

1591/176  
24/11/21



The Government  
Sadiq College Women  
University Bahawalpur Pakistan

AF-II  
24.11.21

## TECHNICAL EVALUATION REPORT OF CHEMISTRY LAB ITEMS TENDER # 33/2020-21

The tender opening was held on 12/07/2021 for Chemistry Lab Items. Eleven (11) bidders participated in tendering process. The names of the bidders/firms are as under;

1. M/S Pakfil Technologies, Lahore
2. M/S Sindh Medical Stores Karachi
3. M/S New Chemical Centre, Lahore
4. M/S H. A. Shah & Sons, Islamabad
5. M/S Kamstech International, Karachi
6. M/S Shalimar Scientific Stores, Lahore
7. M/S Technology Links Pvt Ltd, Lahore
8. M/S SU Enterprizes Gulberg-III Lahore
9. M/S RAAB Scientific Solutions, Lahore
10. M/S Rays Technologies Gulberg-III Lahore
11. M/S Key Scientific Corporation Gulberg-III Lahore

M/S Technology Links Pvt Ltd, Lahore were disqualified as valid CNIC not attached and supply orders of private firms attached rather than governmental w/o. no scoring attached

Report is as under:

Chairperson /  
Technical Committee

Member

Member

Member

Member

Member



| Item | R<br>Q<br>ty | Pakfils<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprises | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                          | RAVS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                            | Technica<br>lly<br>Qualified | Technically<br>Disqualife<br>d |
|------|--------------|-------------------------|----------------------------|------------------------|-------------------|---------------------------|-------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------|
|      |              |                         |                            |                        |                   |                           |                               |                | <p>Gilson patented volume locking system. The Multichannel version also offers an extremely lightweight pipette, new shape ensures a perfect fit. Volume range 20 µl to 200 µl, Eight Channel Model P8 x 200L</p> <p>Make: Gilson France</p> <p>Authorization letter not attached</p> | <p>durability.</p> <p>Specification: Volume: 2 to 20 µl Model 8x20G, Gilson Made in France.</p> <p>c. Gilson Pipetman L Multi-channel the Multichannel version also offers an extremely lightweight pipette, new shape ensures a perfect fit. adjustable tip ejector button has also been implemented to adapt to both right- and left-handed users. PIPETMAN L is an adjustable volume pipette that features a Gilson patented volume locking system.</p> <p>GLP Features Convenient GLP features to PIPETMAN L</p> <p>Additional GLP features include: \$ Traceable serial number</p> | <p>c. Multi-Channel Pipette: An adjustable volume pipette with volume locking system. The Multichannel version also offers an extremely lightweight pipette, new shape ensures a perfect fit. Volume range 20 µl to 200 µl, Eight Channel Model P8 x 200L</p> <p>Gilson France, Complete set (1-each)</p> |                              |                                |

Chairperson  
Technical Committee

*S. A. H.* Member

Member

*M. A. H.* Member

*M. A. H.* Member

*M. A. H.* Member







| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | R Q | Pakfills Technologies               | Sindh Medical Stores         | New Chemical Centre               | H. A. Shah & Sons                                 | Kamtech International                             | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                        | SU Enterprizes                                                                         | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                              | RAVS Technologies                                                 | Key Scientific Corporations      | Technicality Qualified      | Technically Disqualified |                         |
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| Digital LCD with Back-Light Function Controller: Digital Feedback Controller with Jog Dial (Turn+Push) and Touch button/Stirring Bar: 3cm bar-included, Usable : up to 5cm bar. Safety Circuit: Over Temp. Protection, Hot Top Indicator LED Lamp. Permissible Temp. & RH %: Ambient +5 ~ 50°C, 85% RHDimension & Weight: 205 x 345 x h135mm, 3.3kg. Power Supply & Cord/Plug: AC 230 V, 50 / 60 Hz, with Cord/Plug. Including: External/Direct Contact Temperature ProbeGermany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/to reign principals must be attached. | 3   | Conductivity Meter: 0 µS/cm... 1000 | Orion Star A212 Conductivity | Multiparameter PH/ORP/Con         | Conductivity Meter Model No / Cat                 | STAR A3226 Orion Star™ A322 Conductivity Portable | Not Quoted                                                                                                                                                                                                                                                                                                        | Conductivity Meter Digital Bench Type Combined logging                                 | Measurement range Conductivity                                                                                                                                                                                                                                                                                                                                         | Conductivity Meter Digital Bench Top Parameter                    | Digital Bench Top Microprocessor | Display 6.5 inch LCD screen | • Pak Fill Technology    | • Sindh Medical Stores: |
| WWeight: 9.3 n & Weight: 450 x 282 x 115mm, 4.1 KgMake: Wiggens, Germany                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2   | Orion Star A212 Conductivity        | Multiparameter PH/ORP/Con    | Conductivity Meter Model No / Cat | STAR A3226 Orion Star™ A322 Conductivity Portable | Not Quoted                                        | Circuit:Over Temp. Protection, Hot Top Indicator LED Lamp. Permissible Temp. & RH %: Ambient +5 ~ 50°C, 85% RHDimension & Weight: 205 x 345 x h135mm, 3.3kg. Power Supply & Cord/Plug: AC 230 V, 50 / 60 Hz, with Cord/Plug. Including: External/Direct Contact Temperature Probe Model MSH5000 Witeg LMS Germany | Working Environment 5 °C - 40 °C, 80 % RH, non-condensingModel: e-GS1HS07/COhaus - USA | Qualitation range Room temp. - 300 °CThermoregulation accuracy ± 0.5 °C (p1100)Timer yes (1 min - 99 h 59 min)Autorevers e yes (5 s - 99 min 59 s)Intermittent mode yes (5 s - 99 min 59 s)Acoustic signals yesHot top warning system on display (when the temperature is above 50 °C)Permissible ambient temperature 5 - 40 °CModel AREC Connect, Veip Made in Italy. | RAAB Scientific Solutions: A authorization letter is not attached |                                  |                             |                          |                         |

Chairperson *Sei-A* Member

Member

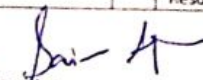
Member

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | R<br>Q<br>ty | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Sindh<br>Medical<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Technica<br>lly<br>Qualified                                                        | Technically<br>Disqualifie<br>d                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <p>µS/cm ±10.5 % of value</p> <p>Salinity 0.0...70.0 (acc. to IOT), 0.00...20 MOhm cm, TDS 1...1999 mg/l</p> <p>Temperature - 5.0...105.0 °C ±0.1 °C (23...221 °F) Cell constant 0.450...0.500 cm-1, 0.09...0.110 cm cm-1, 0.800 bis 0.880 cm-1, 0.25...2.5 cm-1, fix 0.01 cm-1</p> <p>Calibration 1-point, Tref 20 °C/25 °C (68 °F/77 °F)</p> <p>Temperature compensation nLF, linear 0.000 to 3.000 %, can be switched-off Germany or UK or Japan or USA or equivalent</p> <p>Note: Valid authorized certificate from the manufacturers/foreign principals must be attached.</p> |              | <p>Benchtop Meter Kit</p> <p>Technical Specifications</p> <p>Conductivity Range: 0.001µS to 3000mS</p> <p>Resolution: 0.001µS</p> <p>01µS minimum, auto ranging, upto 4 significant digits</p> <p>Relative Accuracy: 0.5% of reading</p> <p>±1digit &gt; 3µS, 0.5% of reading ±0.01µS</p> <p>0.5% of reading ±0.01µS</p> <p>5S 3µS</p> <p>Reference Temperature: 5, 10, 15, 20, 25 °C</p> <p>Temperature Compensation :Linear (0 to 10.0%/°C), nonlinear nLFn &amp; nLFu, EP (USP), off</p> <p>Compatible Cell</p> <p>Constants: 0.001 to 199.9</p> <p>Calibration Points: Up to 5 points</p> <p>Calibration Editing: Yes</p> <p>Resistivity Range: 2ohm to 100meg-ohm</p> <p>Resolution: 10</p> | <p>ductivity/TDS /Salinity/ Resistivity/ Temp.</p> <p>Benchtop Meter</p> <p>Conductivity range: 0.0 to 475 µS/cm</p> <p>Resolution: 0.1µS/cm</p> <p>Accuracy: ±1% of reading</p> <p>+2µS/cm</p> <p>TDS range: 0.001 mg/l to 200.0 g/l</p> <p>Resolution: 0.001/0.01/0.1/1mg/l</p> <p>Accuracy: ±0.5% full scale</p> <p>0.01/0.1 g/l</p> <p>Salinity range: 0.0 to 80.0 ppt, resolution: ppt, accuracy ±0.5% full scale</p> <p>temperature range: -10.0 to 120.0°C</p> <p>resolution 0.1 °C</p> <p>accuracy ±0.4°C</p> <p>pH calibration upto 5 points</p> <p>Make: BOECO Germany</p> | <p># 11621479</p> <p>Model # Orion Star A322</p> <p>Technical Specifications</p> <p>Conductivity Range: 0.001µS to 3000mS</p> <p>Resolution: 0.001µS</p> <p>1µS minimum, auto ranging, upto 4 significant digits</p> <p>Relative Accuracy: 0.5% of reading</p> <p>±1digit &gt; 3µS, 0.5% of reading ±0.01µS</p> <p>≤ 3µS</p> <p>Reference Temperature: 5, 10, 15, 20, 25°C</p> <p>Compensation: Linear (0 to 10.0%/°C), nonlinear nLFn &amp; nLFu, EP (USP), off</p> <p>Compatible Cell Constants: 0.001 to 199.9</p> <p>Calibration Points: Up to 5 points</p> <p>Calibration Editing: Yes</p> <p>Resistivity Range: 2 ohm to 100meg-ohm</p> <p>Resolution: 1ohm or 0.1meg-ohm, auto ranging</p> <p>Relative Accuracy: 0.5% reading</p> | <p>Meter Model Orion Star A322</p> <p>Resolution (Conductivity) 0.001 µS/cm; 30.0 to 299.0 µS/cm; 30.0 to 200.0 mS/cm; to 500.0 mS/cm without cat;</p> <p>TDS range 0.00 to 14.99 mg/L (ppm); 150 to 1499 mg/L (ppme); 1.50 to 14.99 g/L (ppt); 15.0 to 100 g/L (ppt); to 400.0 g/L; NaCl range 0 to 400%.</p> <p>Temp range: -9.9 to 120.0°C. 1 point calibration for EC with 6 memorized values. NaCl with 1 point.</p> <p>Supplied with MA814DB/1 probe, electrode holder MA9315, software MiS200, RS232 connection with 2 meter cable, 12 VDC adapter and calibration solutions.</p> <p>Model MI 170 Milwaukee Made in Europe</p> |                           | <p>with GLP EC/TDS/NaCl/Temp bench meter; range: EC 0.00 to 2999 µS/cm; 30.0 to 299.0 mS/cm; 30.0 to 200.0 mS/cm; to 500.0 mS/cm without cat;</p> <p>TDS range 0.00 to 14.99 mg/L (ppm); 150 to 1499 mg/L (ppme); 1.50 to 14.99 g/L (ppt); 15.0 to 100 g/L (ppt); to 400.0 g/L; NaCl range 0 to 400%.</p> <p>Temp range: -9.9 to 120.0°C. 1 point calibration for EC with 6 memorized values. NaCl with 1 point.</p> <p>Supplied with MA814DB/1 probe, electrode holder MA9315, software MiS200, RS232 connection with 2 meter cable, 12 VDC adapter and calibration solutions.</p> <p>Model MI 170 Milwaukee Made in Europe</p> | <p>range: 0.0 µS/cm to 199.9 mS/cm</p> <p>TDS range: 0.1 mg/l to 199.9 g/l</p> <p>Salinity range: 0.00 to 19.99psu</p> <p>Temperature range: 0°C to 100 °C</p> <p>Resolution Automatic range: 0.1°C</p> <p>Error Limits ± 0.5 % Measured Value. ± 0.3 °C</p> <p>Calibration 1 point. 3 predefined standards</p> <p>Memory 99 measurements.</p> <p>Last recent calibration data</p> <p>Power Supply 110-240V/50Hz, DC 12V</p> <p>Display White backlight liquid crystal</p> <p>Input Mini-Din</p> <p>Temperature Compensation Linear: 0.00 %/°C...10.00 %/°C</p> <p>Reference Temp.: (20 - 25°C)</p> <p>Housing Material ABS</p> <p>Standard Solution 50ml</p> <p>Model: STARTER 3100C</p> <p>Ohaus - USA</p> | <p>Conductivity/Salinity/s pec. resistivity, TDS</p> <p>Conductivity 0.001 µS/cm ... 1000 mS</p> <p>Spezischer Widerstand 0.00 ... 199 MOhm cm</p> <p>Salinity 0.0 ... 70.0 TDS 0 ... 1999m g/l</p> <p>Temperature -5.0 ... 105.0 °C ±0.1 °C (23 ... 221 °F)</p> <p>Cell constant 0.450...0.500 cm-1, 0.09 ... 0.110 cm cm-1, 0.800 to 0.880 cm-1, 0.25 ... 2.5 cm-1, fix 0.01 cm-1</p> <p>Calibration 1-point Tref 20 °C/25 °C (68 °F/77 °F)</p> <p>temperature compensation nLF, linear 0.000 to 3.000%, resolution conductivity 0.1 µS/cm</p> <p>salinity 0.1, accuracy temp. 0.1 K</p> <p>Make: WTW Germany</p> | <p>Controlled with parallel temperature indication, Conductivity Range 0.0 us/cm to 1000 ms/cm, Accuracy 0.5%, Temperature Range -5.0 to +105.0°C, Salinity 0.0-70.0, TDS 0-1999 mg/l, Reference Temperature 20 or 25°C</p> <p>Selectable With following accessories.</p> <p>a) Conductivity Electrode with built in Temperature Sensor</p> <p>b) Electrode Stand with Base</p> <p>c) Standard solution 50 ml</p> <p>Complete package Model Inolab Cond 7110/Set operated on 220 Volts WTW Made in Germany.</p> <p>(xylem brand)</p> | <p>Parameters conductivity, resistivity, TDS, salinity, temperature</p> <p>Conductivity measuring range (0.00-20.00) µS/cm (20.0-200.0) µS/cm (200-2000) µS/cm (2.00-20.00) mS/cm (20.0-200.0) mS/cm</p> <p>Conductivity resolution 0.01/0.1/1µS/cm</p> <p>0.01/0.1mS/cm</p> <p>Conductivity Accuracy Electrode: ±1.0%FS</p> <p>Instrument: ±1.50%FS</p> <p>Resistivity measuring range 0 ... 100 MΩ•cm</p> <p>TDS 0.00mg/L ~100 g/L</p> <p>Salinity 0-100 ppt</p> <p>Temp measuring range (0-100)°C</p> <p>Temp resolution 0.1°C</p> | <p>• HA Shah &amp; Sons</p> <p>• Rays Technologies</p> <p>• New Chemical Centre</p> | <p>Conductivity range is not according to specifications required 0.0 µS/cm to 3000 mS/provide d 0.0 to 475 µS/cm</p> <p>• S U Enterprizes: Conductivity range: required 0.0 µS/cm to 3000 mS /offered 0.0 µS/cm to 199.9 mS/cm</p> <p>• Key Scientific Corporations: Authorizati on letter is not attached</p> <p>• RAAB Scientific Solutions: Authorizati on letter not attached</p> <p>Shalimar Scientific Stores TDS Range: 0.001to200 .0ppt</p> |

Chairperson  Member

Member

Member

Member

Member



| Item | R<br>Q<br>ty | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations                                                                             | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
|------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|-------------------------------|----------------|------------------------------|----------------------|------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|
|      |              | hmo0.1meg-<br>ohm, auto<br>ranging<br>RelativeAccur<br>acy:0.5%<br>reading ±1<br>digit<br>Salinity<br>Type:Practical<br>salinity or<br>natural sea<br>water<br>Range:0.06to8<br>0.00psu,<br>0.05to<br>42.00ppt<br>Resolution:0.0<br>1psu,0.01ppt<br>RelativeAccur<br>acy:0.5%<br>reading ±1<br>digit<br>TDS Range:<br>0.001to200.0p<br>pt<br>Resolution:0.0<br>01pptminimu<br>m, auto<br>ranging, upto<br>4 significant<br>digits<br>RelativeAccur<br>acy:±0.5%<br>reading ±1<br>digit<br>TDS Factor<br>Range:Linear,<br>0.02to 9.99<br>Temperature<br>Range:-<br>5to105°C, 23to<br>221°F<br>Resolution:0.1<br>°C,0.1°F<br>RelativeAccur<br>acy:±0.1°C,<br>±0.1°F<br>Offset |                            | ±1 digit<br>Salinity<br>Type:Practical<br>salinity or<br>natural sea<br>water<br>Range:0.06 to<br>80.00psu,<br>0.05to<br>42.00ppt<br>Resolution:0.01<br>psu,0.01ppt<br>RelativeAccurac<br>y:0.5% reading<br>±1 digit<br>TDS Range:<br>0.001to200.0pp<br>t<br>Resolution:0.00<br>1pptminimum,<br>auto ranging,<br>upto 4<br>significant<br>digits<br>RelativeAccurac<br>y:±0.5% reading<br>±1 digit<br>TDS Factor<br>Range:Linear,<br>0.02to 9.99<br>Temperature<br>Range:-<br>5to105°C, 23to<br>221°F<br>Resolution:0.1°<br>C,0.1°F<br>RelativeAccurac<br>y:±0.1°C,<br>±0.1°F<br>Offset<br>Calibration:1poi<br>nt<br>Make: Thermo<br>Fischer<br>Scientific USA |                   |                           |                               |                |                              |                      | Temp<br>accuracy<br>±0.5°C<br>Data storage<br>300 sets<br><br>Model, S-<br>611L PEAK<br>Instruments<br>USA |                              |                                 |

Chairperson  
Technical Committee

Member

Member

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| Item | RQ | Pakfills Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Sindh Medical Stores | New Chemical Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                  | RAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Technically Qualified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Technically Disqualified |
|------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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|      |    | Calibration: 1p<br>oint<br>Make:<br>Thermo<br>Fischer<br>Scientific USA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |                                                                                                                                                                                                                                                                                                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                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |
| 4    | 2  | Orion Star<br>A221 pH<br>Portable<br>Meter<br>Standard Kit<br>pH Range:-<br>2.000 to 20.000<br>Accuracy (±1<br>digit): +0.1,<br>+0.01, +0.005<br>(test sample<br>temp 59 to 95 °F<br>(15 to 35 °C))<br>Calibration: 1, 2,<br>3 point mV:<br>Range: ±1200.0<br>mV, ±2000 mV<br>Accuracy (±1<br>digit): +0.3, +1<br>(test sample<br>temp 59 to 95<br>°F (15 to 35 °C))<br>Temperature:<br>Range: 23 to 221<br>°F (5.0 to 105.0<br>°C)<br>Accuracy (±1<br>digit): ±0.2 °F<br>(±0.1 °C)<br>Mechanical and<br>electrical Display:<br>7-Segment LCD<br>Power Supply:<br>Four 1.5V AA<br>batteries or four<br>1.2 V NiMH<br>Battery Life: Up<br>to 2500 hours<br>Dimensions<br>(WxHxD):<br>9.45x7.48x3.15 | Not Quoted           | Model No / Cat<br># 15612057<br>Model # Orion<br>Star A221<br>Make:<br>Fisher Brand<br>AC Adapter<br>Universal 50-60<br>Hz, 100-240<br>VAC power<br>adapter (sold<br>separately, Cat.<br>No. 1010003)<br>Accuracy (mV)<br>±0.2 mV or<br>±0.05% of<br>reading<br>Resolution: 0.1<br>mV<br>Relative Accur<br>acy: ±0.2mV/or<br>±0.05 % of<br>reading<br>which ever is<br>greater<br>Accuracy (pH)<br>±0.002<br>Alarm Output<br>Calibration due<br>alarm (fixed 12<br>hour)<br>Backlight<br>Option Yes,<br>selectable<br>Battery Life 800<br>hr.<br>Battery Type 4<br>x AA<br>Calibration pH,<br>relative mV<br>(±0.1 °C, ±0.1<br>°F)<br>Offset<br>Calibration: 1p<br>Power AC<br>Adapter: Optio | STAR A2218<br>Orion Star™ A221<br>Portable pH Meter<br>Range (mV) ±2000 mV<br>Range (ORP)<br>±2000.0mV<br>AC Adapter<br>Universal 50-60<br>Hz, 100-240<br>VAC power<br>adapter (sold<br>separately, Cat.<br>No. 1010003)<br>Accuracy (mV)<br>±0.2 mV or<br>±0.05% of<br>reading<br>Resolution: 0.1<br>mV<br>Relative Humidity<br>Range 5 to 85%, non-<br>condensing<br>Resolution (pH) 0.1,<br>0.01, 0.001<br>Resolution (mV)<br>0.1mV<br>Resolution<br>(Temperature) 0.1 °C,<br>0.1 °F<br>Stability Smart<br>Averaging<br>Temperature (English)<br>Operating 41 °F to<br>113 °F (ambient)<br>Temperature (Metric)<br>Operating 5 °C to 45 °C<br>(ambient)<br>Temperature Probe<br>Calibration 1 point<br>temperature offset<br>Calibration pH,<br>relative mV<br>(±0.1 °C, ±0.1<br>°F)<br>Offset<br>Calibration: 1p<br>Power AC<br>Adapter: Optio | Not Quoted             | Portable pH meter<br>Range pH -2.00 to<br>20.00 pH / -2.000 to<br>20.000 pH mV ±2000<br>mV<br>Temp -20.0 to 120.0<br>°C (-4.0 to 248.0 °F)<br>Resolution pH 0.01 pH<br>/ 0.001 pH<br>mV 0.1 mV<br>Temp 0.1 °C / 0.1 °F<br>Accuracy pH ±0.01 pH<br>/ ±0.002 pH<br>(@25 °C) mV ±1 mV<br>Temp ±0.5 °C up to<br>60 °C; ±1 °C outside /<br>±1 °F up to 140 °F; ±2 °F<br>outside<br>pH Calibration<br>automatic, up to 5<br>points calibration, 7<br>standard buff ers<br>available<br>(1.68, 4.01, 6.86, 7.01,<br>9.18, 10.01, 12.45)<br>and two custom buff<br>ers<br>ORP Calibration<br>factory calibrated<br>Temperature<br>Compensation<br>automatic, from -5 to<br>80 °C / 23 to 176 °F<br>Probe MA906BR/1<br>amplified<br>pH/temperature<br>probe (supplied)<br>Temperature probe<br>Built-in temperature<br>probe | pH meter<br>Measurement<br>Range<br>0.00...14.00 pH, -<br>0 °C...100 °C<br>Resolution 0.01<br>pH, 1 mV, 0.1 °C<br>Error<br>Limits/Accuracy ±<br>0.01 pH, ± 1 mV, ±<br>0.5 °C<br>pH Calibration<br>Up to 3 points<br>Calibration Buffer<br>4 predefined<br>Memory 30 sets,<br>most recent<br>calibration data<br>Power/Battery 4<br>x AAA >500 hrs<br>Display Liquid<br>crystal<br>pH Input BNC,<br>impedance<br>>10e+12 Ω<br>Temp. Input<br>Cinch, NTC 30 kΩ<br>Temp<br>Compensation<br>ATC or MTC<br>Temp<br>Compensation<br>Range 0 °C...100<br>°C<br>IP Rating IP54<br>Housing Materials<br>ABS<br>Model: STARTER | pH meter Portable<br>Specification:<br>pH -2.000 ... +19.999<br>±0.005 pH<br>mV -1200.0 ...<br>+1200.0 ±0.3 mV<br>-2000 ... +2000 ±1<br>mV<br>Temperature -5.0 ...<br>+105.0 ±0.1 °C (23 ...<br>221 °F)<br>Calibration 1, 2 or 3-<br>point calibration<br>Display 7-Segment<br>LCD, customized<br>For battery operation,<br>with Electrode Sentix<br>41<br>Model PH 3110 Set 2,<br>WTW Made in<br>Germany. | The pH 3110 is<br>ideal for all<br>seeking an easy,<br>robust and<br>waterproof<br>instrument for<br>portable pH<br>measuring.<br>Features:<br>• pH or ORP<br>measurements<br>• Easy 1- to 3-<br>point<br>calibration with<br>adjustable<br>calibration<br>timer<br>• Robust and<br>waterproof (IP<br>67)<br>Specification:<br>pH -2.000 ...<br>+19.999 ±0.005<br>mV -1200.0 ...<br>+1200.0 ±0.3<br>mV<br>-2000 ...<br>+2000 ±1 mV<br>Temperature -5.0 ...<br>+105.0 ±0.1 °C<br>(23 ... 221 °F)<br>Calibration 1, 2<br>or 3-point<br>calibration<br>Display 7-<br>Segment LCD. | Display 6.5<br>inch LCD<br>screen<br>Parameters<br>pH, mV,<br>temperature<br>Measuring<br>range -2.00 ~<br>18.00 pH<br>Resolution<br>0.01/0.1 pH<br>Accuracy<br>±0.02pH<br>mV<br>Measuring<br>range -<br>1999.00~<br>1999.00 mV<br>Resolution<br>1mV<br>mV Accuracy<br>±0.1%FS<br>Temp<br>Measuring<br>range 0~<br>100°C<br>Temp<br>Resolution<br>0.1°C<br>Temp<br>Accuracy<br>±0.5°C<br>Temp<br>Compensation<br>n 0-100°C,<br>automatic<br>Calibration 1,<br>2, 3 point,<br>automatic | • Pak Fill<br>Technolo<br>gies<br>• HA<br>Shah &<br>Sons<br>• Rays<br>Technolo<br>gies<br>• New<br>Chemical<br>Centre<br>• Pak Fill<br>Technolo<br>gies<br>• Shalimar<br>Scientific<br>Stores:<br>Temperatur<br>e range<br>required 23<br>to 221 °F (-<br>5.0 to<br>105.0<br>°C)<br>• Offered<br>-20.0 to<br>120.0 °C (-<br>4.0 to<br>248.0 °F)<br>• S U<br>Enterprizes:<br>pH range<br>required -<br>2.0 to<br>20.0 / offered<br>0.00...14.00<br>• Key<br>Scientific<br>Corporatio<br>ns:<br>Authorizati<br>on letter is<br>not<br>attached<br>• RAAB<br>Scientific<br>Solutions:<br>Authorizati<br>on letter is<br>not<br>attached |                          |

Chairperson *Shirish* Member

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| Item                                                                                                                                                                                                                        | R | Pakits Technologies | Sindh Medical Stores | New Chemical Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | H. A. Shah & Sons                                                                                   | Kamstech International | Shalimar Scientific Stores                               | SU Enterprises             | RAAB Scientific Solutions | RAYS Technologies                                                                                                                                       | Key Scientific Corporations                            | Technically Qualified | Technically Disqualified |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------|----------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------|--------------------------|
| <p>100-240VAC<br/>Battery<br/>Power include<br/>d—4AAAs<br/>Battery life: 80<br/>hrs<br/>Make:<br/>Thermo<br/>Fischer<br/>Scientific USA</p> <p>the<br/>manufacturers/<br/>foreign principals<br/>must be<br/>attached.</p> |   |                     |                      | <p>point ORP<br/>mode<br/>Certifications/C<br/>ompliance CE,<br/>TUV-3-1, FCC<br/>Class A<br/>Data<br/>Management<br/>Details Transfer<br/>single, range or<br/>all data points<br/>to printer or<br/>computer<br/>Data Points<br/>10000 with date<br/>and time stamp<br/>Description<br/>Orion Star A221<br/>pH portable<br/>meter<br/>Dimensions (L x<br/>W x H) 24cm x<br/>10cm x 6.5cm<br/>(9.5 in. x 3.9 in.<br/>x 2.6 in.)<br/>Includes Star<br/>A221 pH meter,<br/>4 AA batteries,<br/>computer cable<br/>Inputs BNC (pH<br/>or ORP<br/>electrode), pin-<br/>tip (reference<br/>electrode), 8<br/>pin MiniDIN<br/>(ATC<br/>temperature<br/>probe)<br/>Isopotential<br/>Point 7.000pH<br/>Keypad<br/>Comprehensive<br/>with menu-<br/>specific<br/>function keys<br/>and dual<br/>purpose<br/>scroll/shortcut</p> | <p>lb.<br/>Weight (Metric) 0.5<br/>kg<br/>Unit Size Each<br/>Make: Thermo<br/>Fisher Scientific</p> |                        | <p>Model MW 106 MAX<br/>Milwaukee Made in<br/>Europe</p> | <p>300<br/>Ohaus - USA</p> |                           | <p>customized<br/>For battery<br/>operation, with<br/>Electrode Sentix<br/>41<br/>Model PH 3110<br/>Set 2, WTW<br/>Made in<br/>Germany.<br/>(Xylem)</p> | <p>Model, S-<br/>610L PEAK<br/>Instruments<br/>USA</p> |                       |                          |

Chairperson  
Technical Committee

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| Item | RQ | Pakfills Technologies | Sindh Medical Stores | New Chemical Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores | SU Enterprizes | RAAB Scientific Solutions | RAVS Technologies | Key Scientific Corporations | Technically Qualified | Technically Disqualified |
|------|----|-----------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------|----------------------------|----------------|---------------------------|-------------------|-----------------------------|-----------------------|--------------------------|
|      |    |                       |                      | keys<br>Languages<br>English,<br>Spanish,<br>French, Italian,<br>German and<br>Chinese;<br>Portuguese and<br>Korean<br>available with<br>software<br>update<br>Log Function<br>Type Automatic<br>data logging<br>with Auto-Read<br>measure mode;<br>manual data<br>logging with<br>Continuous<br>measure mode<br>Memory Non-<br>volatile<br>memory<br>preserves data<br>log, calibration<br>log and meter<br>settings<br>Methods 10 per<br>channel with<br>password<br>protection<br>Model Orion<br>Star A221<br>pH/mV/RmV/O<br>RP/Temperature<br>Meter<br>Power Supply<br>Universal AC<br>adapter<br>(included) or 4<br>AA batteries<br>(sold<br>separately)<br>Probe Type pH<br>electrode, ORP<br>electrode, |                   |                        |                            |                |                           |                   |                             |                       |                          |

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| Item | R<br>Q<br>ty | Pakflits<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                              | H. A. Shah & Sons | Kamstech<br>International | Shallmar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions | RAVS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
|------|--------------|--------------------------|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|-------------------------------|----------------|------------------------------|----------------------|--------------------------------|------------------------------|---------------------------------|
|      |              |                          |                            | reference half-cell electrode, ATC temperature probe (purchase separately) Range (ORP) $\pm 2000.0$ mV Range (Relative mV) $\pm 2000.0$ mV                                                                                                                                                                                                                                                                                                                          |                   |                           |                               |                |                              |                      |                                |                              |                                 |
|      |              |                          |                            | Relative Humidity Range 5 to 85%, non-condensing Resolution (mV) 0.1mV Stability Smart                                                                                                                                                                                                                                                                                                                                                                              |                   |                           |                               |                |                              |                      |                                |                              |                                 |
|      |              |                          |                            | Smart Averaging Temperature Accuracy $\pm 0.1^{\circ}\text{C}$ Temperature (English) Operating $41^{\circ}\text{F}$ to $113^{\circ}\text{F}$ (ambient) Temperature (Metric) Operating $5^{\circ}\text{C}$ to $45^{\circ}\text{C}$ (ambient) Temperature Probe Calibration 1 point temperature offset calibration Temperature Range (English) $22.0^{\circ}\text{F}$ to $221.0^{\circ}\text{F}$ Temperature Resolution $0.1^{\circ}\text{C}$ , $0.1^{\circ}\text{F}$ |                   |                           |                               |                |                              |                      |                                |                              |                                 |

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Ref             | Pakfilis Technologies                    | Sindh Medical Stores                          | New Chemical Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | H. A. Shah & Sons | Kamsteck International | Shallmar Scientific Stores | SU Enterprizes                                                                                                                                                                                                                                                                             | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RAYS Technologies                                                                                                                            | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Technically Qualified                                                                      | Technically Disqualified                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <p>After cleaning ordinary tap water, alcohol or a solvent as the cleaning liquid. High-power transducer is has good cleaning effect, can be visually observed use your eyes. Digital timer to control the time all materials are stainless steel. Excellent waterproof makes a safe product and a long working life. Models which equipped with a heating system have the thermostat system. Technical Parameters: Ultra sonic Frequency: 40KHz Interior Material: Stainless Steel SUS304 Capacity: 6L Time Controller: Digital timing control range 0 to 30 minutes Power supply: AC 100V-120V, 50/60 Hz AC 220V-240V, 50/60 Hz Ultrasonic Power: 120W, 2 Vibration head: Heating power: 100W (digital)</p> | 40 min - 30 min | W Frequency 40 kHz Timing 1 min - 30 min | mini Make: Labotronics Scientific Ltd, Canada | steel lid, basket and housing. Cooling fan for prolonged operation: 5L and above volume machine. Drain pipe on side for easy draining and cleaning. Tank and other metal parts are grounded (ESD-safe). Ceramic heaters for better heating effect. Side handles for easy handling: 3L and above machines. Degassing mode to get the cleaning started faster. Adjustable power for maximum versatility: for DS-P series machines. All series machines are with timer and heater. Adjustable heating: 0-80°C Make: Stalwart |                   |                        |                            | Remove Dirt, Grease, Waxes and Oil from all Lab instruments by Ultrasonic Frequency y Microprocessor Control : Timer, Temperature and Output Control y Multi-Frequency Sonication Body y HF-Frequency : 40KHz y Temperature power supply 230 V, 50/60 Hz, Model WUC-DO6H Witeg LMS Germany | frequency. The leakproof housing features super sealing. The 304 stainless steel tank is surrounded by a durable, impact resistant polypropylene housing. Sealed membrane control panel is impervious to splashes and spills. Cleaner with heater, digital timer, Temperature range: +5 to 80°C. Timer: 0-60 min. Stainless Steel lid. Universal basket. Basket for small items. Lid with handle and drain plug. Capacity: 5 Liters. Model: Ultrasons - HOCat # 3000851, P. Selecta - Spain | Ultrasound frequency (kHz) = 37 Power consumption total (W) = 500 temperature setting between 30°C and 80°C, variable on 5°C Made in Germany | for an optimised sound field distribution in the cleaning liquid. - Temperature-controlled ultrasonic operation:- Splashing-water-proof operating panel. - Temperature setting between 30°C, and 80°C, variable in 5°C, steps. - Automatic switch-off after 12 h operation to prevent unintended permanent operation. Technical Specifications:- Tank max. (litre) = 5.75 - Tank internal dimensions = 300x 151x 150mm- Ultrasonic frequency (kHz) = 37 - Mains voltage variants (Vac) = 220 Model E60H, Elma Made in Germany. | frequency (kHz) = 37 - Power consumption total (W) = 500 Model E100H, Elma Made in Germany | Authorizations on letter is not attached New Chemical Centre Model mentioned could not meet the requirement. |

Chairperson *Shah* Member *Shah* Member *Shah* Member *Shah* Member *Shah* Member *Shah*

| Item                                                                                                                                                 | RQ | Pakfills Technologies                                                                                                                                                                                                                                                                                                                 | Sindh Medical Stores | New Chemical Centre                                                                                                                                                                                                                                                                                                   | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                 | SU Enterprises | RAAB Scientific Solutions | RAVS Technologies | Key Scientific Corporations | Technically Qualified                             | Technically Disqualified                                |
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| Control Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/to rejoin principals must be attached. |    |                                                                                                                                                                                                                                                                                                                                       |                      |                                                                                                                                                                                                                                                                                                                       |                   |                        |                                                                                                                                                                                            |                |                           |                   |                             |                                                   |                                                         |
| 6                                                                                                                                                    |    | Nitrogen Gas Cylinder: 50 L                                                                                                                                                                                                                                                                                                           | Not Quoted           | Nitrogen Gas Cylinder Model No / Cat # STC30/50M Make: Stalwart                                                                                                                                                                                                                                                       | Not Quoted        | Not Quoted             | Nitrogen Gas Cylinder 10 cubic / 50 L Pakistan                                                                                                                                             | Not Quoted     | Not Quoted                | Not Quoted        | Not Quoted                  | • New Chemical Centre • Shalimar Scientific Store |                                                         |
| 7                                                                                                                                                    |    | Autoclave (250 ml): BAOSHISHAN 250ml Hydrothermal Synthesis Autoclave Reactor 304 Stainless Steel High-Pressure Digestion Tank with PTFE Lined for Rapid Digestion of Insoluble Material Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/to rejoin principals must be attached. | Not Quoted           | Autoclave 250 ml Model No / Cat # TP/HT250 Make: Topicon Technical Specifications: Material Made of: Shell made of quality stainless steel. Liner materials is special PTFE. Safe temperature is 220°C. Remarks Working pressure <3 Mpa (surface pressure). Tempe heating and cooling speed: 5 °C/min. Break down the | Not Quoted        | Not Quoted             | Autoclave Capacity 250ml Hydrothermal Synthesis Autoclave Reactor 304 Stainless Steel High-Pressure Digestion Tank with PTFE Lined for Rapid Digestion of Insoluble Material Biobase China | Not Quoted     | Not Quoted                | Not Quoted        | Not Quoted                  | • New Shalimar Scientific Stores                  | • New Chemical Centre Authorization letter not provided |

Chairperson *Sei-Ai* Member

Member

Member *Yasser*

Member *GS*

Member *Abbas*



| Item | R<br>Q<br>T<br>Y | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                         | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                            | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Technica<br>lly<br>Qualified                                                                                                                                                                                                                                                                                                                                                                                                                                    | Technically<br>Disqualifie<br>d                                                                                                 |                                                                                                                                                                                                                                                                                                        |
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|      |                  |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | refractory<br>material<br>quickly.<br>Make:<br>Toption                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                           |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                 |                                                                                                                                                                                                                                                                                                        |
| 8    |                  | 2                        | SINAR6095<br><br>SinarAgriPro<br>Moisture<br>Analyser<br>Accuracy:<br>Better than<br>+/-0.5% mc<br>dependant<br>upon<br>application<br>Measurement<br>range: 5%-<br>45%<br>dependant<br>upon<br>application<br>Operating<br>Environment:<br>0-45°C<br>Dimensions:<br>21 x 7.5x<br>7.5cm<br>Weight:<br>1.5Kg<br>(including<br>carry case)<br>Power<br>Supply: 9v<br>Alkaline<br>Principle of<br>Operation:<br>Capacitance<br>Temperature<br>Compensatio<br>n: Automatic<br>Read out | Halogen<br>Moisture<br>Analyzer<br>Range: 110 g<br>Readability:<br>0.001 g<br>Pan size Φ<br>90 mm<br>Communicat<br>ion mode:<br>Press and<br>continue<br>Heat source:<br>Halogen<br>lamp<br>Operating<br>temperature<br>: 5 °C to 35<br>°C<br>Temperature<br>range: 40 °C<br>to 199 °C<br>Temperature<br>sensor: PT-<br>100<br>Temperature<br>step: 1 °C<br>Moisture<br>range: 0.00<br>% to 100 %<br>Moisture<br>readability:<br>0.0001<br>Dry residual<br>range: | Not Quoted        | Not Quoted                | Not Quoted                    | Moisture Analyzer<br>with Infrared Heater<br>the i-Thermo G are<br>rugged instruments<br>for moisture<br>determination of raw<br>materials and finished<br>samples in the food,<br>cosmetics, ceramics,<br>agriculture and<br>construction industry.<br>Capacity<br>160g<br>Resolution<br>0,001g<br>Calibration<br>External<br>Pan size<br>100mm Samples Pan<br>Repeatability<br>0,001g<br>Linearity<br>± 0,003g<br>Response time (sec.)<br>≤4<br>Moisture Readability<br>0,01%<br>Moisture Repeatability<br>± 0,20% (~2g sample)<br>Verification N/A<br>Temperature Range<br>35-160°C, step of 1°C<br>Drying Modes Time<br>(1-99min) / Autostop<br>% | Capacity 90g<br>Repeatability (Std<br>Dev) (g) 0.2% (3g<br>sample)<br>0.05% (10g<br>sample)<br>Readability<br>0.05% / 0.005g<br>Sample Size 3g<br>to 20g typical,<br>0.5g min.<br>Interface<br>Bidirectional RS-<br>232<br>Timer 1 - 99<br>minutes, 30-<br>second<br>increments to 60<br>minutes<br>Heating<br>Technology<br>Halogen<br>Temperature<br>Range 50°C to<br>160°C in 5°<br>increments<br>Power 100 to<br>240 VAC, 50/60 Hz<br>Tare Range To<br>capacity by<br>subtraction<br>Temperature<br>Range 5° to 40°C<br>Display Type<br>Custom backlit | Moisture Balance<br>Capacity: Max = 60g,<br>Min = 0.02g<br>Minimum readability :<br>0.001g, 0.01/0.1%<br>(Selectable)<br>Repeatability: 0.15%<br>(2g), 0.05% (5g),<br>0.02% (10g)<br>Drying heater:<br>Straight type halogen<br>heater<br>Power: 400W<br>Temperature range:<br>40-200°C<br>Temperature range<br>setting: 50 to 200°C<br>(1°C increments)<br>Display: LCD with<br>backlight<br>Pan size: Ø95mm<br>Timer setting: 1-120<br>minutes or<br>continuous, (max 12<br>hours)<br>Interface: RS-232C<br>(9-pin connector) I/O<br>port, USB port<br>Data memory: 100<br>Model MOC63U,<br>Shimadzu Japan<br><br>Model MOC63U,<br>Shimadzu, Japan | Capacity: Max<br>= 60g, Min =<br>0.02g<br>Minimum<br>readability:<br>0.001g,<br>0.01/0.1%<br>(Selectable)<br>Repeatability:<br>0.15% (2g),<br>0.05% (5g),<br>0.02% (10g)<br>Drying heater:<br>Straight type<br>halogen heater<br>Power: 400W<br>Temperature<br>range: 40-<br>200°C<br>Temperature<br>range setting:50<br>to 200°C (1°C<br>increments)<br>Display: LCD<br>with backlight<br>Pan size:<br>Ø95mm<br>Measurement<br>modes:<br>Standard, (Easy<br>start /<br>Automatic end /<br>Timed end)<br>Rapid drying,<br>(Easy start / | Capacity:<br>Max = 60g,<br>Min = 0.02g<br>Minimum<br>readability:<br>0.001g,<br>0.01/0.1%<br>(Selectable)<br>Repeatability:<br>0.15% (2g),<br>0.05% (5g),<br>0.02% (10g)<br>Drying heater:<br>Straight type<br>halogen<br>heater<br>Power:<br>400W<br>Temperature<br>range: 40-<br>200°C<br>Temperature<br>range<br>setting:50 to<br>200°C (1°C<br>increments)<br>Display: LCD<br>with backlight<br>Pan size:<br>Ø95mm<br>Timer setting:<br>1-120<br>minutes or | • Rays<br>Technolo<br>gies<br>• SU<br>enterpriz<br>es<br>•Shalima<br>r<br>Scientific<br>Stores<br>•Sindh<br>Medical<br>Stores • | •RAAB<br>Scientific<br>Solutions:<br>Authorizati<br>on letter<br>not<br>attached<br>•Key<br>Scientific<br>Corporatio<br>ns<br>Authorizati<br>on letter is<br>not<br>attached<br>Pak Fill<br>Technologi<br>es:<br>Providing<br>portable<br>agri<br>moisture<br>analyzer<br>which is<br>not<br>required. |

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| Item | R<br>Q<br>ty           | PakFils<br>Technologies | Sindh<br>Medical<br>Stores                                | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | H. A. Shah & Sons | Kamstech<br>International | Shallimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SU Enterprizes                                                                                                                                                                                                                                           | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                        | RAVS<br>Technologies                                                                                                               | Key Scientific<br>Corporations                           | Technica<br>lly<br>Qualified | Technically<br>Disqualif<br>ed |
|------|------------------------|-------------------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------|--------------------------------|
| 9    | Autoclave (100<br>ml): | 1                       | Not Quoted                                                | Autoclave 100<br>ml/Model No /                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Not Quoted        | Not Quoted                | Digital Autoclave fully<br>automatic Capacity 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Capacity: 85<br>liters/Chamber                                                                                                                                                                                                                           | AutoclaveGR series<br>intelligent                                                                                                                                                                                                                                   | Autoclave<br>Digital                                                                                                               | External<br>Dimensions                                   | • • S U<br>Enterpriz         | • New<br>Chemical              |
|      |                        |                         | resolution:<br>0.1% mc<br>Make: Sinar<br>technology<br>UK | 100.00 % ~<br>0.00 %<br>Dry residual<br>readability:<br>0.0001<br>ATRO ( 1 : )<br>100 % ~ 999<br>%<br>ATRO ( 2 : ) 0<br>% ~ 999 %<br>Temperature<br>setting: 40<br>°C ~ 199 °C<br>by 1 °C step<br>Time setting:<br>1 min ~ 99<br>min by 15<br>step<br>Number of<br>storage: 15<br>Number of<br>history: 15<br>Operation<br>height > 50<br>cm<br>Chamber<br>height: 22<br>mm<br>Display: LCD<br>Calibration:<br>External<br>Autostop:<br>0.1 % ~ 9.9 %<br>within 1 min<br>Interface:<br>RS232<br>Heater<br>power: 220<br>V ± 15 % 50<br>Hz<br>115 V ± 15 %<br>400 W<br>Make:<br>Labotronics<br>Scientific Ltd<br>Canada |                   |                           | Temperature<br>Profiles standard<br>Display Of Results<br>Moisture %, Dry<br>residue %, ATRO,<br>weight<br>Printout Of Results<br>Current drying mode,<br>Current result, date/<br>time (only with TLP-50<br>printer)<br>Max Sample Height<br>25 mm<br>Lamp<br>infrared lamp<br>Minimum load<br>20 mg<br>Display<br>Dot Matrix Graphical<br>Tare Range<br>(Subtractive) 160 g<br>Span Drift In<br>+10...+30°C ± 4 ppm/°C<br>Interface<br>RS232<br>Working<br>Temperatures - 35°C<br>Power Supply 220-<br>240Vac<br>Model i Thetrom<br>G163L Bel Engineering<br>Italy | LCD<br>Displays %<br>moisture or %<br>solids or weight<br>(g), temperature,<br>time<br>Pan Size<br>(Diameter) 90<br>mm<br>Included<br>Accessories<br>Sample Pans<br>(Quantity 50)<br>Standard<br>In Use Cover<br>Standard<br>Model: MB 27<br>Ohaus – USA | Automatic end /<br>Timed end /<br>Step drying,<br>(Easy start /<br>Automatic end /<br>Timed end)<br>Timer setting:<br>1-120 minutes<br>or continuous,<br>(max 12 hours)<br>Interface: RS-<br>232C (9-pin<br>connector) I/O<br>port, USB port<br>Data memory:<br>100 | continuous,<br>(max 12<br>hours)<br>Interface:<br>RS-232C (9-<br>pin<br>connector)<br>I/O port, USB<br>port<br>Data<br>memory: 100 | Complete unit,<br>Model<br>MOC63U,<br>Shimadzu,<br>Japan |                              |                                |

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | R Q | Pakfilis Technologies | Sindh Medical Stores | New Chemical Centre                                                                                                                                                                                                                                                                                                                                                   | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                       | RAYS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Technical Qualified        | Technically Disqualified                                                                                                                                                                                                                                                     |
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| <p>Digital Microprocessor Controlled Vertical Unit Temperature Range 105 to 135°C Interior Chamber Stainless steel, capacity 50 Lit. interior chamber dimension 300x710 D mm, Built in Timer 1 to 250 Minutes and Pressure Gauge 0 to 0.4 mpa. Selected Modes for Liquid and Solids and Agar/Process. Complete with stainless steel Baskets operated on 220 Volts Electromechanical Lock</p> <p>System, Dual Sensing Interlock mechanism, Pulse Sensing System for Air Exhaust. Programmable Auto start Process Status Display Over Pressure Cutoff. Over Temperature Cutoff, Pressure Safety valve, Complete Unit as above with standard accessories, Germany or UK or Japan or USA or</p> |     |                       |                      | <p>Cat # TP/HT100 Technical Specifications: Material Made of Shell made of quality stainless steel, Liner materials is special PTFE, Safe temperature is 220°C, Remarks Working pressure 53 Mpa (surface pressure), Temperature heating and cooling speed: <math>\leq 5^\circ\text{C}/\text{min}</math>, Break down the refractory material quickly, Make: Topton</p> |                   |                        | <p>Liters, Chamber material SUS304, Sterilization Temperature 105-138°C, Melting/dissolution temperature range 60-100°C, Temperature accuracy <math>\pm 0.1^\circ\text{C}</math>, dual sensor interlocking system, electronic lock system Range of sterilization time 1-300 minutes, Fully automatic internal discharging Embedded with a steam trapping bottle, drainage hose, water plate, exhaust bottle, Two stainless steel baskets, inter locking device, electric double inner locks, dry scorch protection, over pressure protection, safety valve, over temperature protection, over current and short circuit protection, leakage protection, cooling lock, anti-scald chamber cover and bench, automatic troubleshooting Model GR 60DA Zeal way Instruments USA</p> | <p>material: SUS304 Rated power supply: 220V/50Hz Rate power (W): 4600W Sterilization temperature: 105-138°C Range of sterilization time: 1-300 minutes Melting &amp; temperature: 60-100°C Range of melting time: 1-300 minutes Warming temperature: 45-60°C Range of melting time: 1-600 minutes Cooling time range 1-100°C Melting time range 1-600 minutes Warming temperature 45-60°C Warming time range 1-999 minutes Cooling time range 1-999 minutes</p> | <p>autoclaves Technical Data: Capacity 60 Lit Temperature 0.1°C Working accuracy 5-45°C, environment 10%-85% Chamber material SUS 304 Sterilization temperature 105-138°C Sterilization time range 1-300 minutes Melting temperature 60-100°C Melting time range 1-600 minutes Warming temperature 45-60°C Warming time range 1-999 minutes</p> | <p>Microprocessor Controlled Vertical Unit Temperature Range 105 to 135°C Interior Chamber Stainless steel, capacity 50 Lit. interior chamber dimension 300x710 D mm, Built in Timer 1 to 250 Minutes and Pressure Gauge 0 to 0.4 mpa, Selected Modes for Liquid and Solids and Agar Process, Complete with stainless steel Baskets operated on 220 Volts with following features:- a. Electromechanical Lock System. b. Dual Sensing Interlock mechanism. c. Pulse Sensing System for Air Exhaust. d. Programmable Auto start e. Process Status Display, Over Pressure Cutoff. Over Temperature Cutoff, Pressure Safety valve, Complete Unit as above</p> | <p>478 x 632 x 748 (W x D x H) mm Internal Dimensions 370 x 415 (diameter x depth) Ø mm Effective chamber height Incl. recess in lid: 463 mm Volume 50 Liters Performance Max. Pressure 0.240 MPa Sterilization temperature 115°C ~ 135°C Culture media melting temperature 60°C ~ 114°C Keep warm temperature 45°C ~ 60°C Control Sterilization timer min. 1 to 300 min. 1 to 300 keep warm timer hrs. 72 hours fixed Exhaust control Exhaust valve open temperature setting Construction material</p> | <p>es* Rays Technology</p> | <p>Centre: Authorized letter is not valid * RAAB Scientific Solutions: Authorization letter is not attached Shalimar Scientific Stores voltage requirement and pressure gauge range are not mentioned. Key Scientific Corporation Pressure requirement is not fulfilled.</p> |

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equivalentNote:  
Valid authorized  
certificate from  
the  
manufacturers/fo  
reign principals  
must be  
attached.

| Item | R<br>Q<br>ty                                                                        | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                    | H. A. Shah & Sons | Kamstech<br>International                                                                   | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | RAAB Scientific<br>Solutions                                                          | RAYS<br>Technologies                                                                                               | Key Scientific<br>Corporations                                                                                              | Technica<br>lly<br>Qualified                                           | Technically<br>Disqualifie<br>d           |                                                   |
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|      |                                                                                     |                          |                            |                                                           |                   |                                                                                             |                               | models and 40-80°C for liquid waste lock OPEN temperature: & waste modesAccessories drainage hose, water plate, exhaust bottle, Two stainless steel BasketsController: "Inspiration" fast speed microcomputer intelligent control system/safety device: "eight-columns evenly distributed" aster locking device, electric double inner lock, dry touch protection, over pressure protection, safety cable: over temperature protection, over current and short circuit protection, leakage protection, cooling lock, anti-scald chamber cover and bench, automatic troubleshootingModel: RTA B5Robous Technology Ltd - UK |                                                                                       | with standard accessories, Model HVE-50 Hirayama Manufacturing Made in Japan                                       | Stainless steel (SUS 304)Interior material Stainless steel plateOperate d on 220 Volts Model MLS-37511, PHCbi Made in Japan |                                                                        |                                           |                                                   |
| 10   | Centrifuge Machine Benchtop Micro Centrifuges Ideal for High Speed Lab Applications | 4                        | Not Quoted                 | Boeco Centrifuge M-240R with Angle Rotor Max RPM (Speed)/ | Not Quoted        | S427000015 Centrifuge S430, rotary knobs, non-refrigerated, without rotor, 230 V/50 - 60 Hz | Not Quoted                    | Refrigerated Centrifuge Machine with multiple rotor Maximum volume Capacity 4x100ml, maintenance free                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Digital Microprocessor Controlled, Special lid locking device, Effortless closing and | Micro Centrifuge Machine Refrigerated Digital microprocessor controlled with large LCD display, Speed range 200 to | Temperature range -20°C to 40°C CFC Free Refrigeration System                                                               | Digital microprocess or controlled with large LCD display, Speed range | • HA Shah & Sons<br>• Shalimar Scientific | • Sind medical store emperature Range: required - |

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores                                                                                                                                                                                                                                                                                                                                                                                       | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Technica<br>lly<br>Qualified                                                  | Technically<br>Disqualifie<br>d                                                                                                                                                                                                                                                                                                      |
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| centrifuges<br>24 x 1.5/2ml<br>micro tube rotor<br>with a<br>biocontainment<br>option.<br>Additional rotor<br>options support<br>5ml microtubes,<br>spin columns,<br>PCR stripes, and<br>hematocrit<br>capillary tubes. •<br>Designed for<br>ease of<br>operation,<br>Frontier Micro<br>centrifuges<br>feature<br>convenient<br>control on an<br>intuitive<br>interface, which<br>allows for<br>responsive<br>operation – even<br>when wearing<br>gloves. •<br>Enclosing all their<br>functionalities<br>within a small<br>footprint,<br>Frontier Micro<br>centrifuges save<br>valuable space on<br>the lab bench.<br>Speed Range:<br>200 rpm – 15,200<br>rpm<br>Maximum<br>Relative<br>Centrifuge Force<br>(x g 21,953 g<br>Construction:<br>Quiet<br>operation, (Brushl<br>ess motor) small<br>footprint |              |                          | RCF: 15,000<br>RPM /<br>21,382 RCF<br>Noise Level:<br>52 dB(A)<br>Dimensions<br>in mm<br>(HxWxD):<br>260 x 281 x<br>533<br>Infinitely<br>variable<br>setting from<br>-10 °C to<br>+40 °C<br>Fast Cool<br>function in<br>10 - 15 min<br>to +4 °C<br>Stand by<br>mode<br>maintains<br>the set<br>temperature<br>Automatic<br>refrigeration<br>switch-off<br>when the lid<br>is opened<br>Make:<br>BOECO<br>Germany |                        | Max. rotor capacity:<br>48 x 1.5/2.0 mL, 6 x<br>50 mL, 2 x MTP<br>Max. speed: 30,130 x<br>g (17,500 rpm)<br>Remarkable<br>versatility with 12<br>different rotors<br>Soft touch one-finger<br>lid closure for<br>ergonomic operation<br>Menu-driven, multi-<br>lingual operation<br>menu (English,<br>German, French,<br>Spanish) with large<br>backlit display<br>5 program keys for<br>easy access to routine<br>programs<br>Saves up to 50 user-<br>defined programs<br>Automatic rotor<br>recognition and<br>imbalance detection<br>for maximized<br>operational safety<br>Eppendorf<br>QuickLock® – System<br>for quickly opening<br>and closing the rotor<br>lid<br>5427754008<br>Rotor FA-45-48-11,<br>aerosol tight, incl.<br>rotor lid, for<br>5430/5430R<br>Max. speed: 18,210 x<br>g (12,700 rpm)<br>Max. capacity: 48 x<br>1.5/2.0 mL tubes<br>Aerosol tight for safe<br>centrifugation of<br>hazardous samples<br>Eppendorf<br>QuickLock® lid<br>Compatible with the<br>5430 and 5430R with |                           | brush-less motor with<br>a speed range of<br>18000 rpm universal<br>speed range, RCF<br>23542<br>microcontroller with<br>automatic rotor<br>identification, LCD<br>Display for the<br>preselection of all<br>centrifuge parameters<br>10 each curves of<br>acceleration and<br>deceleration, simple<br>starting, Temperature<br>control range -20 to<br>+40°C, with<br>built in time display,<br>range 0 – 99hr or<br>infinite, Operated<br>on 220 Volts,<br>with following rotors<br>as per tender<br>1-No. angle rotor<br>capacity 44*1.5/2.0<br>ml<br>1-No. angle rotor<br>capacity 12*5ml<br>Model Z320R, Hermle<br>Made in Germany | opening of the lid<br>with one hand,<br>Ergonomically<br>arranged controls<br>and displays,<br>Viewing port in<br>the lid, 10<br>complete running<br>programs can be<br>stored and<br>recalled,<br>Temperature: -20<br>to +40C<br>Safety<br>Metal housing and<br>lid, Centrifuging<br>chamber of<br>stainless steel, lid<br>dropping<br>protection, Lid<br>locking and<br>holding during<br>rotor run,<br>Emergency lid lock<br>release, Motor<br>overheating<br>protection,<br>Chamber<br>overheating<br>protection with<br>MikRO 220R,<br>Imbalance switch-<br>off, Easily<br>exchangeable<br>rotors, Automatic<br>rotor recognition<br>Temperature: -20<br>to +40C<br><br>Specifications:<br>Max Speed:<br>18000rpm, Max<br>RCF: 31514xg,<br>Max capacity: 48 x<br>1.5/2.0ml, Timer:<br>1-99min or<br>continuous, Short<br>cycle: impulse key | 15000 rpm<br>Automatic motor<br>driven lid lock.<br>Active imbalance-<br>identification and cut<br>off<br>Storage up to 99<br>programmes.<br>Pre selection of the<br>running time range 99<br>hr 59 minutes.<br>Temperature range -<br>20°C to 40°C,<br>Standstill cooling,<br>Selection of speed in<br>both rpm and G force.<br>Quick Key for short<br>Runs<br>CFC Free Refrigeration<br>System<br>With Angle rotor 44 x<br>1.5/2.0 ml tubes<br>Speed 15000rpm<br>Complete with above<br>Rotor, Operated on<br>220 Volts,<br>Model Z216MK,<br>Hermle Germany<br><br>OPTIONAL FOR<br>ABOVE<br><br>i. Combi angle rotor<br>for 24 x 1.5ml tubes<br>and<br>4 x 8 place PCR<br>Stripes Speed<br>15000rpm<br><br>ii. Angle rotor 12 x 5<br>ml Reaction tubes<br>Speed 14500rpm | Digital<br>microprocessor<br>controlled with<br>large LCD<br>display<br>Speed range<br>200 to 15000<br>rpm<br>Automatic<br>motor driven lid<br>lock.<br>Active<br>imbalance-<br>identification<br>and cut off<br>Storage up to<br>99<br>programmes.<br>Pre selection of<br>the running<br>time range 99<br>hr 59 minutes.<br>Quick Key for<br>short Runs<br>With Angle<br>rotor 44 x<br>1.5/2.0 ml<br>tubes Speed<br>15000rpm<br>Complete with<br>above Rotor,<br>Operated on<br>220 Volts,<br>Model Z216MK,<br>Hermle<br>Germany.<br><br>OPTIONAL FOR<br>ABOVE<br><br>i. Combi-angle<br>rotor for 24 x<br>1.5ml tubes and<br>4 x 8 place PCR<br>Stripes Speed<br>15000rpm<br><br>ii. Angle rotor | 200 to 15000<br>rpm,<br>Maximum<br>RCF 21380 x g<br>Capacity 24 x<br>1.5 ml or as<br>per rotor,<br>with<br>following<br>features:<br>- Automatic<br>motor driven<br>lid lock.<br>- Maintenance<br>free induction<br>drive<br>- Active<br>imbalance-<br>identification<br>and cut off<br>- Storage up<br>to 99<br>programmes.<br>- Pre<br>selection of<br>the running<br>time range 99<br>hr 59<br>minutes.<br>- Temperature<br>range -20°C<br>to 40°C,<br>- Standstill<br>cooling.<br>- Selection of<br>speed in both<br>rpm and G-<br>force.<br>- Quick Key<br>for short<br>Runs<br>- CFC Free<br>Refrigeration<br>System<br>- Manufacture | Stores<br>• S U<br>Enterpriz<br>es<br>• Key<br>Scientific<br>Corporati<br>ons | 20 °C to<br>+40 °C /<br>provided –<br>10 °C to<br>+40 °C<br>aximum<br>capacity<br>required<br>(Rotor) 44<br>x 1.5 /<br>2.0ml; 12 x<br>5 ml<br>/ not<br>provided<br>•RAAB<br>Scientific<br>Solutions<br>Authorizati<br>on letter is<br>not<br>attached<br>•Rays<br>Technologi<br>es<br>Authorizati<br>on letter is<br>not<br>attached |

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                   | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                   | RAAB Scientific<br>Solutions | RAYs<br>Technologies                                  | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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| <p>Temperature Range (-4 °F – 104 °F) (-20 °C – 40 °C)</p> <p>Safety Features</p> <p>Single touch lid-closer system</p> <p>advanced Motorized prevents centrifuge from opening</p> <p>Cooling Built-in Fast Pre-cooling option in only 8-10 min (deponed on rotor type)</p> <p>Protection Technology Advance</p> <p>Imbalance sensor that stops the centrifuge if the any imbalanced or sudden shock occurs, protecting your samples</p> <p>Stopping Centrifuge pre-selected running time has ended the centrifuge will stop automatically reducing energy consumption and extending life of system.</p> <p>Maximum Capacity (Rotor) 44 x 1.5 / 2.0ml; 12 x 5 ml</p> <p>Program memories: 99</p> <p>Germany or UK or Japan or USA</p> |              |                          |                            |                        | <p>serial numbers at or above 16,000. For other numbers a software update is needed. Please contact your sales representative</p> <p>Make: Eppendorf Germany AG</p> |                           |                               | <p>for short cycle. Temperature: -20 to +40C</p> <p>Rotor # 1158-L</p> <p>Speed: 18000 rpm, RCF: 31514xg, Capacity: 48 x 1.5/2ml</p> <p>Rotor # 1015</p> <p>Speed: 6000 rpm, RCF: 4146xg, Capacity: 12 x 5ml</p> <p>Model: MICRO 220R</p> <p>Hettich Germany</p> |                              | <p>12 x 5 ml Reaction tubes</p> <p>Speed 14500rpm</p> | <p>d according to international safety regulations</p> <p>- 10 acceleration &amp; deceleration rates</p> <p>- Audible signal at the end of each run</p> <p>1-No. Angle rotor 44 x 1.5/2.0 ml tubes</p> <p>Speed 15000rpm</p> <p>Complete with above Rotor, Operated on 220 Volts, Model Z216MK, Hermle Made in Germany.</p> <p>IF NEEDED FOR ABOVE</p> <p>a. Combi-angle rotor for 24 x 1.5/2.0 ml tubes and 4 x 8place PCR Stripes</p> <p>Speed 15000rpm</p> <p>b. Angle rotor 12 x 5 ml Reaction</p> |                              |                                 |

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| Item | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                      | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Technica<br>lly<br>Qualified                                                                                                          | Technically<br>Disqualifie<br>d                                                                                                                                 |
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|      |              |                          |                            |                                                                                                                                                                                                                                                                                                                                                             |                   |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | tubes Speed<br>14500rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                       |                                                                                                                                                                 |
| 11   | 2            |                          | Not Quoted                 | Cold Cabinet<br>Model No / Cat<br># STF-395P<br>Specification:<br>Temperature<br>control: 2°-8°C,<br>Temperature<br>resolution (0.1°<br>C increments),<br>Interior<br>dimensions:<br>580W x 533 x<br>1352 mm,<br>External<br>Dimensions<br>650W x 673 x<br>1992 mm,<br>Effective<br>capacity: 395<br>liters, Net<br>Weight<br>95/108Kg<br>Make:<br>Stalwart | Not Quoted        | Not Quoted                | Cold Cabinet<br>Pharmacy<br>Refrigerator<br>digital<br>microprocessor<br>controlled<br>temperature<br>refrigerator with<br>holding capacity of<br>350 liters<br>and 5 pieces wired<br>storage shelves.<br>Temperature Range :<br>2 °C to 15 °C<br>Temperature Set<br>Point : + 4 °C<br>Number of Wire<br>shelves : 5<br>Net volume : 350 L<br>Gross Volume : 390 L<br>Inner Surface Material<br>: CR-Ni 304<br>Output : USB<br>Voltage Supply : 195 V<br>to 230 V, 50 Hz<br>Internal Dimensions<br>(W x L x H) : 516 x 543<br>x 1390 mm<br>External Dimensions<br>(W x L x H) : 600 x 640<br>x 2000 mm<br>Weight : 147 kg<br>Model LPRF-A11<br>Labtron UK | Advantages of the<br>Smart controller:<br>4,3", clear, full<br>colour touch<br>screen<br>LAN, USB ports for<br>data transfer<br>Multi-segment<br>time and<br>temperature<br>programs<br>Visual and sound<br>alarm<br>Internal memory<br>for programs and<br>data storage<br>Event registry<br>Quick change of<br>program<br>parameters<br>Alarm Bar<br>Operating with<br>gloves on<br><br>Controller Smart<br>Display 4.3" +<br>touch screen<br>Network LAN<br>USB YES (saving<br>registration data<br>saving events)<br>Keypad Numeric<br>Main Screen<br>Dashboard (all<br>relevant data<br>visible from one<br>main window)<br>Programs 5<br>Program name | Cold Cabinet<br>External dimensions<br>610 x 716 x 1886(W x<br>D x H)mm<br>Internal dimensions<br>516 x 550 x 1467(W x<br>D x H) mm<br>Volume 400 Liters<br>Temperature control<br>range +4°C to +14°C<br>Controller<br>Microprocessor with<br>non-volatile memory<br>Temperature display<br>Digital<br>Temperature sensor<br>Thermistor<br>Cooling method<br>Forced cool air<br>circulation<br>Defrost method<br>Timer Cycle defrost<br>Refrigerant HFC<br>(CFC-Free)<br>Insulation Rigid<br>polyurethane foamed<br>insulation (CFC-free)<br>Exterior material<br>Painted steel<br>Interior material<br>Vacuum molding (ABS<br>resin)<br>Outer doors 1<br>(Plastic sash with 2-<br>layer glass window)<br>Outer door lock Y<br>(Cylinder key lock)<br>Shelves 5<br>(polyethylene-coated | Technical Data:<br>External<br>dimensions 610<br>x 716 x 1886(W<br>x D x H)mm<br>Internal<br>dimensions<br>516 x 550 x<br>1467(W x D x H)<br>mm<br>Volume 400<br>Liters<br>Temperature<br>control range<br>+4°C to +14°C<br>Controller<br>Microprocessor<br>with non-<br>volatile<br>memory<br>Temperature<br>display Digital<br>Temperature<br>sensor<br>Thermistor<br>Cooling method<br>Forced cool air<br>circulation<br>Defrost method<br>Timer Cycle<br>defrost<br>Refrigerant<br>HFC (CFC-Free)<br>Insulation<br>Rigid<br>polyurethane<br>foamed<br>insulation (CFC-<br>free) | Temperature<br>control: 2°-<br>14°C<br>Temperature<br>display Digital<br>(1° C<br>increments)<br>Interior<br>dimensions:<br>720W x 350D<br>x 1435H mm<br>External<br>Dimensions<br>800W x 465D<br>x 1800H mm<br>Effective<br>capacity: 340<br>liters (12.0<br>cu.ft.)<br>Net Weight<br>100Kg<br>(220lbs)<br>Internal<br>cabinet:<br>Stainless<br>steel.<br>Insulation<br>polyurethane<br>foam<br>Doors:<br>Sliding glass<br>doors,<br>double-paned<br>glass<br>With heat-<br>reflective film<br>Shelves:<br>Hard Steel<br>Wire | •New<br>Chemical<br>Centre:<br>•Shalima<br>r<br>Scientific<br>Store<br>• SU<br>Enterpriz<br>es Key<br>•Scientifi<br>c corporati<br>on | •RAAB<br>Scientific<br>Solutions:<br>Authorizati<br>on letter<br>not<br>attached<br>•Rays<br>Technologi<br>es<br>Authorizati<br>on letter is<br>not<br>attached |

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RAAB Scientific<br>Solutions                                                                                                                                              | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                             | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                     | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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| <p>foam, glass doors, double-paned glass with heat-reflective film, Shelves: Hard Steel Wire Lighting / Casters: LED/2 casters Compressor Hermetic type, 160 W Refrigerant HFC, Defrosting cyclical defrosting &amp; evaporator temp. detection system, Defrosting heaters 101 W, Door ajar alarm: Buzzer/door ajar lamp, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached.</p> |              |                          |                            |                        |                   |                           |                               | <p>Free number assigned<br/>Priority<br/>Parameters<br/>Segments 6<br/>Data registry max. 10,000 measurement data stored for a maximum of 6 months<br/>Events registry<br/>Yes<br/>Statistics YES - only the current cycle<br/>Temperature protection class 2.0<br/>Device name<br/>Fixed (serial number)<br/>Alarm Bar Yes<br/>Quick change Yes</p> <p>Type: Digital microprocessor controlled<br/>Housing Stainless steel<br/>Interior stainless steel OH17 (DIN 1.4016) interior<br/>Door: solid door with internal glass door or Glass Door<br/>Refrigeration type<br/>Forced air circulation.<br/>Capacity: 400 liters<br/>Temperature range: 0°C to +15°C<br/>Temperature resolution: 0.1°C temperature</p> | <p>wire<br/>Casters 4 (2 levelling foot)<br/>Alarms High temperature &amp; Low temperature, Operated on 220Volts Model LPR-400-PE PHCbi (New Name of Panasonic) Japan</p> | <p>Exterior material<br/>Painted steel<br/>Interior material<br/>Vacuum molding (ABS resin)<br/>Outer doors 1 (Plastic sash with 2-layer glass window)<br/>Outer door lock Y (Cylinder key lock)<br/>Shelves 5 (polyethylene-coated wire<br/>Casters 4 (2 levelling foot)<br/>Alarms High temperature &amp; Low temperature</p> <p>Operated on 220Volts Model LPR-400-PE PHCbi (New Name of Panasonic) Japan</p> | <p>Lighting / Casters:<br/>LED/2 casters<br/>Compressor<br/>Hermetic type, 160 W Refrigerant HFC<br/>Defrosting cyclical defrosting &amp; evaporator temp. detection system<br/>Defrosting heaters 101 W<br/>Door ajar alarm: Buzzer/door ajar lamp<br/>Complete as above MPR-S313<br/>Panasonic / PHCbi (New Name of Panasonic) Made in Japan</p> |                              |                                 |

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| Item | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                                                                                                                                                        | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                              | RAVS<br>Technologies                                                                                                                                                                                                                                                                                                                                                            | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                | Technica<br>lly<br>Qualified                                                                                                                                                                                                                                                                                                | Technically<br>Disqualifie<br>d                                                                                              |                                                                                                                                                                          |
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|      |              |                          |                            |                                                                                                                                                                                                                                                                                                               |                   |                           |                               | protection class:<br>1.0<br>Shelves: 2<br>stainless steel<br>wire shelves,<br>adjustable slides,<br>max unit<br>workload 20kg<br>Access port $\phi$ =<br>30 mm<br>Memory: Test<br>results memory<br>Port: USB<br>Lock: Door lock<br>Alarm: Open<br>door alarm<br>Light: internal<br>LED light<br><br>Model: CHL 6 CS<br>Smart<br>Poleko – Poland<br>(Europe)                                                  |                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                             |                                                                                                                              |                                                                                                                                                                          |
| 12   |              | 3                        | Not Quoted                 | Boeco<br>Analytical<br>Balance<br>Max.<br>capacity 82<br>/220 g<br>Minimal load<br>0.001 g<br>Readability<br>0.00001/0.0<br>001 g<br>Tare range -<br>220 g<br>Repeatability<br>0.000015/0.<br>0001 g<br>Linearity $\pm$<br>0.00006/0.0<br>002 g<br>Pan size<br>Open work<br>pan $\phi$ 90 mm<br>Stabilization | Not Quoted        | Not Quoted                | Not Quoted                    | ANALYTICAL BALANCE<br>WITH INTERNAL AUTO<br>CALIBRATION<br>MODEL NO:<br>JJ224BF<br>Height<br>adjustable<br>feet<br>TECHNICAL<br>SPECIFICATIONS:Capa<br>city: 220 gReadout d:<br>0.1 mg<br>(0.0001g)Reproducibil<br>ity: 2 dLinearity (g):<br>$\pm 3$ dTare Range: 220<br>gWeighting Plate: $\Phi$<br>80 mmInterface:<br>RS232Dimension<br>(WxLxH): 220 360<br>x345 mmPower<br>Supply: 230 VM/s<br>G&G-GERMANY | Type: Digital<br>Microprocessor<br>ControlledCapacit<br>y: 220<br>g.Readability:<br>0.1mg<br>(0.0001g).Tare<br>range: 220 gm.<br>Repeatability: < +<br>0.1 mg<br>(0.0001gm)Lineari<br>ty: < + 0.2 mg<br>(0.0002gm)Respo<br>nse time: 4<br>Second.Pan size<br>(dia): 90<br>mmCalibration:<br>Internal.Weighing<br>Below Hook:<br>Integral Weighing<br>Below Hook<br>Weighing Units:<br>mg, g, ct, oz, dwt, | Electronic Analytical<br>Balance • Digital<br>Microprocessor<br>Controlled • With<br>Latest UniBlock<br>Technology •<br>Automatic calibration<br>by pressing keys with<br>internal calibration<br>weight Technical:<br>Weighting Capacity:<br>220gm Minimum<br>display: 0.1mg Pan<br>size (mm): $\phi$ 91<br>approx. Operated on<br>220Volts, Model ATX-<br>224 Shimadzu, Japan | Electronic<br>Analytical<br>Balance Digital<br>Microprocessor<br>Controlled With<br>Latest UniBlock<br>Technology,<br>UniBlock<br>designs<br>replaces 70<br>parts of<br>Electromagnetic<br>balances and<br>ensures stable<br>results.<br>Technical<br>Specification:<br>Weighting<br>Capacity:<br>220gm<br>Minimum<br>display:<br>0.1mg Pan<br>size (mm):<br>$\phi$ 91 approx.<br>Operated on | • Digital<br>Microprocess<br>or<br>Controlled •<br>With Latest<br>UniBlock<br>Technology •<br>Automatic<br>calibration by<br>pressing keys<br>with internal<br>calibration<br>weight<br>Technical:<br>Weighting<br>Capacity:<br>220gm<br>Minimum<br>display:<br>0.1mg Pan<br>size (mm):<br>$\phi$ 91 approx.<br>Operated on | • Sindh<br>Medical<br>Stores •<br>Shalimar<br>Scientific<br>Stores • S<br>U<br>Enterpriz<br>es<br>• Rays<br>Technolo<br>gies | • RAAB<br>Scientific<br>SolutionsAu<br>thorization<br>letter is not<br>attached •<br>Key<br>Scientific<br>Corporatio<br>nsAuthoriz<br>ation letter<br>is not<br>attached |

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| Item | Product                                                                                                                                                                                                                                                                                                                 | Manufacturer | Medical Stores                                                                                                                                                                               | Chemical Centre | H. A. Shah & Sons | International | Shalimar Scientific Stores                                                                                                                                                                                             | CU Enterprises                                                                                                                                                                                                         | RAAS Scientific Solutions                                                                                                                                                                  | RAAS Technologies                                                                                                                                                                                                                                                                                                                                                                                                          | Key Scientific Corporations                                                                                  | Technically Qualified                                                                                                                             | Technically Disqualified |
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| 13   | Heating Mantle with Stirrer: Temperature 450°C, Electrothermal, Capacity 5000ml, Max Flask Size: (ml) 5000, Material: Aluminum, Max Stirrer Speed (rpm) 2000, Max temperature (°C)                                                                                                                                      | 2            | Not Quoted                                                                                                                                                                                   | Not Quoted      | Not Quoted        | Not Quoted    | Heating Mantle with Stirrer Temperature 450°C, Electrothermal, Capacity 5000ml, Max Flask 5000 ml, Material: Aluminum, Max Stirrer Speed rpm 2000, Max temperature 842 F, Max temperature 450C, Power (VAC) 230, Power | Not Quoted                                                                                                                                                                                                             | Heating Mantle Temperature 450°C with stirrer Key Features • Cool-to-the-touch design • Max element temperature 450°C • Built-in energy regulator • Replaceable insulated heater cartridge | Capacity 5000ml • Cool-to-the-touch design • Max element temperature 450°C • Built-in energy regulator • Replaceable insulated heater cartridge                                                                                                                                                                                                                                                                            | Capacity 5000ml • Temperature 450°C • Built-in energy regulator • Replaceable insulated heater cartridge • A | • Shalimar Scientific Stores • RAAS Scientific Solutions Authorized on letter not attached • Key Scientific Corporation's Authorized on letter is |                          |
|      | weight- Easy setting, expanded piece counting function comparator function, formulation modes- Windows direct communication function, Complete unit, operated on 220Volts, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/to rejoin principals must be attached. |              | time 6 / 3.5 sec Calibration: Internal (automatic) interface: 2 x RS232, 2 x USB (A+B), WIFI Display: 5" colour capacitive touch-screen working temperature +10°C - +40°C Make BOECO Germany |                 |                   |               |                                                                                                                                                                                                                        | tical, tola, mommes, baht, grain, mesghal, Newton, oz, tealsOperating Temp: -10 to +40C, 10 - 80%/HDraft Shield: All glass draught shield with 3 sliding doorsCommunication: RS232Display: LCDModel: PR 2240haus - USA |                                                                                                                                                                                            | 991 approx. Extra Feature: Overload Protection Features: - Automatic calibration by pressing keys with internal calibration weight - Easy setting, expanded piece counting function comparator function, formulation modes - Windows direct communication function, send balance data to excel without any data software with optional RS232C interface. Complete unit, operated on 220Volts, Model ATX-224Shimadzu, Japan | 220V, Model ATX-224 Shimadzu, Japan                                                                          |                                                                                                                                                   |                          |

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| Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Position | Supplier | New Chemical Centre | H. A. Shah & Sons | Kansach International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                          | SU Enterprises | ICAD Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                     | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                           | Technically Qualified | Technically Disqualified |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|---------------------|-------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|
| <p>double fuses for extra safety</p> <ul style="list-style-type: none"> <li>• Bracket for 1.3cm support rods (but not including the support rods)</li> <li>Flask capacity 500ml - 250ml, quantity required(5)</li> <li>Material: Polypropylene outer casing, Max element temperature: 450°C</li> <li>Dimensions (d x w x h), mm 260 x 175 x 133, Flask capacity 500-1000ml, quantity required(3)</li> <li>Material: Polypropylene outer casing, Max element temperature: 450°C</li> <li>Dimensions (d x w x h), mm 310 x 238 x 157, Flask capacity 2000ml, quantity required(2)</li> <li>Material: Polypropylene outer casing, Max element temperature: 450°C</li> <li>Dimensions (d x w x h), mm 400 x 350 x 197</li> <li>Germany or UK or Japan or USA or equivalent</li> <li>Note: Valid</li> </ul> |          |          |                     |                   |                       | <p>England</p> <p>b) Heating Mantle, flask capacity 1000ml EMA0100/CEB England</p> <p>c) Heating Mantle, flask capacity 250ml EMA0250/CEB England</p> <p>d) Heating Mantle, flask capacity 500ml EMA0500/CEB England</p> <p>e) Heating Mantle, flask capacity 1000ml EMA1000/CEB England</p> <p>f) Heating Mantle, flask capacity 2000ml EMA2000/CEB England</p> <p>Electro thermal MIS England</p> |                | <p>resistant polypropylene outer casing</p> <ul style="list-style-type: none"> <li>• A grounded earth screen and double fuses for added safety</li> <li>Capacity 500ml</li> <li>Model CMUA/500/CE</li> <li>Electrothermal Made in England.</li> <li>b. Heating Mantle Temperature 450°C with Stirrer</li> <li>The EM Electromantle series features a durable, chemically resistant, polypropylene outer housing that minimises damage from spills. They allow maximum heat transfer with minimum risk for flask breakage.</li> <li>Key Features</li> <ul style="list-style-type: none"> <li>• Cool-to-the-touch design</li> <li>• Max element temperature 450°C</li> <li>• Built-in energy regulator</li> <li>• Replaceable insulated heater cartridge</li> <li>• Indicator lamps for power and heater operation</li> <li>• A chemically resistant polypropylene outer casing</li> <li>• A grounded earth screen and double fuses for added safety</li> </ul> </ul> | <p>b. Heating Mantle with Stirrer Capacity 2000ml</p> <ul style="list-style-type: none"> <li>• Cool-to-the-touch design</li> <li>• Max element temperature 450°C</li> <li>• Built-in energy regulator</li> <li>• Replaceable insulated heater cartridge</li> <li>• A chemically resistant polypropylene outer casing</li> <li>• A grounded earth screen and double fuses for added safety</li> </ul> <p>Model CMUA/2000/CE Electrothermal England</p> | <p>b. Heating Mantle with Stirrer Capacity 2000ml</p> <ul style="list-style-type: none"> <li>• Temperature 450°C</li> <li>• Built-in energy regulator</li> <li>• Replaceable insulated heater cartridge</li> <li>• A chemically resistant polypropylene outer casing</li> <li>• A grounded earth screen and double fuses for added safety</li> </ul> <p>Model CMUA/2000/CE Electrothermal England</p> |                       |                          |

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| Q  | For its Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Single Medical Scores | New Chemical Centre | H. A. Singh & Sons | International | Shalimar Scientific Scores | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                      | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                      | RAAB Technologies                                                                                                                                                                                                                                                                                                                                                  | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                             | Technically Qualified                                                                                                                                                                                                                                                                                                                                | Technically Disqualified                      |                                                                                                                                              |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------|--------------------|---------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
|    | authorized certificate from the manufacturers/foreign principals must be attached.                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |                     |                    |               |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                     | Capacity 2000ml Model CMUA/2000/CE Electrothermal Made in England.                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                      |                                               |                                                                                                                                              |
| 15 | UV Lamp corrosion-resistant, specular-aluminum reflector optimizes UV irradiance. A LONG LIFE™ filter glass for higher initial UV transmission and maximum resistance to solarization. Color-coded on/off switches, conveniently located at the top of the units anodized-aluminum lamp housings extremely rugged and durable. Long wave (UV-A, 365nm) / Short wave (UV-C, 254nm) UV Tube(s): One 6-watt BL, BLE-6T365, One 6-watt SW, BLE-6254S, Germany or UK or Japan or USA or equivalent. Note: Valid authorized certificate from the | 3                     | Not Quoted          | Not Quoted         | Not Quoted    | Not Quoted                 | UV Lamp Hand held UV Lamp for Thin Layer chromatography The BioGlow™ series of Handheld UV Lamps provides UV radiation with wavelengths of 365nm or 254nm, or a combination of both 254nm and 365nm. The UV Lamps represent a technical innovation in the evolutionary process of UV lamps, with a unique built in position device which automatically protects operators from exposure to UV radiation. Model BG-A Crystal Germany | Application: Short wavelength (254nm); Fluorescence technique, fluorochrometry, mineralogy, photopolymerization, mutation studies, toxicology. Long wavelength (365nm); TLC plate 3 viewing, fluorochrometry, food inspection, quality control, titration, pesticide analysis, mineralogy. Compact UV Lamp (Handy) Wavelength 254 & 365nm. Power: 220VAC, 50Hz. Model: LF-204LSUVI Tech - U.K. | Hand Held UV Lamp corrosion-resistant, specular-aluminum reflector optimizes UV irradiance. A unique LONG LIFE™ filter glass for higher initial UV transmission and maximum resistance to solarization. Long wave (UV-A, 365nm) / Short wave (UV-C, 254nm) UV Tube(s): One 6-watt BL, BLE-6T365, One 6-watt SW, BLE-6254S Model ENF-260C, Spectronics, Made in USA | Hand-Held Dual Wave Length UV Lamp • A corrosion-resistant, specular-aluminum reflector optimizes UV irradiance. A unique LONG LIFE™ filter glass for higher initial UV transmission and maximum resistance to solarization. Long wave (UV-A, 365nm) / Short wave (UV-C, 254nm) UV Tube(s): One 6-watt BL, BLE-6T365, One 6-watt SW, BLE-6254S Model ENF-260C, Spectronics, Made in USA | • A corrosion-resistant, specular-aluminum reflector optimizes UV irradiance. A unique LONG LIFE™ filter glass for higher initial UV transmission and maximum resistance to solarization. Long wave (UV-A, 365nm) / Short wave (UV-C, 254nm) UV Tube(s): One 6-watt BL, BLE-6T365, One 6-watt SW, BLE-6254S Model ENF-260C, Spectronics, Made in USA | • Shalimar Scientific Scores • SU Enterprises | • RAAB Scientific Solutions • Authorizations letter not attached • Key Scientific Corporation is not attached • Technologically Disqualified |

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|    |   | Technology                                                                                                                                                                                                                                                                                    | Sindh Medical Stores | New Chemical Centre                                                                                                                                                               | H. A. Shah & Sons                                                                            | International | Scientific Stores                                                                                                                                                                                                                                                                                                                                      | Enterprises                                                                                                                                                                                                                                                             | Scientific Solutions                                                                                                                                           | Technology                                                                                                                                                                                                                                                                                                        | Scientific Corporations                                  | Technically Qualified                                                                                                                                        | Technically Disqualified                                                                                                                                                                                  |
|----|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |   | Various functions available as standard, Capacity 300gm, Readability 0.01gm, Pan Size 110mm, battery operated as well as operated on 220 volts, Germany or UK or Japan or USA or equivalent<br>Note: Valid authorized certificate from the manufacturers/foreign principals must be attached. |                      | Operational temperature : 5 °C - 25 °C<br>Calibration system: External calibration<br>Interface: RS232<br>Display Dual LCD (Optional)<br>Make: Labotronics scientific Ltd, Canada |                                                                                              |               | external Height adjustable feet ,weighing below hook operated on 220 volts<br>Model JJ300A G&G Germany                                                                                                                                                                                                                                                 | Pan size (dia): 120 mm<br>Calibration: External.<br>Weighing Below Hook: Integral<br>Weighing Below Hook<br>Weighing Units: g, Newton,<br>Operating Temp: 10 to +40C, 30 – 90%RH<br>Communication: RS232<br>Draft Shield: Included<br><br>Model: TA 302<br>Ohaus - USA. |                                                                                                                                                                | conversions and various functions available as standard<br>Capacity 300gm, Readability 0.01gm, Pan Size 110mm, battery operated as well as operated on 220 volts, Model ELB-300, Shimadzu, Japan                                                                                                                  | well as operated on 220v, Model ELB-300, Shimadzu, Japan | Enterprises                                                                                                                                                  | Authorization letter is not attached                                                                                                                                                                      |
| 17 | 2 | Micropipettes: Measuring Range 0.2 to 2µl, Accuracy ±0.014µl, Germany or UK or Japan or USA or equivalent                                                                                                                                                                                     | Not Quoted           | Not Quoted                                                                                                                                                                        | Micro pipettes 3120000011 Research plus, adjustable 0.1- 2.5µl<br>Make: Eppendorf Germany AG | Not Quoted    | Micro pipettes Gilson Adjustable built to last constructed of stainless steel and PVDF with unique dry seal technology thick body robust accurate and precise individually calibrated, Tip Holders and Tip Ejectors are fully Auto cleavable<br>Measuring Range 0.2 to 2µl, Accuracy ±0.014µl, Model P2N Gilson Made in France<br>Supplier LMS Germany | Micropipette Model AO-2 Range Volume 0.1 - 2µL<br><br>Ohaus - USA                                                                                                                                                                                                       | Pipette PIPETMAN G offers legendary accuracy, precision and performance with the highest comfort. Measuring Range 0.2 to 2µl, Model P2G, Gilson Made in France | PIPETMAN G offers one of the lowest pipetting forces available on the market for hours of comfortable pipetting. PIPETMAN G offers legendary accuracy, precision and performance with the highest comfort. Ranges as follows:-<br>Measuring Range 0.2 to 2µl, Accuracy ±0.014µl, Model P2G, Gilson Made in France | Measuring Range 0.2 to 2µl, Model P2G, Gilson France     | <ul style="list-style-type: none"> <li>Shalimar Scientific Stores</li> <li>S U Enterprises</li> <li>Rays Technologies</li> <li>HA Shah &amp; Sons</li> </ul> | <ul style="list-style-type: none"> <li>RAAB Scientific Solutions</li> <li>Authorization letter not attached</li> <li>Key Scientific Corporations</li> <li>Authorization letter is not attached</li> </ul> |

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| Q. No. | Technologies                                                                                                                                     | Medical Stores | Centre     | International | Stores     | Solutions                                                                            | Technologies | Key Corporations                                                                                                                                                                                                                                           | Technically Qualified                                          | Technically Disqualified                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                            |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                 |
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| 22     | Micro pipette Gilson multichannel pipette, Volume: 20 to 200 µL Systematic Error: ± 0.50 to ±2.00 µL Germany or UK or Japan or USA or equivalent | 1              | Not Quoted | Not Quoted    | Not Quoted | Micro pipette 802000001 Research plus, 8 channel 20-200µl Make: Eppendorf Germany AG | Not Quoted   | Micro pipettes Gilson Multichannel Pipette, Volume 20 to 200 µL and lightweight Volume locking system, Color-coded Push button, Measuring range 20 to 200µl, Systematic Error: ± 0.50 to ±2.00 µL Model P 8x200 Gilson Made in France Supplier LMS Germany | Micro pipette Model Range Volume 20-200µl 20-200µl Chaus - USA | Multi Channel Pipette PREMIUM PIPETTING COMFORT PIPETMAN G offers one of the lowest pipetting forces with a redesigned piston assembly system and high-quality piston grease, PIPETMAN G guarantees hours of comfortable pipetting RELIABLE RESULTS PIPETMAN G relies on the legendary accuracy, precision, and reliability of PIPETMAN®, with improved pipetting comfort. BUILT-TO-LAST AND CONVENIENT Volume: 20 to 200 µL Model 8x200G, Eight Channel Gilson France | precision and performance with the highest comfort. Measuring Range 100 to 1000µl, Accuracy ±1.5µl, Model P1000G, Gilson Made in France. | PREMIUM PIPETTING COMFORT PIPETMAN G offers one of the lowest pipetting forces with a redesigned piston assembly system and high-quality piston grease, PIPETMAN G guarantees hours of comfortable pipetting | RELIABLE RESULTS PIPETMAN G relies on the legendary accuracy, precision, and reliability of PIPETMAN®, with improved pipetting comfort. BUILT-TO-LAST AND CONVENIENT Made of PVDF and stainless steel, | Multi-Channel Pipette Eight Channel Lowest pipetting forces with a redesigned piston assembly system and high-quality piston grease, PIPETMAN G guarantees hours of comfortable pipetting Volume: 20 to 200 µL Model 8x200G, Gilson France | <ul style="list-style-type: none"><li>Shalimar Scientific Stores</li><li>S U Enterprises</li><li>Rays Technologies</li></ul> | <ul style="list-style-type: none"><li>HA Shan &amp; Sons</li><li>Measuring range is not according to required specifications required 20 to 200 µL/provide d 30- 300µl</li><li>RAAB Scientific Solutions</li><li>Authorization letter not attached</li><li>Key Scientific Corporation ns</li><li>Authorization letter is not attached</li></ul> |

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| Product                                                                                                                                                                                                                                                                                                                                                                                                                               | Technology | Medical Stores                                                                                                                                                                                                                                                                       | Centre                                                                                                                                                      | International                                                                                                                                                                        | Stores                                                                                                                                                                                                                                                                                                                                               | Solutions                                                                                                                                                                                                                                                                             | Technology                                                                                                                                                                                                          | Corporations                                                                                                                                                                                                                                                                                                                                                             | Qualified                                                                                                                                                                                                                                                                            | Disqualified                                                                                                                                                                   |                                                                                                      |                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Setting Digital, Heating bath, Temperature control Electronics / Digital Secondary overtemp. Cut off (°C) 250, Material heating bath (mm) Stainless steel AISI 316L Volume heating bath (l) 4.5 litres, instrument is supplied with Nitre evaporating and Receiving operated on 220 Volts, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached. |            | Temperature, rotations, vacuum Gradient settings: Temperature, pressure Temperature unit selection: °C, °K Pressure units selections: hPa, Torr Cooler condensation size: 1200 sq cm (double spiral) Switched vacuum pump: output max 650 VA, input max. 2000 VA Make: BOECO Germany | Wiggins Germany                                                                                                                                             |                                                                                                                                                                                      | 2. Temperature control mode: PID with digital display 3. Overheat cut off protection temp.: Built in 4. Temperature stability: ±1°C 5. Volume capacity: 5 liters 6. Material: Stainless steel 7. Heating power: 1300W 8. Safety: Automatically powered OFF when liquid is absent 9. Power supply: 230V ±10% - 50/60Hz ±5% Model EV400H LabTech Italy | (LCD) Temperature accuracy: ±1°C (Water) 12°C (Oil) Heating power 1300 Watts Bath diameter 250 mm Bath volume 5 Lt Model: EV400 Tough LabTech SRL – Italy                                                                                                                             | Volume heating bath 4.5 l Complete unit with Glassware set G1 Operated on 220 Volts, Model HEI VAP CORE HU/G1, Heidolph Made in Germany                                                                             | setting 3.5" LCD Display Heating bath temperature control electronic / digital Secondary overtemp. cut off 250 °C Material heating bath stainless steel AISI 316L Diameter heating bath 250 mm Volume heating bath 4.5 l Instrument is supplied with Glassware set G1 Complete unit as above, Operated on 220 Volts, Model HEI VAP CORE HU/G1, Heidolph Made in Germany. | temperature Bath temperature setting 3.5" LCD Display Heating bath temperature control electronic / digital Secondary overtemp. cut off 250 °C Material heating bath stainless steel AISI 316L Volume heating bath 4.5 l Operated on 220 Volts, Model Hei Vap Core, Heidolph Germany | bath temperature required (°C) 20 – 210/provided, (°C) 180,                                                                                                                    |                                                                                                      |                                                                                                                                                 |
| 24 Rotary Evaporator Vacuum Pump, PTFE Diaphragm Chemistry High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, a, made of Chemically Resistant Fluoro plastics . PTFE Diaphragms Gas ballast Valve for                                                                                                                                                                                                        | 2          | Not Quoted                                                                                                                                                                                                                                                                           | Chemical Resistant Vacuum Pump Gas tight, leakage rate approx. 6 x 10-3 mbar x l/s Maintenance-free ATEX-compliant in accordance with ATEX II 2G IIB+H2 T3X | Rotary Evaporator Vacuum Pump Model No. /Cat # C519 Order # 169510 power 220 V, max. power 250 W, max. current 2.4 A, max. vacuum 8 mbar, max. flow rate 41 L/ min, motor speed 1700 | Not Quoted                                                                                                                                                                                                                                                                                                                                           | Vacuum Pump PTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, all pumping parts in contact with pumped media are made of Chemically Resistant Fluoroplastics . Technical | LabTech pumps are specifically designed for laboratory operations to meet the highest standard of precision, reliability, and ease of use. Pumping speed: 30L/min Pumping Speed: 18liters / minute Vacuum pressure: | Vacuum Pump PTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, all pumping parts in contact with pumped media are made of Chemically Resistant Fluoro plastics. PTFE Diaphragms increase                                                                     | Vacuum Pump PTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators,                                                                                                           | 24. Vacuum Pump PTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, | • Shalimar Scientific Stores • RAAB Scientific Solutions • Sindh Medical Store • New Chemical Centre | • Key Scientific Corporations: Authorization letter is not attached • Rays Technologies Authorization letter is not attached, • SU Enterprises; |

Chairperson *Sai-Aj* Member *Masez* Member *Member* Member *Member* Member *Member*



| R<br>Q<br>ty | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Sindh<br>Medical<br>Stores                                                                                                                                                                                                   | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                     | H. A. Shah & Sons | Kamstech<br>International | Shallmar Scientific<br>Stores                                                                                                                                                                                                                           | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                         | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RAVS<br>Technologies                                                                                                                                                                                                                                                                                                                                         | Key Scientific<br>Corporations                                                                                                                                                                                                   | Technica<br>lly<br>Qualified                                                                                                                                                                                              | Technically<br>Disqualifie<br>d                                                                                                              |                                                                                                                                                                                                       |
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|              | Continuous<br>Condensate<br>Purge with Built-in<br>manual Vacuum<br>Regulator Valve<br>with Lid Gauge<br>for Adjustment of<br>Pumping Speed,<br>Number of Head<br>/ Stages 2,<br>Maximum<br>Pumping Speed<br>0.75 m3h/0.9<br>m3h, Ultimate<br>Vacuum 12 mbar,<br>Ultimate Vacuum<br>with Gas Ballast<br>20<br>mbar/Operated<br>on 220 Volts,<br>Germany or UK<br>or Japan or USA<br>or equivalent<br>Note: Valid<br>authorized<br>certificate from<br>the<br>manufacturers/fo<br>reign principals<br>must be<br>attached. | Delivery: 20<br>l/min/Vacu<br>m: 8 mbar<br>abs. Operatin<br>g pressure: 1<br>bar/Connecto<br>rs for tube:<br>ID 10<br>mm/Permissi<br>ble media<br>and ambient<br>temp:<br>+5...+40°C<br>M<br>ake: KNF<br>Laboport<br>Germany | rpm, outlet 10<br>mm/Make:<br>Wiegens<br>Germany                                                                                                                                                                                                                                                                                           |                   |                           | Specification Number<br>of Head / Stages<br>2/Maximum Pumping<br>Speed 0.75 m3h/0.9<br>m3h/Ultimate Vacuum<br>12 mbar/Ultimate<br>Vacuum with Gas<br>Ballast 20 mbar MZ1<br>C Vacuum brand<br>Supplier LMS<br>Germany                                   | 20mbar/Noise: 5<br>S0dB/Model:<br>VP18R<br>PlusLabtech SRL -<br>Italy                                                                                                                                                                                                                                                                                                                  | Reliability and<br>Extended Operation<br>Life: MZ1C is equipped<br>with a Gas ballast<br>Valve for Continuous<br>Condensate Purge<br>with Built-in manual<br>Vacuum Regulator<br>Valve with Lid Gauge<br>for Adjustment of<br>Pumping<br>Speed/Technical<br>Specification Number<br>of Head / Stages<br>2/Maximum Pumping<br>Speed 0.75 m3h/0.9<br>m3h/Ultimate Vacuum<br>12 mbar/Ultimate<br>Vacuum with Gas<br>Ballast 20 mbar,<br>Operated on 220 Volts<br>Model MZ1C<br>Vacubrand Made in<br>Germany | all pumping<br>parts in contact<br>with pumped<br>media are made<br>of Chemically<br>Resistant Fluro<br>plastics.<br>Technical Numb<br>er of Head /<br>Stages<br>2/Maximum<br>Pumping Speed<br>0.75 m3h/0.9<br>m3h/Ultimate<br>Vacuum 12<br>mbar/Ultimate<br>Vacuum with<br>Gas Ballast 20<br>mbar/Operated<br>on 220V Model<br>MZ1C<br>Vacubrand<br>Germany | Vacuum with<br>Gas Ballast 20<br>mbar/Operate<br>d on 220V<br>Model MZ1C<br>Vacubrand<br>Germany                                                                                                                                 |                                                                                                                                                                                                                           | Specifications<br>are not<br>according<br>to<br>requiremen<br>t: Vacuum<br>pressure<br>required<br>Vacuum 12<br>mbar /<br>provided<br>20mbar |                                                                                                                                                                                                       |
| 25           | Rotary<br>Evaporator<br>Chiller<br>Stainless steel<br>bath vessels,<br>Drain connection<br>at the rear,<br>Working<br>Temperature: -25<br>°C to +100 °C<br>Temperature<br>stability: 0.05 ±K,<br>Bath volume<br>max: 7.5 L<br>Bath depth: 160<br>mm, Pump<br>pressure max: 0.2                                                                                                                                                                                                                                            | 2                                                                                                                                                                                                                            | Boeco<br>Circulation<br>Chiller COR<br>400<br>Performance<br>: 1/4 HP<br>9660006<br>Performance<br>Stainless steel<br>bath vessels,<br>Working<br>Temperature:<br>22°C => 7°C;<br>80 l/hour<br>Minimum<br>temperature<br>: 1°C for<br>water<br>Minimum<br>temperature<br>stability: ±0.5,<br>Bath volume<br>max: 5.5- 8 L<br>Pump pressure | Not Quoted        | Not Quoted                | Rotary Evaporator<br>Chiller<br>Model No / Cat<br># FL601 Order #<br>9660006<br>Stainless steel<br>bath vessels,<br>Working<br>Temperature:<br>-20 °C to + 40<br>°C<br>Temperature<br>stability: ±0.5,<br>Bath volume<br>max: 5.5- 8 L<br>Pump pressure | Rotary Evaporator<br>Chiller<br>digital fuzzy controller<br>with Jog-Dial-switch<br>(turn + push) &<br>capacitive touch<br>button/Stainless steel<br>bath vessels, Drain<br>connection at the rear<br>Working temperature:<br>-25 °C to +150 °C<br>Temperature stability:<br>0.1°C-display, 0.1°C-<br>control, ±0.2°C at-<br>10°C, PT100<br>Bath volume max: 8 L<br>Pump pressure max: | LabTech's state-<br>of-the-art water<br>chillers ensure<br>accurate and<br>constant cooling<br>conditions of your<br>instrumentation<br>in the harsh<br>laboratory<br>environment.<br>» Temp. Control<br>Range: -5° to<br>+35°C<br>» Temp. Stability:<br>±0.3°C (PID/LCD)<br>» Refrigeration<br>Capacity:                                                                                                                                                                                                | Chiller Model ALPHA<br>RA8<br>» Stainless steel bath<br>vessels<br>» Drain connection at<br>the rear<br>Technical Data:<br>Working temperature:<br>-25 °C to +100 °C<br>Temperature stability:<br>0.05 ±K<br>Bath volume max: 7.5<br>L<br>Bath depth: 160 mm<br>Pump pressure max:<br>0.2 bar                                                                | Temperature: -<br>25 °C to +100<br>°C<br>Temperature<br>stability: 0.05<br>±K<br>Bath volume<br>max: 7.5 L<br>Bath depth: 160<br>mm<br>Pump pressure<br>max: 0.2 bar<br>Pump flow max.<br>(Pressure): 15<br>l/min<br>Operated on | Chiller<br>Temperature:<br>-25 °C to +<br>100 °C<br>Temperature<br>stability: 0.05<br>±K<br>Bath volume<br>max: 7.5 L<br>Bath depth:<br>160 mm<br>Pump<br>pressure max:<br>0.2 bar<br>Pump flow<br>max.<br>(Pressure): 15 | • RAAB<br>Scientific<br>solutions<br>• Shallmar<br>Scientific<br>Store                                                                       | • New<br>Chemical<br>Centre<br>• temperatur<br>e: required -<br>25 °C to +<br>100 °C/<br>provided -<br>20 °C to +<br>40 °C.<br>Pump<br>pressure<br>max<br>required<br>0.2 l<br>bar/provide<br>d 1 bar |

Chairperson *Dr. A. H.*

Member

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A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Technica<br>lly<br>Qualified                                                                                                                                                           | Technically<br>Disqualifie<br>d                                                                                                                                                                                                                                                                                                                                |
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                        | warning and<br>automatic stop<br>function<br>locking mode<br>Operated on 220<br>Volts<br>Model WCR-8 Witeg<br>LMS Germany                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                            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| 26 | PH Meter Digital<br>Bench Model<br>Microprocessor<br>Controlled<br>With parallel<br>Temperature<br>indication, PH<br>Range -2.0 to<br>20.0<br>±0.005pH, PH<br>Resolution<br>0.001pH, MV<br>Range<br>±1200.0mV,<br>Accuracy mV ±-<br>0.3mv, Automatic<br>Temperature<br>Compensation,<br>Temperature<br>Range -5 to<br>+105.0°C,<br>Temperature<br>accuracy ±0.1°C<br>with two/three<br>Point Calibration<br>System, Battery<br>operated<br>operated With<br>220 Volts, Black<br>Electrode stand<br>with base., Plastic<br>Beaker 50 ml,<br>3MKCL Solution<br>50 ml.,<br>Calibration<br>Standard<br>solutions PH 4, 7<br>& 10 50ml<br>each, PH<br>Electrode | 4            | Orion Star<br>A211pH<br>Benchtop<br>Meter ROSS<br>Kit<br><br>pH Range: -<br>2.000to20.000<br>Resolution:0.1<br>, 0.01,0.001<br>Relative<br>Accuracy:±0.0<br>02Calibration<br>Points:Up to 5<br>Calibration<br>Editing:Yes<br>mV/RmV<br>Range:<br>±2000.0mV<br>Resolution:0.1<br>mV<br>Relative<br>Accuracy:±0.2<br>mVor ±0.05<br>%of reading<br>which ever is<br>greater<br>EH ORP<br>Mode:Yes<br>Temperature<br>Range: -<br>5to105°C,<br>23to 221°F<br>Resolution:0.1<br>°C,0.1°F<br>RelativeAccur<br>acy:±0.1°C,<br>±0.1°F<br>OffsetCalibrati | Multiparameter<br>PH/ORP/Con<br>ductivity/TD<br>S /Salinity/<br>Resisitivity/<br>Temp.<br>Benchtop<br>Meter<br>Conductivity<br>range: 0.0<br>to 475<br>µS/cm<br>Resolution:<br>0.1µS/cm<br>Accuracy:<br>±1% of<br>reading<br>+2µS/cm<br>PH Range -<br>2.0 to 16.0<br>,PH<br>Resolution<br>0.01pH<br>TDS range:<br>0.001 mg/l<br>to 200.0 g/l<br>Resolution:<br>0.001/0.01/0<br>.1/1mg/l<br>Accuracy:<br>±0.5% full<br>scale<br>0.01/0.1 g/l<br>Salinity<br>range: 0.0 to<br>80.0 ppt,<br>resolution:<br>ppt,<br>accuracy | PH Meter<br>Digital Bench<br>Top<br>Model No / Cat<br># 12820643 /<br>Accumet XL150<br>pH Range: -<br>2.000to20.000<br>Resolution:0.1,<br>0.01,0.001<br>Relative<br>Accuracy:±0.00<br>2CalibrationPoi<br>nts:Up to 5<br>Calibration<br>Editing:Yes<br>mV/RmV<br>Range:<br>±2000.0mV<br>Resolution:0.1<br>mV<br>Relative<br>Accuracy:±0.2m<br>Vor ±0.05 %of<br>reading<br>Temperature<br>Range: -<br>5to105°C, 23to<br>221°F<br>Resolution:0.1°<br>C,0.1°F<br>RelativeAccurac<br>y:±0.1°C,<br>±0.1°F<br>OffsetCalibratio<br>n:1point<br>Power AC<br>Adapter:Includ<br>ed— universal 100- | STARA2110<br>Orion Star™ A211<br>Benchtop pH Meter<br>Model Orion Star<br>A211<br>pH/mV/RmV/ORP/Te<br>mperature Benchtop<br>Meter<br>Power Supply<br>Universal AC adapter<br>(included) or 4 AA<br>batteries (sold<br>separately)<br>Probe Type pH<br>electrode, ORP<br>electrode, reference<br>half cell electrode,<br>ATC temperature<br>probe, stirrer probe<br>(purchase separately)<br>Range (mV) ±2000.0<br>mV<br>Range (ORP)<br>±2000.0mV<br>Range (pH) -2 to 20<br>Range (Relative mV)<br>±2000.0mV<br>Relative Humidity<br>Range 5 to 85%, non-<br>condensing<br>Resolution (pH) 0.1,<br>0.01, 0.001<br>Resolution (mV)<br>0.1mV<br>Resolution<br>(Temperature) 0.1°C,<br>0.1°F<br>Stability Selectable<br>fast, medium, slow or<br>Smart Stability | Not Quoted                | pH / Temperature<br>Laboratory Bench<br>Meter<br>SPECIFICATIONS<br>pH Range -<br>2.00 to 20.00/ 2.000<br>to 20.000 pH<br>mV Range ±1000/<br>±2000mV<br>Temp Range -20.0 a<br>120.0°C / -4.0 a<br>248.0°F<br>pH Resolution<br>0.01/0.001 pH<br>mV Resolution 0.1<br>mV / 1 mV<br>Temp Resolution<br>0.1°C / 0.1°F<br>mV Accuracy ±0.2<br>mV / ±1 mV<br>pH Accuracy ±0.01<br>Ph<br>pH Automatic Upto 5<br>point calibration, with<br>7 memorized buffers<br>Calibration<br>Temperature<br>Compensation<br>automatic, from -<br>20.0 to 120.0°C / -4.0<br>to 248.0°F<br>with Glass Electrode,<br>black holder stand,<br>calibration pH buffers.<br>Power supply 12 VDC<br>power adapter<br>(included)<br>Model MW 151<br>Milwaukee Made in<br>Europe | Color Touch<br>screen Display<br>4.3" high-<br>resolution color<br>touch screen has<br>large digits and<br>well-arranged<br>icons<br>— Recognizable<br>icons provide<br>direct, one-touch<br>access to<br>important<br>information<br>including user ID,<br>sample ID, date,<br>time, current<br>calibration group,<br>and sensor<br>performance<br>where you can<br>check detailed<br>calibration data<br>— Return to the<br>main menu from<br>any screen with<br>just one button<br>tap on the display<br>One touch<br>toggling between<br>pH, mV (ORP) and<br>Rel. mV<br><br>Measurement<br>Range -<br>2.000...20.000 pH<br>mV Range -<br>2000.00 to<br>+2000.00 mV<br>Temperature | PH Meter Digital<br>Bench Top<br>The inoLab® pH 7110<br>is highly suitable for<br>routine<br>measurements in the<br>lab, where automatic<br>documentation is not<br>a priority. Less keys<br>make operation<br>simple and safe. With<br>smooth, easy to clean<br>surface.<br><br>Parameter<br>pH/mV/Temp<br>Measuring range pH -<br>2.000 ... 19.999<br>Measuring range<br>Temperature -5.0 ...<br>105.0 oC<br>Measuring range mV -<br>1200.0 ...+1200.0 / -<br>2000...+2000mV<br>Accuracy pH +/-<br>0.005/ +/-0.01/0.1<br>Accuracy mV +/- 0.3<br>mV/ +/- 1 mV<br>Accuracy Temperature<br>+/-0.1 K<br>With two/three Point<br>Calibration System<br>Battery operated as<br>well as operated With<br>220 Volts<br>Complete with<br>following accessories:-<br>a) Black Electrode<br>stand with base.<br>b) Plastic Beaker 50 | PH Meter<br>Digital Bench<br>Model<br>Microprocessor<br>Controlled<br>With parallel<br>Temperature<br>indication, PH<br>Range -2.0 to<br>20.0 ±0.005pH,<br>PH Resolution<br>0.001pH, MV<br>Range<br>±1200.0mV,<br>Accuracy mV ±-<br>0.3mv, Automatic<br>Temperature<br>Compensation,<br>Temperature<br>Range<br>-5 to +105.0°C,<br>Temperature<br>accuracy ±0.1°C<br>with two/three<br>Point<br>Calibration<br>System, Battery<br>operated as<br>well as<br>operated<br>With 220 Volts<br>Complete with<br>following<br>accessories:-<br>a) Black<br>Electrode stand<br>with base.<br>b) Plastic<br>Beaker 50 ml. | Display 6.5<br>inch LCD<br>screen<br>Parameters<br>pH, mV,<br>temperature<br>Measuring<br>range -2.00 ~<br>18.00 pH<br>Resolution<br>0.01/0.1 pH<br>Accuracy<br>±0.02pH<br>mV<br>Measuring<br>range -<br>1999.00~<br>1999.00 mV<br>Resolution<br>1mV<br>mV Accuracy<br>±0.1%FS<br>Temp<br>Measuring<br>range 0~<br>100°C<br>Temp<br>Resolution<br>0.1°C<br>Temp<br>Accuracy<br>±0.5°C<br>Temp<br>Compensatio<br>n 0-100°C,<br>automatic<br>Calibration 1,<br>2, 3 point,<br>automatic | • Pak Fil<br>Technolo<br>gies<br>• HA<br>Shah &<br>Sons<br>• S U<br>Enterpriz<br>es<br>• Rays<br>Technolo<br>gies<br>• New<br>Chemical<br>Centre •<br>Shalimar<br>Scientific<br>Stores | • Sindh<br>Medical<br>Stores<br>pH range is<br>not<br>according<br>to our<br>specificatio<br>ns required<br>PH Range -<br>2.0 to<br>20.0/provid<br>ed PH<br>Range -2.0<br>to 16.0<br>• RAAB<br>Scientific<br>Solutions<br>Authorizati<br>on letter<br>not<br>attached<br>• Key<br>Scientific<br>Corporatio<br>n<br>Authorizati<br>on letter<br>not<br>attached |

Chairperson *Sai Aj* Member

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|    |                                                                                                                                                                                                                                       | R<br>Q<br>TY | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores                                                                                                                    | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                    | Key Scientific<br>Corporations                                  | Technica<br>lly<br>Qualified                                                                                                                                                                                                                                        | Technically<br>Disqualifie<br>d |
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|    |                                                                                                                                                                                                                                       |              |                          |                                                                                                                                               |                        |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Temperature<br>Compensation<br>ATC and MTC<br>Power Supply<br>240V/50-60Hz, 9<br>V DC<br>Model: ST5000<br>Ohaus - USA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                         |                                                                 |                                                                                                                                                                                                                                                                     |                                 |
| 27 | Glass ware drying cabinet:<br>capacity 125 L, 3 adjustable shelves, Max temp: ambient +50, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached. | 3            | Not Quoted               | Glassware Drying cabinetModel No / Cat # 12989968 / LEEC F2 capacity 540 L, 4 adjustable shelves, Max temp: ambient +50Make: Fisher Brand USA | Not Quoted             | Not Quoted        | Glassware Drying cabinetAir Circulation type ForcedTemp Range Ambient +10°C to 250°C (Ambient +18°F to 482°F)Temp&Time controller Microprocess PID controllerHeater Capacity 2000 WDimension Internal (WxDxH) 555x450x600mmDimension External (WxDxH) 710x615x975mmCapa city 150 LMaterial Internal Stainless SteelMaterial External Steel Plate With Powder Heating CoatedShelves 3 Supplied (17 Maximum)Fan Position Bottom Electrical RequirementsCat. No. DO149FGBSH scinetific USA | Controller Smart Display 4.3" + touch screenNetwork LANUSB YES (saving registration data saving events)Keypad NumericMain Screen Dashboard (all relevant data visible from one main window) Programs 5Program name Free number assignedPriority ParametersSegme nts 6Data registry max. 10,000 measurement data stored for a maximum of 6 monthsEvents registry YesStatistics YES - only the current cycleTemperature protection class 2.0Device name Fixed (serial number)Alarm Bar YesQuick change Yesmicroprocesso r controlled | Universal Oven Capcity 161 Liter Adaptive Multifunctional Digital PID-microprocessor Controller With High-Definition TFT-Color DisplaysTemperature range 10°C above ambient up to + 300°C1 Pt 100 Sensor Din Class A in 4-Wire Circuit Forced air circulation (Fan) Forced air circulation by quite air turbine, adjustable in 10% steps self-diagnostics for fault analysisdigital timer adjustable from 1 minute to 99 days, 23 hours Interior Stainless Steel & Textured Stainless Steel Casing Easy to Clean Interior, Made of Stainless Steel Interior dimension: 560 x 720 x 400 mm, With two stainless steel traysOperated on 220volts Model UF-160 Memmert, Germany | Universal Oven precise drying,Adaptive Multifunctional Digital PID-microprocessor Controller With High-Definition TFT-Color Displays• Temperature range 10°C above ambient up to + 300°C• 1 Pt 100 Sensor Din Class A in 4-Wire Circuit • forced air circulation (Fan) • forced air circulation by quite air turbine, adjustable in 10% steps • self-diagnostics for fault analysis• digital timer adjustable from 1 minute to 99 days, 23 hours• Interior Stainless Steel & Textured Stainless Steel Casing • Over Temperature | Volume of the chamber: 225 litersStandard maximum temperature: 300°CTemper ature stability: < ± 0.2 °CInternal dimensions (W x D x H): 500 x 450 x 1000 mmExternal dimensions (W x D x H): 664 x 746 x 1312 mmQuantity of shelves: 2 provided Number of doors: 10Operated on 220Volts, Model XU225France Etuves, France | • Shalimar Scientific Store• SU enterprizes• Rays Technolo gies | • New Chemical Centre: no feature for regulation of temperatur e is mentioned; offered model doesnot contain temperatur e control• RAAB Scientific Solutions:A uthorization letter not attached• Key Scientific Corporatio ns:Authoriz ation letter is not attached |                                 |

Chairperson  
Technical Committee

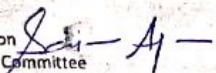
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|                                    | R<br>Q<br>TY                                                                        | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                                         | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RAAB Scientific<br>Solutions                                                          | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                               | Key Scientific<br>Corporations                                                        | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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|                                    |                                                                                     |                          |                            |                        |                   |                           |                                                                                       | standard version<br>drying oven,<br>forced convection,<br>chamber capacity:<br>180 liters,<br>stainless steel<br>interior &<br>exterior, Solid<br>door,<br>temperature<br>range: 5°C above<br>ambient<br>temperature...+30<br>0°C, temperature<br>resolution every:<br>0,1°C, Timer: 1 –<br>365 days, 23hours<br>59 minutes or<br>continuous, 4,3"<br>full colour touch<br>screen<br>(comfortable use -<br>just like your<br>smartphone),<br>automatic air-flap<br>control, six-<br>segment<br>temperature-time<br>profile, 1 stainless<br>steel wire shelf,<br>access port, test<br>results memory.<br>Shelves: 3Nos.<br>Temperature<br>protection class<br>2.0 to DIN 12880,<br>RS 232 and USB<br>ports for data<br>transfer, open<br>door alarm,<br>Safety: Over Temp<br>alarm, Over<br>Current Protector,<br>Sensor Error<br>Detector, Auto<br>restart: Auto<br>restart at the<br>same program |                                                                                       | Protection•<br>Program Stored<br>in Case of<br>Power Failure •<br>Easy to Clean<br>Interior, Made<br>of Stainless<br>Steel Operated<br>on 220volts, UF<br>Series.Capacity<br>108 Lit, interior<br>dimension: 560<br>x 480 x 400<br>mm, with<br>Three stainless<br>steel trays,<br>Model UF-110,<br>Memmert,<br>Made in<br>Germany. |                                                                                       |                              |                                 |
| Chairperson<br>Technical Committee |  | Member                   |                            |                        |                   |                           |  | Member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Member                                                                                                                                                                                                                                                                                                                             |  |                              |                                 |



| Sl. No. | Pakrills Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Sindh Medical Stores | New Chemical Centre                                                                                                                                                                                                                                                                                                                           | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RAAS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                       | Technically Qualified                                                                                                  | Technically Disqualified                                                                                                                                                                                                                                |
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| 28      | <p>Incubator: Adaptive multifunctional Digital PID-Microprocessor controller with High-Definition TFT-Color Display</p> <p>Temperature range 10°C above ambient up to +80°C, Resolution of display for set point values 0.1°C, Double doors (interior glass, exterior stainless steel), Adjustment of pre-heated fresh air admixture by air flap control in 10% steps, digital timer adjustable from 1 minute to 99 days, 23 hours, adjustable electronic overtemperature monitor and mechanical temperature limiter, protection class 1, Double Over Temperature Protection, Interior &amp; Housing made of Stainless Steel,</p> | 2                    | <p>Incubator Model No / Cat # 12885873 / IN30 Specifications TFT-Color Display</p> <p>Temperature range 5°C to 80°C, temp. accuracy 0.1°C, Interior &amp; Housing made of Stainless Steel, Operated on 220volts, Capacity 32 Lit, by 32 Lit, Interior dimension: 250 x 4000 x 320mm</p> <p>Make: Fisher Brand (Memmert)</p> <p>Not Quoted</p> | Not Quoted        | Not Quoted             | <p>Incubator Memmert Temperature range 10°C above ambient up to +80°C Resolution of display for set point values 0.1°C</p> <p>Double doors (interior glass, exterior stainless steel) Adjustment of pre-heated fresh air admixture by air flap control in 10% steps, digital timer adjustable from 1 minute to 99 days, 23 hours adjustable electronic overtemperature monitor and mechanical temperature limiter, protection class 1 Double Over Temperature Protection Interior &amp; Housing made of Stainless Steel</p> <p>Set point WAIT function - the process time does not start until the set temperature is reached</p> <p>Programme Stored in Case of Power Failure Operated on 220volts, IN Series Capacity 32Lit with</p> | <p>after power resumption, door lock, Model: SLW 180 IG SmartPoleko - Poland (Europe)</p> <p>Advantages of the Smart controller: 4.3", clear, full colour touch screen LAN, USB ports for data transfer Multi-segment time and temperature programs Visual and sound alarm Internal memory for programs and data storage Event registry Quick change of program parameters Alarm Bar Operating with gloves on</p> <p>Controller Smart Display 4.3" + touch screen Network LAN USB YES (saving registration data saving events) Keypad Numeric Main Screen Dashboard (all relevant data visible from one main window) Programs 5 Free number assigned Priority.</p> | <p>Incubator Capacity 32 Liter</p> <p>Adaptive multifunctional Digital PID-Microprocessor controller with High-Definition TFT-Color Display</p> <p>Temperature range: up to +80°C</p> <p>Double doors (interior glass, exterior stainless steel) Digital timer adjustable from 1 minute to 99 days, 23 hours</p> <p>Adjustable electronic overtemperature monitor and mechanical temperature limiter, protection class 1 Double Over Temperature Protection Interior &amp; Housing made of Stainless Steel</p> <p>Programme Stored in Case of Power Failure Interior dimension: 400 x 320 x 250mm With One stainless steel tray, Operated on 220volts Model IN-30, Memmert, Germany</p> | <p>Incubator Memmert Precision Adaptive multifunctional Digital PID-Microprocessor controller with High-Definition TFT-Color Display</p> <p>Temperature range: 10°C above ambient up to +80°C</p> <p>Resolution of display for set point values 0.1°C</p> <p>Double doors (interior glass, exterior stainless steel), Adjustment of pre-heated fresh air admixture by air flap control in 10% steps, digital timer adjustable from 1 minute to 99 days, 23 hours</p> <p>Adjustable electronic overtemperature monitor and mechanical temperature limiter, protection class 1 Double Over Temperature Protection Interior &amp; Housing made of Stainless Steel</p> <p>Set point WAIT function - the process time does not start until the set temperature is reached</p> <p>Programme Stored in Case of Power Failure Interior dimension: 400 x 320 x 250mm With One stainless steel tray, Operated on 220volts Model IN-30, Memmert, Germany</p> | <p>Volume of the chamber: 32 liters</p> <p>Standard maximum temperature: ambient + 5 to 80°C</p> <p>Temperature stability: &lt; ± 0.2 °C</p> <p>Volume of the chamber: 32 liters</p> <p>Internal dimensions (WxDxH): 300 x 270 x 400 mm</p> <p>Quantity of shelves: 2 provided</p> <p>Operated on 220Volts, Model XB032 France Etuves, France</p> | <p>• SU Enterprizes</p> <p>• RAYS Technologies</p> <p>• Key Scientific Corporations</p> <p>• Technically Qualified</p> | <p>• New Chemical Centre required digital timer adjustable from 1 minute to 99 days/ not provided</p> <p>• RAAB Scientific Solutions Authorized on letter is not attached</p> <p>• Key Scientific Corporations Authorized on letter is not attached</p> |



| R<br>Q<br>ty                                                                                                                                                                                                                                                                          | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                               | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RAAB Scientific<br>Solutions | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                             | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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| <p>Set point WAIT function Operated on 220volts, Capacity 32 Lit, Interior dimension: 400 x 320 x 250mm with One stainless steel tray, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached.</p> |                          |                            |                        |                   |                           | <p>One stainless steel tray, Model IN-30, Memmert, Supplier LMS Germany</p> | <p>Parameters<br/>Segments 6<br/>Data registry max. 10,000 measurement data stored for a maximum of 6 months<br/>Events registry Yes<br/>Statistics YES - only the current cycle<br/>Temperature protection class 2.0<br/>Device name Fixed (serial number)<br/>Alarm Bar Yes<br/>Quick change Yes<br/>Digital microprocessor controlled standard version drying oven, natural convection, chamber capacity: 32 liters, stainless steel interior &amp; exterior, Solid door, temperature range: 5°C above ambient temperature...+10 0°C, temperature resolution every: 0,1°C, Timer: 1 – 365 days, 23hours 59 minutes or continuous, 4,3" full colour touch screen (comfortable use - just like your smartphone),</p> |                              | <p>1<br/>• Double Over Temperature Protection<br/>• Interior &amp; Housing made of Stainless Steel<br/>• Set point WAIT function - the process time does not start until the set temperature is reached<br/>• Programme Stored in Case of Power Failure<br/>Operated on 220volts, IN Series<br/>Capacity 32 Lit, Interior dimension: 400 x 320 x 250mm with One stainless steel tray, Model IN-30, Memmert, Made in Germany.</p> |                                |                              |                                 |

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|    | Parkin Technologies                                                                                                                                                                                                    | Sindh Medical Stores | New Chemical Centre                                                                                                                | H. A. Shah & Sons                                                                                                                                                          | Kamstech International | Shalimar Scientific Stores | SU Enterprises                                                                                                                                                                                                                                            | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                            | RAVS Technologies                                                                                                                                                                                                              | Key Scientific Corporations                                                                                                                                                    | Technicality Quaffied                                                                                                                                     | Technically Disqualifie d                    |                                                                                                                                   |
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| 29 | Ultrasonic Cleaning Bath : 20 KHz units are excellent for processing samples from 250 ul to several liters on a flow-through basis. Order calibrated SS temperature probe separately. • Automatic tuning and frequency | 5                    | Benchtop Ultrasonic Cleaner Capacity: 22 L Tank dimensions: (L x W x H) 500 x 300 x 150 mm Heating Power: 1400 W Frequency: 40 KHz | Ultrasonic Cleaner Model No / Cat # S-D5-6P Technical Specifications: Stamped Stainless Steel 304 tank without welding gap SUS 304 stainless steel lid, basket and housing | Not Quoted             | Not Quoted                 | Sonicator with Prob Digital microprocessor controlled automatic tuning, energy(joules) monitor, energy controller, programmable digital actual amount of power in watts, with automatic tuning & frequency control automatic amplitude Compensation, high | automatic air-flap control, six-segment temperature-time profile, 1 stainless steel wire shelf, access port, test results memory, Temperature protection class 2.0 to DIN 12880, RS 232 and USB ports for data transfer, open door alarm, Safety: Over Temp alarm, Over Current Protector, Sensor Error Detector, Auto restart: Auto restart at the same program after power resumption, door lock. Model: CLIN 32 IG Smart Poleko – Poland (Europe) | Ultrasonic Cell Disruptor Digital microprocessor controlled Ultrasonic Processor with Timer and Pulser – 150 milliliters, automatic tuning & frequency control automatic Amplitude compensation, variable power output control | Ultrasonic Cell Disruptor Digital microprocessor controlled programmable digital actual amount of power in watts. Ultrasonic Processor with Timer and Pulser – 150 milliliters | Ultrasonic Cell Disruptor • Digital microprocessor or controlled • Programmable digital actual amount of power in watts • Ultrasonic Processor with Timer | • Sindh Medical Stores • Shalimar Scientific | • New Chemical Centre : temperature range required 1°C to 100°C/ provided 1°C to 80°C. • RAAB Scientific Solutions: Authorization |

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | R<br>Q<br>TY                                                                                                                                  | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores                                                                                                    | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | H. A. Shah & Sons                                                                                                              | Kamstech<br>International                                                                                                                                                        | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                 | RAAB Scientific<br>Solutions                                                                                                                            | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                      | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                     | Technica<br>lly<br>Qualified                                                                                                                                                                                                                                                                                    | Technically<br>Disqualifie<br>d                                                     |                                                                                                                    |
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| Control*<br>Integrated<br>temperature<br>controller from<br>1°C to 100°C*<br>Stores up to 10<br>procedures* Real<br>time display*<br>Control process<br>time from 1<br>second to 10<br>hours* Shipped<br>complete with a<br>1/2 in. (13 mm)<br>probe (630-0220)<br>with replaceable<br>tip, tool kit, and<br>instruction<br>manual<br>Germany or UK<br>or Japan or USA<br>or equivalent<br>Note: Valid<br>authorized<br>certificate from<br>the<br>manufacturers/fo<br>reign principals<br>must be<br>attached. |                                                                                                                                               |                          | Timing: 1<br>min ~ 30 min<br>Make:<br>Labotronics<br>Scientific Ltd<br>Canada                                                 | Cooling fan for<br>prolonged<br>operation: 6L<br>and above<br>volume<br>machine<br>Drain pipe on<br>side for easy<br>draining and<br>cleaning<br>Tank and other<br>metal parts are<br>grounded (ESD-<br>safe)<br>Ceramic<br>heaters for<br>better heating<br>effect<br>Side handles for<br>easy handling<br>: 3L and above<br>machines<br>Degas mode to<br>get the cleaning<br>started faster<br>Adjustable<br>power for<br>maximum<br>versatility: for<br>DS-P series<br>machines<br>All series<br>machines are<br>with timer and<br>heater<br>Adjustable<br>Heating: 0-80C<br>Make:<br>Stalwart |                                                                                                                                |                                                                                                                                                                                  | intensity type capacity<br>to work with<br>Processing volum 200<br>ul to liter<br>depend on prob<br>, variable power<br>output control with<br>built in timer Control<br>process time from 1<br>second to 10 hours,<br>intergrated<br>temperature<br>controller from 1°C to<br>100°C• Stores up to<br>10 procedures<br>Real time display<br>frequency 20KHz, 500<br>watt , Complete Unit,<br>operated on 220 Volts<br>Model VCX-500,<br>Sonics, Made in USA .<br>With standard<br>Accessories<br>i) Titanium alloy<br>probe having tip<br>diameter 13mm Cat #<br>630-0220<br>ii) Temprature prob<br>iii) Tool kit for above<br>system | Volume: 250µl –<br>1L<br>Power Output<br>500 watt<br>maximum<br>Frequency<br>20kHz<br>Ultrasonic<br>Converter Part #<br>CV334<br>Diameter 2.5"<br>(64mm) Length<br>7.25" (183mm)<br>Standard Probe<br>Part # 630-0220<br>Tip Diameter<br>0.5" (13mm) with<br>replaceable tip<br>Length 5.5"<br>(139mm)<br>Material Ti6Al4V<br>titanium alloy<br>Converter Cable<br>Part # 201-0300<br>Length 6 ft.<br>(1.8m)<br>Model: VCX 500<br>Sonics – USA | with built in timer,<br>Net power output:<br>130 Watts.<br>with probe: Tip<br>diameter: 1/8" (3 mm)<br>Model VCX-130,<br>Sonics, USA                    | milliliters,<br>automatic<br>tuning &<br>frequency<br>control<br>automatic<br>amplitude<br>compensation,<br>variable power<br>output control<br>with<br>built in timer,<br>Net power<br>output: 130<br>Watts.<br>frequency<br>20KHz,<br>STANDARD<br>probe: Tip<br>diameter: 1/8"<br>(3 mm).<br>Model VCX-<br>130, Sonics,<br>Made in USA. | and Pulser –<br>150<br>microliters to<br>150<br>milliliters,<br>• Automatic<br>tuning &<br>frequency<br>control<br>automatic<br>• With built<br>in timer,<br>• Net power<br>output: 130<br>Watts.<br>• Frequency<br>20 KHz,<br>• With probe:<br>Tip diameter:<br>1/8" (3 mm).<br>Model VCX-<br>130, Sonics,<br>USA | on letter<br>not<br>attached<br>• Key<br>Scientific<br>Corporatio<br>ns:<br>Authorizati<br>on letter is<br>not<br>attached<br>• Rays<br>Technologi<br>es: tempe<br>rature<br>range<br>required<br>1°C to<br>100°C/<br>notprovide<br>d<br>• SU<br>Enterprizes:<br>Authorizati<br>on letter is<br>not<br>attached |                                                                                     |                                                                                                                    |
| 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Conductivity<br>Meter Digital<br>Bench Top<br>MicroprocessorC<br>ontrolled with<br>parallel<br>temperature<br>indication,<br>ConductivityRang | 2                        | STARA2125Ori<br>on Star A212<br>Conductivity<br>Benchtop<br>Meter<br>KitTechnical<br>Specifications<br>Conductivity<br>Range: | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Orion Star A212<br>Conductivity<br>Benchtop<br>Meter<br>KitTechnical<br>Specifications<br>Conductivity<br>Range: 0.001µS<br>to | STARA2125Orion Star<br>A212 Conductivity<br>Benchtop Meter<br>KitTechnical<br>Specifications<br>Conductivity Range:<br>0.001µS to<br>3000mSResolution: 0.<br>001µS minimum, auto | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Conductivity meter<br>Digital bench<br>TypeCombined<br>logging with GLP<br>EC/TDS/NaCl/Temp<br>bench meter; range:<br>EC 0.00 to 2999<br>µS/cm; 30.0 to 299.0<br>µS/cm; 3 to 29.99                                                                                                                                                                                                                                                             | Measurement<br>range<br>Conductivity<br>range: 0.0 µS/cm<br>to 199.9<br>mS/cmTDS range:<br>0.1 mg/l to 199.9<br>g/l Salinity range:<br>0.00 to 19.99psu | Conductivity Meter<br>Digital Bench<br>TopParameter<br>Conductivity/Salinity/s<br>pec. resistivity,<br>TDSConductivity 0.001<br>µS/cm ... 1000<br>mSSpezischer<br>Widerstand 0.00...                                                                                                                                                      | Conductivity<br>Meter Digital<br>Bench Top<br>Microprocessor<br>Controlled with<br>parallel<br>temperature<br>indication,<br>Conductivity                                                                                                                                                                          | Display 6.5<br>inch LCD<br>screenParam<br>eters<br>conductivity,<br>resistivity,<br>TDS, salinity,<br>temperatureC<br>onductivity                                                                                                                                                                               | • Pak Fil<br>Technolo<br>gies •<br>HA Shah<br>& Sons<br>• New<br>Chemical<br>Centre | • Shalimar<br>Scientific<br>StoresCond<br>uctivity<br>range is not<br>according<br>our<br>specificatio<br>ns Range |

Chairperson *Sai-Aj* Member

Member

Member

Member

Member







| Q No | PakTifs Technologies | Sindh Medical Stores | New Chemical Centre | H. A. Shah & Sons | Kamstech International | Shallimar Scientific Stores | SU Enterprises | RAAB Scientific Solutions | RAFS Technologies | Key Scientific Corporations | Technically Qualified | Technically Disqualified |
|------|----------------------|----------------------|---------------------|-------------------|------------------------|-----------------------------|----------------|---------------------------|-------------------|-----------------------------|-----------------------|--------------------------|
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natural sea water Range: 0.00 to 80.00 psu, 0.05 to 42.00 ppt Resolution: 0.01 psu, 0.01 ppt Relative Accuracy: 0.5% reading  $\pm 1$  digit TDS Range: 0.001 to 200.0 ppt Resolution: 0.001 ppt minimum, auto ranging, upto 4 significant digits Relative Accuracy:  $\pm 0.5\%$  reading  $\pm 1$  digit TDS Factor Range: Linear, 0.02 to 9.99 Temperature Range: 5 to 105°C, 23 to 221°F Resolution: 0.1°C, 0.1°F Relative Accuracy:  $\pm 0.1\%$ ,  $\pm 0.1\%$  Offset Calibration: 1 point Power AC Adapter: Included—universal, 100-240 VAC Battery Power: Optional—4 AAAs Battery Life: 800 hrs Max

0.01 ppt Relative Accuracy: 0.5% reading  $\pm 1$  digit TDS Range: 0.001 to 200.0 ppt Resolution: 0.01 ppt minimum, auto ranging, upto 4 significant digits Relative Accuracy:  $\pm 0.5\%$  reading  $\pm 1$  digit TDS Factor Range: Linear, 0.02 to 9.99 Temperature Range: 5 to 105°C, 23 to 221°F Resolution: 0.1°C, 0.1°F Relative Accuracy:  $\pm 0.1\%$ ,  $\pm 0.1\%$  Offset Calibration: 1 point Make: Thermo Fischer Scientific USA

C, 0.1°F Relative Accuracy:  $\pm 0.1\%$ ,  $\pm 0.1\%$  Offset Calibration: 1 point Make: Thermo Fischer Scientific USA

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|    | R<br>Q<br>ty | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                             | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                        | Technica<br>lly<br>Qualified                                                                                                                                                                                                                                                                                                 | Technically<br>Disqualifie<br>d                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                           |
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| 31 |              | <p>Spectrophotometer Visible:<br/>Grating 1200 Lines /mm<br/>\$ Both round / Square Cuvette, \$ Automatic Zero Function<br/>Digital microprocessor controlled range 320-1000nm, Data processing Microprocessor Display 3 1/2 digit LCD, Optical system grating 1200 lines/mm zero blank set automatic Zero and blank setting automatic, bandwidth 6nm, Complete Unit with 10cm path length glass cells, Complete set operated On 220 Volts, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached.</p> | 2                          | <p>e: Thermo Fischer Scientific USA<br/>AQ7100 AquaMate 7100 Visible Spectrophotometer Include TECHNICAL SPECS<br/>Accuracy (Photometric) <math>\pm 0.002A</math>at 0.5A<br/>Detector Type Dual Silicon Photodiodes<br/>Dimensions (Lx Wx H) 35.5x 38.5x 19.5cm<br/>Display 7-inch color touchscreen, fixed, high definition, 800x 1280pixels<br/>Drift &lt;0.0010A/Hr (At500nm after 1hourwarmup )<br/>Height(Metric ) 19.5cm<br/>Lamp Tungsten-Halogen(&gt;100 OhoursTypical)<br/>Length(Metric ) 35.5cm<br/>Noise (RMSat500nm 60consecutive measurements)<br/>s0.0002DAat</p> | <p>Touchscreen UV-Visible Spectrophotometer<br/>Optical system: Double beam<br/>Wavelength range: 190 nm ~ 1100 nm<br/>Spectral bandwidth: 2nm<br/>Spectral bandwidth: 0.5 nm, 1 nm, 2 nm, 4 nm, 5 nm<br/>Wavelength accuracy: <math>\pm 0.3</math> nm<br/>Wavelength repeatability : 0.1 nm<br/>Display: 9 inches VGA<br/>Detector: Silicon photodiode<br/>Scan speed: HIGH, MEDIUM, LOW<br/>Stray light: 0.05 % T at 220 nm,360 nm<br/>Light source: Tungsten and Deuterium<br/>Power: AC 110 V,50 Hz AC 220 V,60 Hz<br/>Make:</p> | Not Quoted                | Not Quoted                    | <p>Spectrophotometer with color screen display<br/>Specification Wavelength Range: 320 to 1100nm<br/>Spectral Bandwidth: 6nm<br/>Transmittance accuracy: <math>\pm 0.5\%</math> T (NIST 930 Filter)<br/>Transmittance repeatability: 0.2% T<br/>Baseline flatness: <math>\pm 0.002</math> Abs (330-1090nm)<br/>Noise level: 0.001 Abs (500nm)<br/>Baseline stability: 0.001 Abs/h (500nm) after 2 hours warm up<br/>Stray light: 0.5% T<br/>Wavelength controlled variable: 0.2nm<br/>Wavelength accuracy: <math>\pm 1</math>nm<br/>Wavelength repeatability: 2400nm/min (0,2 sampling interval without filter)<br/>Wavelength scan speed: (0,2 sampling interval without filter)<br/>Wavelength move speed: to any specified position within 1sec.<br/>Absorbance: -0.3 to 1.999<br/>Transmittance: 0 to 199.9%<br/>Spectrum Scanning: Yes</p> | <p>Specifications Wavelength Range 340-1000nm<br/>Wavelength Width 10nm in entire region<br/>Wavelength Accuracy <math>\pm 2</math>nm at 365 and 546nm<br/>Wavelength Scale 2nm scale<br/>Spectroscopy Single beam, Diffraction grating 1200 lines/nm<br/>Energy &lt;0.5%T typical at 340nm with appropriate light filter<br/>Display 3-1/2 digit LCD<br/>Photometric Range 0-1.999ABS, 0-100%T, 0-1999C<br/>Accuracy <math>\pm 2\%</math>T<br/>Detector High sensitivity silicon photocell<br/>Light Source Long-life Tungsten lamp with lens<br/>Sample Volume 1.0ml(Minimum)<br/>Power Requirements 100-240VAC, 50/60Hz, 15W<br/>Standard Accessories Square cuvette</p> | <p>Spectrophotometer Visible Digital microprocessor controlled range 320-1000nm<br/>Data processing Microprocessor Display 3 1/2 digit LCD<br/>Bandwidth 6nm<br/>Grating 1200 Lines /mm<br/>Both round / Square Cuvette<br/>Automatic Zero Function<br/>With 10cm path length glass cells, Operated On 220 Volts, Model SP-300, Optima Japan</p> | <p>Features \$ Grating 1200 Lines /mm<br/>\$ Both round / Square Cuvette<br/>\$ Automatic Zero Function<br/>Digital microprocessor controlled range 320-1000nm, Data processing Microprocessor Display 3 1/2 digit LCD<br/>Optical system grating 1200 lines/mm zero blank set automatic Zero and blank setting automatic, bandwidth 6nm, Complete Unit with 10cm path length glass cells, Complete set operated On 220 Volts, Model SP-300, Optima Made in Japan</p> | <p>Digital microprocessor or controlled range 320-1000nm<br/>Data processing Microprocessor or Display 3 1/2 digit LCD<br/>Bandwidth 6nm<br/>Grating 1200 Lines /mm<br/>Both round / Square Cuvette<br/>Automatic Zero Function<br/>With 10cm path length glass cells, Operated On 220 Volts, Model SP-300, Optima Japan</p> | <ul style="list-style-type: none"><li>Sindh Medical Stores</li><li>Shalimar Scientific Stores</li><li>Pak Fil Technologies</li><li>New Chemical Centre</li></ul> | <ul style="list-style-type: none"><li>S U Enterprizes wavelength range is not according required specifications required 320-1000nm/provided Range 340-1000nm</li><li>RAAB Scientific Solutions Authorizati on letter is not attached</li><li>Key Scientific Corporations Authorizati on letter is not attached</li><li>RAYS Technologies Authorizati on letter is not attached</li></ul> |

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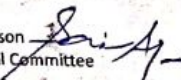
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| R<br>Q<br>ty                       | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sindh<br>Medical<br>Stores              | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                        | SU Enterprizes                                                                                                                               | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------|-------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------|--------------------------------|------------------------------|---------------------------------|
|                                    | OA at 260and<br>500nm<br>$\leq 0.00030Aat$<br>1A at 260and<br>500nm<br>$\leq 0.00040Aat$<br>2A at 260and<br>500nm<br>OpticalDesign<br>Dual beam<br>Photometric<br>Accuracy<br>Instrument<br>$\pm 0.002Aat$<br>$0.5A \pm 0.004Aa$<br>t<br>$1.0A \pm 0.008Aa$<br>t<br>2.0A Photomet<br>ric Display 3A<br>to +5A<br>Photometric<br>Range -3A to<br>+3.5A<br>Photometric<br>Repeatability<br>$\pm 0.001Aat$ 1A<br>measured<br>at 1.0Aat<br>546nm<br>Printer Snap-<br>on printer avail<br>able<br>Range<br>(Photometric)<br>-3A to +3.5A<br>Sample Volum<br>e (Metric)<br>Multiple<br>Scan Speed<br>Automatic -<br>upto<br>1800nm/min<br>Spectral Band<br>width 5nm<br>Stray Light<br>$< 0.05\%Tat$<br>340nm and | Labotronics<br>Scientific Ltd<br>Canada |                        |                   |                           | Concentration: -300<br>to 1999<br>Selectable Resolution:<br>1, 0.1, 0.01 or 0.001<br>Light source: Tungsten<br>Halogen lamp<br>Detector: Silicon<br>photodiode<br>Power requirement:<br>AC, 100-240V,<br>50/60Hz<br>Model S-200 Vis<br>BOECO Germany | 2pc<br>Round Cuvette<br>10pcs<br>Power cord 1pc<br>Vinyl dust cover<br>1pc<br>Operation manual<br>1 copy<br><br>Model: PD303<br>Apel - Japan |                              |                      |                                |                              |                                 |
| Chairperson<br>Technical Committee | Member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                         | Member                 |                   | Member                    |                                                                                                                                                                                                                                                      | Member                                                                                                                                       |                              | Member               |                                |                              |                                 |



|    | R<br>Q<br>TY                                                                                                                                                                                                                                                                           | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                  | Sindh<br>Medical<br>Stores                                                                                                                                                                                     | New Chemical<br>Centre                                                                                                                                                                                   | H. A. Shah & Sons | Kamstech<br>International                                                                                                                                                                                                                                                                            | Shallmar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                               | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                   | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                  | Key Scientific<br>Corporations                                                                                                                                                                                                                        | Technica<br>lly<br>Qualified                               | Technically<br>Disqualifie<br>d                                                                 |                                                                                                                                                                                                                  |
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|    |                                                                                                                                                                                                                                                                                        | 400nm<br>Type Vis<br>Wavelength<br>Accuracy<br>±0.5nm<br>Wavelength<br>Data Interval<br>0.2nm, 0.5nm,<br>1nm, 2nm,<br>5nm<br>Wavelength<br>Range 325nm<br>–1100nm<br>Wavelength<br>Repeatability<br>≤±0.2nm<br>Wavelength<br>Scan Speed<br>Automatic –<br>upto<br>1800nm/min<br>Weight(Metric<br>) 7.5kg<br>Width(Metric)<br>38.5cm<br>Warranty 1<br>Year<br>Make:<br>Thermo<br>Fischer<br>Scientific USA |                                                                                                                                                                                                                |                                                                                                                                                                                                          |                   |                                                                                                                                                                                                                                                                                                      |                               |                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                       |                                                            |                                                                                                 |                                                                                                                                                                                                                  |
| 32 | Abbe<br>Refractometer:<br>index<br>measurement<br>range is required<br>small contract,<br>laboratories or<br>applications<br>where sample<br>throughput is<br>relatively, low.<br>display.Range<br>1.30 - 1.70 RI (0 -<br>95 °Brix)<br>Resolution (Scale<br>Division) 0.0005<br>(0.25° | 2                                                                                                                                                                                                                                                                                                                                                                                                         | DR201-95<br>DIGITAL<br>HAND-HELD<br>REFRACTOME<br>TERS<br>P/N: DR201-<br>95<br>Technical<br>Specifications<br>Measure<br>mentrange:<br>1.3330–<br>1.5318nD<br>0–95%Brix<br>Accuracy:<br>±0.0003nD<br>±0.2%Brix | Boeco Digital<br>Abbe<br>Refractomet<br>er<br>Measuring<br>range<br>Refractive<br>index ND:<br>1.3000-<br>1.7000<br>Brix BX - TC:<br>0-95 %<br>Brix BX: 0-95<br>%<br>Measuring<br>accuracy<br>Refractive | Not Quoted        | 173453<br>ABBEMAT 3200<br>AUTOMATIC<br>REFRACTOMETER<br>(173453)<br>Measuring range:<br>Accuracy refractive<br>index:<br>Temperature control:<br>Temperature control<br>range 1.30 – 1.72 nD<br>*<br>0.0001 nD *)<br>Internal temperature<br>control by Peltier<br>15°C to 60°C<br>Temperature probe | Not Quoted                    | Abbe Refractometer<br>in sturdy housing with<br>light viewing area.<br>Connections for water<br>bath<br>589 nm LED<br>illumination.<br>Digital thermometer<br>0-99 °C<br>Measuring range:<br>1,3000-1.7200 nD; 0-<br>95 %Brix<br>Accuracy: +/-0.0002<br>nD; +/-0.1 %Brix<br>Scale division: 0.0005<br>nD; 0.25 %Brix<br>Power supply: 90-240 | Abbe<br>Refractometer<br>Illumination<br>Scale illumination,<br>LED-illumination<br>(590 nm) for<br>prism<br>Accuracy 0.1%<br>Brix; 0.0002nD<br>Measurement<br>range 0-95% Brix<br>solids content<br>(sugar scale);<br>1.3000-1.7000 nD<br>Power supply<br>220 V, switchable<br>Scale division | Abbe Refractometer<br>Refractometer ideally<br>suited for use where a<br>wide refractive<br>index measurement<br>range is required such<br>as in small contract<br>laboratories or<br>applications where<br>sample throughput is<br>relatively<br>low. The instrument<br>features both<br>refractive index and<br>Brix scales,<br>with the prism<br>temperature being | Range 1.30 -<br>1.70 RI (0 - 95<br>°Brix)<br>Resolution<br>(Scale Division)<br>0.0005 (0.25<br>°Brix)<br>Operating<br>Temperature 5<br>– 75 °C<br>Temperature<br>Resolution<br>0.1°C<br>Temperature<br>Accuracy ±1°C<br>Model Abbe 5,<br>Bellingham & | Polarimeter<br>Analogue<br>Model WXG-4<br>Made in<br>China | • Shalimar<br>Scientific<br>Stores<br>• S U<br>Enterprizes<br>• RAAB<br>Scientific<br>Solutions | • Pak Fil<br>Technologi<br>es<br>Temprature<br>range is not<br>according<br>to our<br>requiremen<br>ts, required<br>5 – 75 °C/<br>provided<br>0–40°C<br>• Sindh<br>Medical<br>Stores<br>Temperatur<br>e range is |

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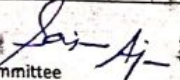
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|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   | Pakfills Technologies                                                                                                                                                                                                                                                                                               | Sindh Medical Stores                                                                                                                                                                                                        | New Chemical Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                         | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                  | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RAYS Technologies                                                                                                                                                                                                                                                                                                                                                        | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                    | Technically Qualified                                              | Technically Disqualified                                                                                                                                                                                         |
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|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                             |                     | display<br>Keyboard Touch screen<br>Prism Synthetic Sapphire<br>Material in contact with samples:<br>Synthetic Sapphire, stainless steel, FFKM<br>Power supply: AC 100 to 240 V; 50/60 Hz<br>Power consumption: Min. 10W to max. 120W depending on sample set<br>temperature and ambient temperature<br>92322<br>REFRACTOMETER<br>REFERENCE LIQUID<br>20ML WATER,<br>1.332ND, PTB<br>CERTIFICATE<br>Make: Anton Paar GmbH |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                |                                                                    |                                                                                                                                                                                                                  |
| 33 | Digital Melting Point Apparatus:<br>- Digital selection & display of temperature -<br>High accuracy - no. of samples 2, Temperature range Ambient to 300°C, Temperature accuracy $\pm 1.0^{\circ}\text{C}$ at $20^{\circ}\text{C}$ , $\pm 2.5^{\circ}\text{C}$ at $300^{\circ}\text{C}$ , Display Three digit LED, Temperature resolution $1^{\circ}\text{C}$ , Sensor Platinum resistance PT100 Ramp rates $20^{\circ}\text{C}$ per minute to plateau, $20^{\circ}\text{C}$ | 2 | M3000 Melting point meter for semi-automatic<br>SPECIFICATIONS: MEASUREMENT RANGE: 30–360°C<br>MEASUREMENT ACCURACY: $\pm 0.3^{\circ}\text{C}$ (30–200°C), $\pm 0.5^{\circ}\text{C}$ (200–360°C)<br>RESOLUTION: 0.1°C<br>PREHEATING RATE: To $200^{\circ}\text{C}$ approx. 4.0 min To $300^{\circ}\text{C}$ approx. | Automatic Melting Point Meter<br>Temperature range: RT - 350°C<br>Detection method: Fully automatic (compatible with Semi-automatic)<br>Camera and Video: Camera and Video SD card capacity: 8 GB<br>Temperature gradients: | Not Quoted          | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                | Not Quoted             | Melting Point Apparatus Colorful Touch Screen Display.<br>Temperature Range Room Temperature to $320^{\circ}\text{C}$<br>Resolution $0.1^{\circ}\text{C}$<br>Temperature Increase Speed $0.1^{\circ}\text{C}/10^{\circ}\text{C}$ (100 temperature point infinitely adjustable)<br>Temperature Control Method PID control<br>temperature, fully closed design of furnace body<br>Accuracy $\pm 0.4^{\circ}\text{C}$ ( $<250^{\circ}\text{C}$ ), $\pm 0.7^{\circ}\text{C}$ ( $>250^{\circ}\text{C}$ )<br>Repeatability When $0.1^{\circ}\text{C}/\text{Min}$ , repeatability $\pm 0.3^{\circ}\text{C}$<br>Display ET | Melting Point Apparatus<br>MEASUREMENT RANGE 30–360°C<br>MEASUREMENT ACCURACY $\pm 0.3^{\circ}\text{C}$ (30–200°C) $\pm 0.5^{\circ}\text{C}$ (200–360°C)<br>RESOLUTION 0.1°C<br>PREHEATING RATE To $200^{\circ}\text{C}$ approx. 4.0 min To $300^{\circ}\text{C}$ approx. 8.0 min<br>HEATING RATE $1^{\circ}\text{C}/\text{min}$<br>OBSERVATION LENS 10x<br>NO. OF CAPILLARIES 3<br>CAPILLARY $\varnothing$ 1.4mm<br>INTERFACE RS232<br>IP CODE | Digital Melting Point Apparatus<br>Number of samples 2<br>Temperature Ambient to $300^{\circ}\text{C}$<br>Temperature accuracy $\pm 1.0^{\circ}\text{C}$ at $20^{\circ}\text{C}$ , $\pm 2.5^{\circ}\text{C}$ at $300^{\circ}\text{C}$<br>Display Three digit LED<br>Temperature resolution $1^{\circ}\text{C}$<br>Sensor Platinum resistance PT100<br>Ramp rates $20^{\circ}\text{C}$ per minute to plateau $20^{\circ}\text{C}$ per minute to melt<br>Dimensions (w x d x h) 160 x 220 x 170 mm<br>Net weight 1.8 kg<br>Electrical supply 230V, 50Hz, 75W<br>Complete unit | Number of samples 2<br>Temperature Ambient to $300^{\circ}\text{C}$<br>Temperature accuracy $\pm 1.0^{\circ}\text{C}$ at $20^{\circ}\text{C}$ , $\pm 2.5^{\circ}\text{C}$ at $300^{\circ}\text{C}$<br>Display Three digit LED<br>Temperature resolution $1^{\circ}\text{C}$<br>Sensor Platinum resistance PT100<br>Ramp rates $20^{\circ}\text{C}$ per minute to plateau | Number of samples 2<br>Temperature range Ambient to $300^{\circ}\text{C}$<br>Temperature accuracy $\pm 1.0^{\circ}\text{C}$ at $20^{\circ}\text{C}$ , $\pm 2.5^{\circ}\text{C}$ at $300^{\circ}\text{C}$<br>Display Three digit LED<br>Temperature resolution $1^{\circ}\text{C}$<br>Sensor Platinum resistance PT100<br>Ramp rates $20^{\circ}\text{C}$ per minute to plateau | • Shalimar Scientific Stores • SU Enterprizes Pak Fil Technologies | • RAAB Scientific Solutions Authorization letter not attached • Key Scientific Corporations Authorization letter is not attached • Rays Technologies Authorization letter is not attached • Sindh Medical Stores |

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|    |                                                                                                                                                                                                                                                                                                                                                  |   | Pakfills Technologies                                                                                                                                                                                                                              | Sindh Medical Stores                                                                                                                                                                                                                                                                                                                                                                                        | New Chemical Centre                                                    | H. A. Shah & Sons                                                                                            | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                       | SU Enterprizes                                                                                 | RAAB Scientific Solutions                                                                          | RAYS Technologies                                                                                                                                                             | Key Scientific Corporations                                                                                                                                                                                                | Technically Qualified                   | Technically Disqualified                                |
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|    | per minute to melt<br>Dimensions (w x d x h) 160 x 220 x 170 mm.<br>Net weight 1.8 kg<br>Electrical supply 230V, 50Hz, 75W, Complete unit with pack of 100 melting point tubes, closed, at both ends, Germany or UK or Japan or USA or equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached. |   | 8.0min HEATING RATE: 1°C/min-10 OBSERVATION LENS: 10x NO. OF CAPILLARIES: 3 CAPILLARY Ø: 1.4mm INTERF ACE: RS-232IP CODE: IP20 POWER SUPPLY: 90-264V DIMENSIONS (WXH XD): 210mm x 360mm x 230mm WEIGHT: 4.3kg Make: A. KRUSS Optronic GmbH Germany | 0.1 °C ~ 20.0 °C / min Temperature accuracy: ± 0.3 °C ( < 250 °C ) ± 0.5 °C ( > 250 °C ) Repeatability: ± 0.1 °C ( At 0.1 °C / min ) Exploration model: No Video playback: No Magnification: 7 Operator account: 8 Curve storage: 10 Display: TFT touch screen Interface: USB, RS232, SD card Standard capillary size: Inner diameter- 1.0 mm Outer diameter- 1.4 mm Make: Labotronic Scientific Ltd Canada |                                                                        |                                                                                                              |                        | High Solution Color Touch Screen Output RS232 interface Sample Tube external diameter φ1.6mm, internal diameter : φ1.2mm Voltage 100V-240V 50HZ-60HZ Power 100W Model DMP 600 A & E Lab UK. with pack of 100 melting point tubes | JP20 POWER SUPPLY 90-264 V Model: M3000 Kruss - Germany                                        | with pack of 100 melting point tubes, Model SMP10, Stuart England                                  | Dimensions (w x d x h) 160 x 220 x 170 mm Net weight 1.8 kg Electrical supply 230V, 50Hz, 75W Complete unit with pack of 100 melting point tubes, Model SMP10, Stuart England | 20°C per minute to melt Dimensions (w x d x h) 160 x 220 x 170 mm Net weight 1.8 kg Electrical supply 230V, 50Hz, 75W Complete unit with pack of 100 melting point tubes, closed at both ends, Model SMP10, Stuart England |                                         | No specification is mentioned.                          |
| 34 | Universal Oven<br>Precise drying, Adaptive Multifunctional Digital PID-microprocessor                                                                                                                                                                                                                                                            | 2 | Not Quoted                                                                                                                                                                                                                                         | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                  | Universal Oven<br>Model No / Cat # 12686977 / Memmert UN55 Temperature | 51014542 Vacutherm vacuum heating and drying ovens dimensions (L x W x H) 57x74.4x57.6 cm frequency 50/60 HZ | Not Quoted             | Universal Oven With Fan Circulation With Forced circulation Adaptive Multifunctional Digital PID-microprocessor                                                                                                                  | Universal Oven<br>Precise drying All the units in the IG Smart version are equipped with a PID | Universal Oven<br>Capacity 32 liter Adaptive Multifunctional Digital PID-microprocessor Controller | Universal Oven<br>Precise drying, Adaptive Multifunctional Digital PID-microprocessor                                                                                         | Volume of the chamber: 58 liters Standard maximum temperature:                                                                                                                                                             | • Rays Technologies<br>• SU Enterprises | • RAAB Scientific Solutions<br>Authorization letter not |

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| RAAS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sindh Medical Stores | New Chemical Centre                                                                                                                                                | H. A. Shah & Sons                                                                                                                                                                                  | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | RAAS Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RAAS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Key Scientific Corporations                                                                                                                                                                                                                                                       | Technically Qualified                                                                                    | Technically Disqualified                                                                                                                                                                                                                                      |
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| <p>Controlled with high definition TFT-Color Displays</p> <p>Temperature range 10°C above ambient up to +300°C, Single DISPLAY, forced air circulation (fan), forced air circulation by quite air turbine, adjustable in 10% steps for each segment individually, self-diagnostics for fault analysis, digital timer adjustable from 1 minute to 99 days, 23 hours, Multiple</p> <p>Overtemperature Protection with audible and visual alarm, Interior Stainless Steel &amp; Textured Stainless Steel</p> <p>Casing</p> <p>Operated on 220volts, UF Series, Capacity 53 Lit, interior dimension: 400 x400x330mm, with single stainless steel tray</p> <p>Germany or UK or Japan or USA or equivalent</p> <p>Note: Valid authorized certificate from the</p> |                      | <p>range up to +300°C, capacity 53 L, depth, 330 mm, Display TFT Length: 514 mm, Interior Dimensions (h*W)</p> <p>340*400*400 mm</p> <p>Make: Fisher Brand USA</p> | <p>temperature 300/400°C</p> <p>voltage 230V capacity 53L Dimensions (interior) 37.1 x41.5x 34.5 cm type: shelf heating with multichannel controller</p> <p>Make: Thermo Fisher Scientific USA</p> |                        | <p>Controller with High-Definition TFT-Color Displays</p> <p>Temperature range 5°C above ambient up to +300°C, Single DISPLAY, natural convection, adjustment of pre-heated fresh air admixture by air flap control in 10% steps for, each segment individually self-diagnostics for fault analysis forced air circulation (Fan)</p> <p>digital timer adjustable from 1 minute to 99 days, 23 hours</p> <p>Multiple</p> <p>Overtemperature Protection with audible and visual alarm Interior Stainless Steel &amp; Textured Stainless Steel Casing</p> <p>Operated on 220volts, UF Series, Capacity 53Lit, interior dimension: 400 x400x330mm with single stainless steel tray, Model UF-55, Memmert, LMS Germany</p> | <p>microprocessor controller with an LCD graphic display and illuminated touch buttons.</p> <p>Advantages of the Smart controller: 4.3", clear, full colour touch screen</p> <p>LAN, USB ports for data transfer</p> <p>Multi-segment time and temperature programs</p> <p>Visual and sound alarm</p> <p>Internal memory for programs and data storage</p> <p>Event registry LabDesk software and user manual for direct download</p> <p>Quick change of program parameters Alarm Bar</p> <p>Operating with gloves on Controller Smart Pro</p> <p>Display 4.3" + touch screen Network LAN USB YES (saving registration data saving events) Keypad Numeric Main Screen Dashboard (all relevant data visible from one main window)</p> | <p>With High-Definition TFT-Color Displays</p> <p>Temperature range: up to +300°C</p> <p>Single DISPLAY</p> <p>Self-diagnostics for fault analysis</p> <p>Digital timer adjustable from 1 minute to 99 days, 23 hours</p> <p>Multiple</p> <p>Overtemperature Protection with audible and visual alarm</p> <p>Interior Stainless Steel &amp; Textured Stainless Steel Casing</p> <p>Interior dimension: 400 x400x330mm</p> <p>With single stainless steel tray, Operated on 220volts, Model UN-55, Memmert Germany</p> | <p>Controller With High-Definition TFT-Color Displays</p> <p>Color Displays</p> <p>Temperature range 5°C above ambient up to +300°C</p> <p>• Single DISPLAY</p> <p>• natural convection</p> <p>• adjustment of pre-heated fresh air admixture by air flap control</p> <p>• In 10% steps for each segment individually</p> <p>• self-diagnostics for fault analysis</p> <p>• digital timer adjustable from 1 minute to 99 days, 23 hours</p> <p>• Multiple Overtemperature Protection with audible and visual alarm</p> <p>• Interior Stainless Steel &amp; Textured Stainless Steel Casing</p> <p>Operated on 220volts, UN Series.</p> <p>Capacity 53 Lit, interior dimension: 400 x400x330mm with single stainless steel tray, Model UN-55.</p> | <p>Ambient +10 degree to 300°C</p> <p>Temperature stability: <math>\pm 0.2^\circ\text{C}</math></p> <p>Internal dimensions (W x D x H): 400 x 350 x 400 mm</p> <p>Quantity of shelves: 1 provided</p> <p>Operated on 220volts, Model XUD58</p> <p>France Etuves, individually</p> | <ul style="list-style-type: none"> <li>Shalimar Scientific Store</li> <li>New Chemical Centre</li> </ul> | <p>attached</p> <ul style="list-style-type: none"> <li>Key Scientific Corporation</li> <li>H. A. Shah &amp; Sons:</li> </ul> <p>Specific requirements are not recorded to requirement s 10°C above ambient up to +300°C/pro vided temperature e 300/400°C</p> |

Chairperson *Sanjay* Member

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|                                                              | R<br>Q<br>TY | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shallmar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RAAB Scientific<br>Solutions | RAYS<br>Technologies            | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
|--------------------------------------------------------------|--------------|--------------------------|----------------------------|------------------------|-------------------|---------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|--------------------------------|------------------------------|---------------------------------|
| Manufacturers/to<br>reign principals<br>must be<br>attached. |              |                          |                            |                        |                   |                           |                               | Programs 5<br>Program name<br>Free number<br>assigned<br>Priority<br>Parameters<br>Segments 6<br>Data registry<br>max. 10,000<br>measurement<br>data stored for a<br>maximum of 6<br>months<br>Events registry<br>Yes<br>Statistics YES -<br>only the current<br>cycle<br>Temperature<br>protection class<br>2.0<br>Device name<br>Fixed (serial<br>number)<br>Alarm Bar Yes<br>Quick change Yes<br>Additional<br>software for PC<br>LabDesk<br><br>Digital<br>microprocessor<br>controlled<br>standard version<br>drying oven,<br>natural<br>convection,<br>chamber capacity:<br>56 liters, stainless<br>steel interior &<br>exterior, Solid<br>door,<br>temperature<br>range: 5°C above<br>ambient<br>temperature...+30<br>0°C, temperature<br>resolution every: |                              | Memmert,<br>Made in<br>Germany. |                                |                              |                                 |
|                                                              | Chairperson  | Member                   |                            | Member                 |                   | Member                    |                               | Member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              | Member                          |                                |                              |                                 |
| Technical Committee                                          |              |                          |                            |                        |                   |                           |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                              |                                 |                                |                              |                                 |





|    | Pakfills Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sindh Medical Stores                                                                                                                                                                           | New Chemical Centre                                                                                                                                       | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                       | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                        | RAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                   | Key Scientific Corporations                                                                                            | Technically Qualified                                                                    | Technically Disqualified                                      |                |                                                               |
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|    | oper. +95 °C, with additional boiling mode (1-100 °C). State-of-the-art control technology of the basic and models, Microprocessor PID-temperature controller with, integrated autodiagnostic system with fault indicator, integrated digital timer from 1 min. to 99.59 hours, Overtemperature Protection (double), Interior Stainless Steel Tank & Textured Stainless Steel Casing, Fitted With Gabled Cover, Capacity 14 Lit., interior dimension 350x290x140mm<br>Germany or UK or Japan or USA or equivalent<br>Note: Valid certificate from the manufacturers/foreign principals must be attached. | range: RT+5 °C to 99 °C<br>Temperature tolerance: ± 1 °C<br>Temperature homogeneity: ± 1 °C<br>Power: 1500 W<br>Voltage: 110 V/60 Hz<br>220 V/50 Hz<br>Make: labotronics Scientific Ltd Canada | mm display: 3.5 inch color graphic display with touch<br>capacity: 17.5 L, temperature: 5 -100°C, Timer from 1 min upto 999 hrs<br>Make: Fisher Brand USA | Dimensions (L x W x H) 15.5 x 24.9 x 9.8 in. (394 x 632 x 249 mm)<br>Display Monochrome LCD<br>Heating Capacity 1200 W<br>Includes Stainless Steel Gable Cover and Rubber Duck<br>Material Epoxy Powder-coated Cold Rolled Steel<br>Model Precision SWB 15<br>Temperature Presets 4<br>Temperature Stability ±0.1°C<br>Temperature Uniformity ±0.05°C<br>Capacity (Metric) 15 L<br>Certifications/Compliance UL, CE<br>Electrical Requirements Global Voltage 100/115 V 200/230 V 50/60 Hz<br>Temperature Range Ambient +5° to 100°C<br>Unit Size Each<br>Make: Fisher Brand USA |                        | 99.59 hours, 1min resolution<br>Capacity 14 liters<br>Temperature range min. 5 °C above ambient up to +95 °C with additional boiling mode (+100 °C)<br>Resolution: 0.1°C, Variation: ±0.1°C<br>State-of-the-art control technology of the basic and models<br>Overtemperature Protection (double) Interior Stainless Steel Tank & Textured Stainless Steel Casing Fitted Operated on 220volts, WNB Series...<br>Model WNB14, Memmert LMS Germany | 28 Liters<br>Reservoir/Tank Material Stainless Steel<br>Reservoir Cover Hinged Gable<br>Temperature Stability ±0.1°C<br>Temperature Uniformity ±0.2°C at 37°C<br>Calibration Capability 1-point Display 3.25" LCD<br>Timer 1 – 99hour or continuous<br>Flammability Class (DIN 12876-1) I (NFI)<br>Over-Temperature Protection Yes<br>Failsafe Heater Control Yes<br>Reservoir Drain Yes<br>Maximum Ambient Temperature 40°C<br>Model: WB28 Polyscience – USA | Reservoir/Tank Material Stainless Steel<br>Reservoir Cover Hinged Gable<br>Temperature Stability ±0.1°C<br>Temperature Uniformity ±0.2°C at 37°C<br>Calibration Capability 1-point Display 3.25" LCD<br>Timer 1 – 99hour or continuous<br>Flammability Class (DIN 12876-1) I (NFI)<br>Over-Temperature Protection Yes<br>Failsafe Heater Control Yes<br>Reservoir Drain Yes<br>Maximum Ambient Temperature 40°C<br>Model: WB28 Polyscience – USA | up to +95 °C<br>State-of-the-art control technology of the basic and models<br>PID-Microprocessor temperature controller integrated digital timer from 1 min. to 99.59 hours<br>Over temperature Protection (double) Interior Stainless Steel Tank & Textured Stainless Steel Casing Fitted With Gabled Cover interior dimension 350x290x140mm<br>Operated on 220volts Model WNB14, Memmert Germany | UV Lamp with Viewing Cabinet 2x8 Watt lamp UV Lamp, wavelength 254/366 nm Object size 20x20cm x 21mm thickness A timer | UV Lamp Viewing Cabinet UV Lamp dual wavelength the stand holds the lamp in a wavelength | UV Lamp with Viewing Cabinet • 2x8 Watt lamp UV               | • Rays Technio | • RAAB Scientific Solutions authorization letter not attached |
| 36 | ZF-20D ultraviolet analyzer; Sample room size: 250 * 170 * 230mm Sample                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1                                                                                                                                                                                              | Not Quoted                                                                                                                                                | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Not Quoted             | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                       | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                       | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                          | UV Lamp with Viewing Cabinet 2x8 Watt lamp UV                                                                          | • Rays Technio                                                                           | • RAAB Scientific Solutions authorization letter not attached |                |                                                               |

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| Technical Disqualified                     | Technically Qualified | Key Scientific Corporations                                                                                                                                      | PAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RAAB Scientific Solutions                                                                                                                                                                                                                                                | SU Enterprises | Shallmar Scientific Stores | Karnatech International | H. A. Shah & Sons | New Chemical Centre | Sindh Medical Stores | Paklinks Technologies | Notes                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------|-------------------------|-------------------|---------------------|----------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key Scientific Corporation is not attached |                       | 254/366 nm. • Object size 20x20cm x 2mm thickness. • A timer automatically turns off after 10 minutes. • A glass filter in the viewing window. • Shock resistant | position. It shields off extraneous light on three sides. 2mm thickness can be pushed through under the back screen. Specifications: • 228 watt lamp UV lamp, wavelength 254/366 nm. • Object size 20x20cm x 2mm thickness. • A timer automatically turns off after 10 minutes. • A glass filter in the viewing window. • Shock resistant Housing/Viewing box is made of plastic fitted with high intensity 8 watt lamps of 254/366nm wavelength. The lamp is equipped with a timer that automatically turns off after 10 minutes. reduces the risk of exposure to radiation operated on 220 Volts, | automatically turns off after 10 minutes. A glass filter in the viewing window, Shock Resistant Housing/Viewing box is made of shock resistant plastic fitted with high intensity 8 watt lamps of 254/366nm wavelength, Operated on 220 Volts, Camag Made in Switzerland |                |                            |                         |                   |                     |                      |                       | <p>Notes:</p> <p>Object size: 20x20cm x 2mm</p> <p>Thickness: 2mm</p> <p>Power supply: 220V</p> <p>Frequency: 50Hz</p> <p>Five lamp life of 1000 hours or more</p> <p>• The ultraviolet transmittance of the filter is more than 20 w/ square meters</p> <p>Germany or UK or Japan or USA or</p> <p>equivalent Note: Valid authorized certificate from the manufacturers/foreign principals must be attached.</p> |

Chairperson: Pan-AT  
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RAAB Scientific<br>Solutions | RAYS<br>Technologies       | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d        |  |
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| Luminescence Spectrometer: capability of measuring fluorescence, phosphorescence or chemiluminescence, and bioluminescence. Pulse rate, delay and gate times can be varied. Source Xenon flash lamp, pulsed at line frequency (50 or 60 Hz). Pulse width at half peak height < 10µs, power equivalent to 20 kW at continuous operation. Delay (td) and gate time (tg) can be varied to measure phosphorescence. Source can be turned off for measuring chemiluminescence and bioluminescence. Optics Monk-Gillieson type monochromators using low stray light, holographic gratings cover the following ranges: Excitation 200-800 nm with zero order selectable | 1            |                          | Not Quoted                 | Not Quoted             | G9800AA Cary Eclipse Bundle includes WinFLR Software and standard accessories. Computer-controlled ratioing fluorescence spectrophotometer with measurement modes for fluorescence, phosphorescence, chemiluminescence and bioluminescence. Czerny-Turner 0.125 m monochromators, 190-1100 nm wavelength range, fixed selectable SBW from 1.5 to 20 nm, full spectrum Xenon pulse lamp with exceptionally long lifetime, pulsed at 80 Hz. Pulse width at half peak height ~2 µs, peak power equivalent to 75 kW. single source with exceptionally long life, horizontal beam geometry, dual R928 PM tubes. Synchronous scanning is available with constant wavelength or constant frequency difference. Excitation spectra are automatically corrected. All reflective optical system with quartz overcoated optics, Schwarzschild source | Not Quoted                | Not Quoted                    | Fluorescence mode: Fluorescence, Luminescence (Chemiluminescence, Bioluminescence, Electroluminescence Source: High intensity 150W continuous xenon lamp Optical: Double continuous spectroscopic monochromator Gratings: Holographic Concave grating Excitation: 64x64mm, blaze at 400nm Emission: 64x64mm, blaze at 400nm Wavelength range: 200-900nm Wavelength accuracy: +/- 2.0nm Wavelength reproducibility: +/-1.0nm Detector: Photomultiplier tube R928, continuously adjustable negative high voltage 0-900V Spectra Bandwidth: Excitation: seletable 1, 2.5, 5, 10 20nm | Not Quoted                   | Camag Made in Switzerland. | Not Quoted                     | Not Quoted                   | • H.A. Shah & Sons<br>• SU Enterprizes |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              | Not Quoted               |                            |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                              |                            |                                |                              |                                        |  |

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| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------|--------------------------------|------------------------------|---------------------------------|
| <p>Excitation 200-650 nm with zero order selectable (standard photomultiplier) 200-900 nm with zero order R928 photomultiplier (optional) Synchronous scanning is available with constant wavelength or constant frequency difference. Excitation spectra are automatically corrected. An excitation filter wheel is incorporated into the optical unit and inserts a 390 nm cut-off filter as an excitation spectrum is scanned through 410 nm. Excitation and Emission Polarizers consisting of 2 filter wheels, each with horizontal and vertical polarizer elements are included. Wavelength accuracy + 1 nm Wavelength + 0.5 nm reproducibility Spectral bandpass The excitation slits</p> |                          |                            | <p>optics for increased energy throughput and precise imaging and focusing, scan rates from 0.01 to 24 000 nm/min, 80 data points per second maximum measurement rate in fluorescence mode, non-measurement phase stepping wavelength drive, room light immunity in fluorescence mode, centrally controlled by computer with Microsoft Windows 2000 or XP operating system. The Agilent Cary Eclipse Fluorescence spectrophotometer is manufactured according to a Quality system certified to ISO 9001. These guaranteed specifications are based on the <math>\pm 4</math> sigma statistical confidence level of the final acceptance tests performed at the factory. Source can be turned off for measuring chemiluminescence and bioluminescence Source Xe pulse lamp with exceptionally long lifetime, pulsed at 80 Hz. Pulse width at half peak height <math>\sim 2</math> <math>\mu</math>s, peak power equivalent to 75 kW. Monochromators Excitation: Czerny-</p> |                   |                           |                               | <p>Emission: slectable 1, 2.5, 5, 10 20nm Wavelength scan speed: Max 30,000nm/min Selectable from 30, 60, 240, 1200, 2400, 12000, 30,000nm/min Scan Interval: 0.2-10.0nm Sensitivity: Signal to noise level using the Raman peak of water excitation 350nm, is 1200:1 RMS measuring noise on background (BG) Linearity: 0.995 (quinine sulfate solution) Baseline drift: &lt;0.3% (within 10 minutes) Fluorescence value drift: &lt;1.5% Ex: 352nm, EM: 450nm, (within 10min) Fluorescence value range: 0 to 70,000</p> <p>Computer + Pinter + UPS included</p> <p>Model: FL970 Techcomp - Singapore</p> <p>Accessories</p> <p>Micro Powder</p> |                              |                      |                                |                              |                                 |

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15 nm and emission slits 2.5-20 nm can be varied and selected in 0.1 nm increments. Scanning speed The scanning speed can be selected in increments of 1 nm from 10-1500 nm/minute. Data can also be collected with respect to time. Emission filters Computer selectable cut-off filters, 290, 350, 390, 430 and 515 nm, a blank (to act as a shutter), a 1 % attenuator, and a clear beam position. Sensitivity Minimum signal-to-noise level using the Raman band of water, excitation 350 nm, is 750:1 RMS measuring noise on the Raman peak, and 2500:1 RMS measuring noise on the baseline. Standard A single position water thermostatted holder for 10 mm cuvettes. Should include a host of automated accessories and software to

| R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                       | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
|--------------|--------------------------|----------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------|--------------------------------|------------------------------|---------------------------------|
|              |                          |                            |                        | Turner, f3.6, 0.125 m focal length<br>Emission: Czerny-Turner, f3.6, 0.125 m focal length<br>Monochromator Gratings<br>Excitation: 30 x 35 mm, 1200 l/mm, blaze at 370 nm<br>Emission: 30 x 35 mm, 1200 l/mm, blaze at 440 nm<br>Detectors: High performance R928 photomultiplier detectors. Separate R928 PMT for reference signal. Optional R3896 PMT for enhanced sensitivity above 700 nm.<br>Wavelength range Mechanical excitation: 190-1100 nm. Zero order selectable.<br>Mechanical emission: 190-1100 nm. Zero order selectable.<br>Operational excitation: 200-900 nm with standard PM tube. Zero order selectable.<br>Operational emission: 200-900 nm with standard PM tube. Zero order selectable<br>Wavelength accuracy $\pm 1.5$ nm<br>Wavelength reproducibility $\pm 0.2$ nm<br>Sensitivity (Raman band of water) > 500:1 RMS: 500 nm |                           |                               | sample Holder<br>Variable angle<br>Powder sample holder<br>Polarizer cell holder<br>1.7ml micro fluorescence cell<br>1ml micro fluorescence cell<br>0.7ml micro fluorescence cell<br>0.35ml micro fluorescence cell<br>1.4ml micro fluorescence cell |                              |                      |                                |                              |                                 |

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research  
 applications  
 whether your  
 application  
 requires  
 fluorescence,  
 phosphorescence,  
 chemi- or  
 bioluminescence.  
 Compatible PC  
 Printer with UPS  
 or recommended  
 accessoriesGerman  
 any or UK or  
 Japan or USA or  
 equivalent  
 Note: Valid  
 authorized  
 certificate from  
 the  
 manufacturers/to  
 reign principals  
 must be  
 attached.

excitation, excitation  
 and emission slits 10  
 nm, 1 s Signal  
 Averaging time.  
 > 750.1 RMS: 350 nm  
 excitation, excitation  
 and emission slits 10  
 nm, 1 s Signal  
 Averaging time.  
 Sample compartment  
 Dimensions: 198 x  
 273 x 205 mm (width  
 x depth x height)  
 Access: Front and top  
 Instrument purging  
 Sample compartment  
 windows and sample  
 compartment  
 Operational  
 Spectral bandwidth  
 Excitation: 1.5, 2.5, 5,  
 10, 20 nm and 10 nm  
 round  
 Emission: 1.5, 2.5, 5,  
 10, 20 nm and 10 nm  
 round  
 Filters  
 Excitation:  
 Computer-selectable  
 filters including 2  
 bandpass filters  
 (250-395 nm, 335-  
 620 nm), 2 cutoff fi  
 lters  
 (550 nm, 695 nm), a  
 shutter and open  
 beam position.  
 Emission:  
 Computer-selectable  
 filters including 1  
 bandpass filter (250-  
 395 nm), 4 cutoff fi  
 lters (295, 360, 430  
 and  
 550 nm), a 3%  
 attenuator, a shutter  
 and an open beam  
 position.

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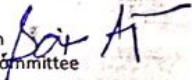
Member

Member

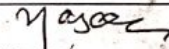
Member

Member

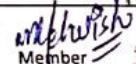
| Pakfills Technologies | Sindh Medical Stores | New Chemical Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Kamstech International | Shalimar Scientific Stores | SU Enterprizes | RAAB Scientific Solutions | RAYS Technologies | Key Scientific Corporations | Technically Qualified | Technically Disqualified |
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|                       |                      |                     | Signal averaging<br>Fluorescence: 0.0125 to 999 s<br>Phosphorescence: 1 $\mu$ s to 10 s (Gate time)<br>Bio/Chemiluminescence: 40 $\mu$ s to 10 s (Gate time)<br>Wavelength scan rate<br>0.010–24 000 nm/min<br>Maximum slew rate<br>24 000 nm/min (400 nm/s)<br>Maximum scan rate<br>24 000 nm/min (400 nm/s)<br>Data interval (nm): 0.15–30 cm-1: 9.3711–140.0566<br>A: 1.5–300 eV: 0.0012–0.0174<br>Photometric display $\pm$ 1000 arbitrary units (a.u.)<br>Gain Selection of Low, Medium and High with manual control from 400 to 1000 V in increments of 1 V.<br>Maximum sensitivity ~5000 times that of Low.<br>Data collection rate (kinetics studies)<br>1 cell: 4800 points/min per cell<br>4 cells: 6 points/min per cell<br>4 cells (0.0125 s SAT, 0.013 s Dwell time): 55 points/min per cell<br>Repetitive scanning 9910103000<br>Kit Powder Cell , Single Crystal Holder G9800AA#325<br>Cary WinFLR |                        |                            |                |                           |                   |                             |                       |                          |

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|    |                                                                                                                                                                                                                                                                                                                                                     |   |                       |                      |                     | Academic Option<br>Adds five free of charge software copies for academic customers.<br>G9809A<br>Single Cell Holder,<br>Water Thermostatted<br>Compatible Computer System with Laser Jet Printer<br>Compatible Branded UPS<br>Make Agilent Technologies USA                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                            |                |                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                   |                          |  |
| 38 | Glassy Carbon Working Electrode                                                                                                                                                                                                                                                                                                                     | 5 | Not Quoted            | Not Quoted           | Not Quoted          | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                            | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Not Quoted                 | Not Quoted     | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                             | Not Quoted                                                                                                                                                                                                                                                                                                         | Not Quoted                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                   |                          |  |
| 39 | Ag/AgCl Electrode                                                                                                                                                                                                                                                                                                                                   | 5 | Not Quoted            | Not Quoted           | Not Quoted          | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                            | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Not Quoted                 | Not Quoted     | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                             | Not Quoted                                                                                                                                                                                                                                                                                                         | Not Quoted                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                   |                          |  |
| 40 | Pt Counter Electrode                                                                                                                                                                                                                                                                                                                                | 5 | Not Quoted            | Not Quoted           | Not Quoted          | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                            | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Not Quoted                 | Not Quoted     | Not Quoted                                                                                                                                                                                                                                                                                                                                                                                                                             | Not Quoted                                                                                                                                                                                                                                                                                                         | Not Quoted                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                   |                          |  |
| 41 | HPLC System<br>HPLC system Complete with PDA detector and accessories1- Solvent Management; Flow rate range (0.01-10.0 ml/min, in 0.01 ml increments); Eleven gradient curve shapes (linear, 2 step, 4 convex, 4 concave); Delay volume is <650 ul (including Sample Management delay volume) – unlike other systems, this volume is independent of | 1 | Not Quoted            | Not Quoted           | Not Quoted          | G7111A<br>1260 Infinity II Quaternary Pump VL<br>1260 Infinity II Quaternary Pump VL, maximum pressure 400bar. Includes quaternary pump, column, connecting capillaries, solvent cabinet, solvent bottles and CAN cable.<br>G4208A Infinity Series Instant Pilot Handheld local controller for all Agilent HPLC systems with color screen LCD, keyboard, and holder. Includes CAN cable and USB slot for method and sequence transfer.<br>Performance | Waters e2695 XC Alliance HPLC System<br>• Waters Quaternary Gradient Alliance HPLC System with Built-in Auto sampler having Sample Heating and Cooling, 4 channel In-line degasser, Column Heater / Cooler, PDA Detectors & Empower QS software which is US FDA Approved & 21 CFR part 11 ready compliant. The e2695 Separations Module has integrated solvent, sample management and includes both a sample heater/cooler and a column heater/cooler. The | Not Quoted                 | Not Quoted     | HPLC System<br>Quaternary Gradient<br>Wetted Materials: Stainless Steel<br>Flow Rate: Programmable (Analytical: 0.001 - 10.000 ml/min)<br>Flow Accuracy: ± 1.0 %<br>Flow Precision: ± 0.1 %<br>RSD 1.000 ml/min<br>Pressure Range: 0 – 40 MPa (0 – 6000 PSI)<br>Pressure Pulsation: typical < 0.1 MPa or < 1.0 %<br>Compressibility Compensation: user-adjustable for different solvents<br>Dimensions: (W x H x D) 310 x 165 x 478 mm | HPLC System<br>Quaternary Gradient<br>Routine HPLC System<br>Consisting of: HPLC Pump System Model S1125G, Quaternary Gradient, Programmable dual-piston pump head for low pulsation<br>Stainless Steel (Analytical)<br>Programmable dual-piston pump head for low pulsation, camshaft constantly lubricated, with | Wetted Materials: Stainless Steel<br>Baseline Noise: ± 1 x 10-5 AU (@240 nm, 1sec. Risetime)<br>Baseline Drift: <3 x 10-4 AU/h<br>Number of Diode: 256<br>Wavelength Range: 190 – 720nm<br>Wavelength Accuracy: 0.5 nm (256 Diodes)<br>Mean Pixel Pitch: 2.2 nm | • Kamstech international<br>• Key Scientific Corporations<br>Authorization letter is not attached<br>• Rays Technologies required deuterium arc lamp/provided deuterium-tungsten lamp<br>• H A Shah and Sons: Higher Delay volume |                          |  |

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| pressure/ method linking; automated system shut down] Built in high efficiency, low volume, and vacuum degassing system with separate vacuum chambers for each solvent.i Flow precision of <= 0.075% RSD with flow accuracy of +/- 1%. i Compositional accuracy is <0.5% and compositional precision is <0.5%, both measured at 1 ml/min.i Must Include In-Built LCD for System Preparation, an automated software assisted purge function for ease of solvent changing and system purging/priming and other applicationsWarranty on system sub-assemblies i - Solvent manager drive mechanics - 2 years or 200,000 injections, whichever occurs first j - Sample manager drive |                       |                      | Specifications: Hydraulic system: Dual piston in series pump with servo-controlled variable stroke drive, power transmission by gears and ball screws, floating pistons Settable flow range: Set points 0.001 – 10 mL/min, in 0.001 mL/min increments Recommended flow Range: 0.2 – 10.0 mL/min Flow precision: ≤0.0/ % RSD, or ≤0.02 min SD whatever is greater Flow accuracy: ± 1 % or 10 µL/min whatever is greater, pumping degassed H2O at 10 MPa (100 bar) Composition accuracy: <0.2% RSD Composition precision: <0.2% RSD Pressure operating range: Operating range up to 40 MPa (400 bar, 5880 psi) Pressure pulsation:< 2 % amplitude (typically < 1.0 %), or < 0.3 MPa (3 bar, 44 psi), whatever is greater, at 1 mL/min isopropanol, at all pressures > 1 MPa (10 bar, 145 psi) Compressibility Compensation: User-selectable, based on mobile phase | system features quaternary solvent delivery and sample introduction via a direct inject sample manager. The system may be configured for a broad range of applications supported by HPLC optical detectors and mass detectors, with a choice of instrument control and data management software. The following items are included as part of the core system: • e2695 XC Separations Module • Integrated Degasser and Plunger Seal-wash • Sample Compartment (Autosampler) with Heater/Cooler (4-40C) • Column Heater / Cooler (4-65) • System Start Up Kit • User Documentation Overall System - Low dispersion fluidics (< 650µL, independent of back pressure) enhance fast gradients and rapid system equilibration - System Prep capability for unattended system priming, purging and equilibration of system - Remote operation via Waters Empower, Millennium32 or MassLynx software |                        |                            |                | Operated on 220 volts Sykam, Made in Germany | interface RS 232C, digital I/O and analog pressure outlet; Flow rate : 0.001 – 10.000 ml/min Pressure range : 0 – 40 MPa (0- 6000 PSI) Power Supply : 100-250V (47 - 63 Hz) Operated on 220 volts Sykam, Made in Germany With four Channel Degasser built in pump Specification:- Wetted Materials: Stainless Steel Baseline Noise: ± 1 x 10-5 AU (@240 nm, 1sec. Risetime) Baseline Drift: <3 x 10-4 AU/h Number of Diode: 256 Wavelength Range: 190 – 720nm Wavelength Accuracy: 0.5 nm (256 Diodes) Mean Pixel Pitch: 2.2 nm (256 Diodes) Resolution (λ FWHM): 7 nm (256 Diodes) Linearity: > | (256 Diodes) Resolution (λ FWHM): 7 nm (256 Diodes) Linearity: > 2.0 AU Flow cell built in Light Source Deuterium Lamp, Tungsten Lamp Autosampler Automatic Sample Injector System Wetted Materials: Stainless Steel / PEEK*, PPS, PVDF Sample Capacity: 60/80 (1.5 ml), 98 (microtiter plates) Injection Volume: Programmable 0.1 - 999.9 µl Injection Precision: < 0.5 % Variable Volume Injection (10 µl; typically ~0.25 %) Linearity: Correlation Factor > 0.999 (10 µl | than required which disperses peaks and affect peak sharpness. Not equipped with Built-in LCD Warranty on sample Manager Derive Mechanics not offered. two lamps system causes the problem of lamp solarization and increased cost of maintenance • RAAB Scientific Solutions, wavelength range is not according to requirement . Incomplete specification provided |                          |

Person: *[Signature]* Member

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| Pakfills Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sindh Medical Stores | New Chemical Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Kamstech International                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Shallmar Scientific Stores | SU Enterprizes | RAAB Scientific Solutions | RAYS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Technically Qualified | Technically Disqualified |
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| <p>Linearity is &lt;0.5% from 5-80 ul. Linearity is &gt;0.999 coefficient of deviation from 1-100 ul. Carryover is &lt;0.0025% from previous injection (Caffeine). i. 0.1 to 2000 ul Injection range with up to 99 injections per vial. Sample capacity is 120 (2ml) vials. Limited volume inserts allow as little as 0.1ul from 7ul. i. Events include 2 inject starts, inject stop and programmable contact closure. 3- Column Oven i - Forced air recirculation Peltier-based column heater module i - 4 to 65° C i - Integral mounting clips for column(s) and tubing's i - Must have cooling option. 4- Photo Diode Array Detector: i Low noise sensitivity = &lt;10 µAU i 190-800 nm with 1.2 nm Digital and Optical</p> |                      |                     | <p>injections G4208A Infinity Series Instant Pilot, Infinity Series Instant Pilot Handheld local controller for all Agilent HPLC systems with color screen LCD, keyboard, and holder. Includes CAN cable and USB slot for method and sequence transfer. automated software assisted purge function for ease of solvent changing and system purging/priming and other applications Sample manager with sample cooling 4 - 40 °C G7129A 1260 Infinity II Vialsampler For use up to 600 bar. Includes 100uL metering device and a 100 uL sample loop plus integrated needle flush port. Includes 2 drawers each for 66 vials (2 mL). HPLC design Autosampler up to 600 bar for 0.1 to 100 mL Injections. Includes:</p> <ul style="list-style-type: none"> <li>• Two drawers, each 66 sample vials (2mL) 132 vials total Capacity.</li> <li>• Automatic routines for adding, mixing and injecting derivatized samples</li> <li>• Needle wash system</li> </ul> | <p>access to plungers, plunger seals, plunger wash seals 3. Sample Management - 120 sample capacity via industry-standard 2 mL vials configured in 5 x 24 vial carousels - Alphabetically indexed and color-coded carousels for multiple users - Compatible with Waters unique range of HPLC Certified vials - Sample delivery precision &lt; 0.5% RSD (5 to 80 uL) - Programmable variable-volume injection volume range of 0.1 to 2,000 uL - Syringe (standard) 250µL with 100µL loop - Tool-free replacement of needle wash frit - Programmable needle height in 1 mm increments - User- settable stat runs, auto additions and auto standards routines - Programmable dynamic needle wash (i.e. no wash vial) minimizes sample carryover 4. Sample Temperature Control Option (P/N WAT270802) - Forced air recirculation Peltier-based sample</p> |                            |                |                           | <p>Model S5250 Column Oven Heating/Cooling electronic defect. Wetted Materials: Stainless Steel / PEEK1, PPS1 Temperature range: 5°C - 100°C; Temperature Accuracy: &lt; 0.1 °C; Column oven comes by default with one column holder Column chamber: 439 x 133 x 75 mm Safety Features: Temperature Fuse; Leakage Sensor; Operated on 220 volts, Model S4120 Fraction Collector System</p> <ul style="list-style-type: none"> <li>• Integrated collect/drain valve</li> <li>• Exchangeable collection racks</li> <li>• Free position selection</li> <li>• Simple I/O interface Model S6410 Add-on: HPLC instrument Control</li> </ul> | <p>selection Model S 6410 Chromatography Software 21 CFR Part 11 complaint software for a single HPLC system (1 time base) Upgradable to 4 independent systems Integration Overlay Calibration Automated measuring support Add-on: HPLC instrument Control</p> <p>With following accessories:-</p> <ul style="list-style-type: none"> <li>a. HPLC Column C18 size 250 x 4.6mm 5µ 1-No</li> <li>b. Ferrules, Stainless Steel tubing, Screws complete for installation with 1000vials</li> <li>c. Branded Computer Core i5 &amp; 22" LED &amp; Laser Printer</li> </ul> |                       |                          |

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| RAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Technically Qualified      | Technically Disqualified |
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| Instrument control for HPLC instruments<br>Add On: Multi-Com 1xUSB to 6x RS232 Converter<br>With 1. No HPLC Column C18 size 250 x 4.6mm S14 with Ferrules, Stainless Steel tubing, Screws complete for installation with 1000vials<br>With Branded Computer Core i5 & 22" LED & Laser Printer<br>With 3KVA UPS for HPLC (locally supplied)<br>Complete as above, Sykam, Made in Germany                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | d 3KVA UPS (locally supplied)<br>Complete as above, Sykam, Germany                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                            |                          |
| RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Shallmar Scientific Stores | Kamtech International    |
| that uses fresh solvent with each injection<br>programmable Standard needle wash/flush port and peristaltic pump<br>• Random access to any vial for multi-method operation<br>• Programmable needle height control to help protect the needle from damage and allow greater flexibility when using advanced routines<br>• Precision: <0.25 % RSD of peak areas from <5 µL to 100 µL<br>• Linearity is >0.9999 in the range of 0.1-100 µL<br>• Carryover is <0.0009% for caffeine under specified conditions and for routine analysis<br>• <0.004 % (40 ppm) with needle wash<br>• 0.1 to 1800 µL injection range with up to 99 injections per vial<br>• Sample capacity 132 vials of 2 mL<br>• Limited volume inserts allow as little as 0.1 µL from 7 µL<br>• Events include 2 inject starts, inject stop and programmable contact closure applications ranging from microbore to | temperature control - 4 deg C to 40 deg C<br>darkened sample compartment<br>5. Column<br>temperature control - Column Heating Option (P/N 185186301)<br>- Forced air recirculation Peltier-based column heater/cooler module - 4 °C to 65 °C<br>- Integral mounting clips for column(s) and tubing<br>- Forced air recirculation Peltier-based column heater/cooler module - 4 °C to 65 °C<br>- Ambient minus 15 °C or 4 °C (whichever is greatest) up to 65 °C<br>- Integral mounting clips for column(s) and tubing<br>6. Warranty on system sub-assemblies<br>- Solvent manager drive mechanics - 2 years or 200,000 injections, whichever occurs first<br>- Sample manager drive mechanics - 2 years or 200,000 injections, whichever occurs first<br>- Seal pack assembly - 1 year or 15,000 injections, whichever occurs first<br>Alliance (B) Series Bottle Tray<br>Waters Extended flow kit with injection |                            |                          |
| H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | New Chemical Centre                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Sindh Medical Stores       | RAVS Technologies        |
| Software – ensures the same light energy output for the entire life of the detector lamp.<br>One lamp – not two – cuts the cost of maintenance and avoids the problem of lamp solarization, which is seen in two lamp systems, when the light from one lamp hazy the glass of the second lamp.<br>Only one moving part – which means fewer parts to wear.<br>Software can turn detector as a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                            |                          |

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| Q<br>ty | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Kamstech<br>International                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Shalimar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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|         | length, wavelength spectral detector. I Specialized routines such as MaxPlot, Purity determinations and spectral libraries. I Collect 8 channels of 2D data at user defined bandwidth for user optimization of 2D detection. 5- Fraction CollectorThe Fraction Collector III is an easy-to-use, stand-alone fraction collector designed for use with HPLC, Preparative HPLC, and MS applications. Compatible with flow rates as high as 300 mL per minute, the Fraction Collector III handles a variety of adapter racks and collection vessels within a compact footprint. Its flexible design accommodates fraction sizes compatible with microtiter plates up to multiple liter containers. 5 |                            |                        | semi preparative chromatography Includes a needle flush port for rinsing of outside needle to maintain lowest carryover during routine work Low internal volume for minimum contribution to a system's total internal volume, which can be even further, reduced using "bypass" mode Overlapped injections for increased productivity Injection program available for customizing advanced injections as well as for sample preparation steps up front injection Performance Specifications Injection range 0.1 - 100 µl in 0.1 µl increments upto 1000 µl Precision <0.25 % RSD of peak areas from <5 µl to 100 µl Pressure range 0 - 60 MPa (0 - 600 bar, 0 - 8702 psi) 0 - 40 MPa (0 - 400 bar, 0 - 5801 psi) Sample viscosity range 0.2 - 5 cp • Sample capacity 132 x 2 mL vial (two trays default) 100 x 2 mL vial (two classic trays optional) | volume range from 0.1 - 2000 µl Includes 2000 ml coiled sample loop & 2500 µl multi-draw syringe 2998 Photodiode Array Detector with Analytical Flowcell The 2998 Photodiode Array (PDA) Detector offers advanced optical detection, providing unprecedented trace impurity detection and quantitation in conjunction with spectral analysis capabilities. It is the ideal detector for any lab application from compound identification to method development. For routine analyses, the 2998 PDA detector is reliable, easy to use, and has enhanced software control to provide flexibility for simultaneous 2D and 3D operation. Features include: - Patented TaperSile™ flow cell ensures high sensitivity while maintaining optimal spectral performance - Low noise performance of <10 µAU - Wide, linear dynamic range with constant optical bandpass - Simultaneous quantification of high and low level |                               |                |                              |                      |                                |                              |                                 |

Chairperson *Sai-Ap*  
Technical Committee

Member

Member

Member *Yaseen*

Member *SD*

Member *Wafarullah*



| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Kamstech<br>International                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Shallmar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technica<br>Disquali<br>d |
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| <p>purpose<br/>functionality in a<br/>multi footprint\$<br/>intuitive keypad<br/>and screen view<br/>make setup<br/>easy\$ Review<br/>results in real<br/>time, or via a<br/>post-run results<br/>table\$ Remote<br/>management<br/>with MassLynx™<br/>Software for MS<br/>applications,<br/>Choose from<br/>several task-<br/>specific sample<br/>run modes of<br/>operation (time,<br/>signal, peak<br/>numbers, etc.)6-<br/>Software:Comple<br/>te system with<br/>original CDS<br/>software fully<br/>compliant with<br/>21 CFR Part 11<br/>guidelines.<br/>Software must<br/>have option to<br/>multi-vendor<br/>system<br/>connectivity.<br/>Software must<br/>have LIMS / LMS<br/>supportSystem<br/>must control<br/>mass<br/>spectrometry<br/>data with mass<br/>spectrometer<br/>upgradation.<br/>Must include<br/>System suitability<br/>for HPLC &amp;<br/>DetectorSystem<br/>qualification</p> |                          |                            |                        | <p>36 x 6 mL vials (two<br/>trays optional)<br/>Injection cycle time<br/>18 s for draw speed<br/>200 µL/min<br/>Ejection speed: 200<br/>µL/min<br/>Injection volume: 1 µL<br/>G7129A#010<br/>Standard drawer<br/>(6x11 vials) x 2<br/>G7129A#101<br/>Agilent InfinityLab<br/>Sample Thermostat<br/>Agilent InfinityLab<br/>Sample Thermostat<br/>provides sample<br/>temperature control<br/>in the range of 4°C up<br/>to 40°C<br/>G7116A<br/>Agilent 1260<br/>InfinityLMulti-Column<br/>Thermostat<br/>Operating principle<br/>Thermostatted<br/>column compartment<br/>with dual,<br/>independent<br/>Peltier-element.<br/>Solvent pre-heating<br/>and still-air operation<br/>for reduction of<br/>chromatographic<br/>band-broadening<br/>under UHPLC-<br/>conditions. Include<br/>Agilent Quick Connect<br/>Column kit for easy<br/>Hassle free column<br/>Connection, Integral<br/>mounting clips for<br/>column(s) and<br/>tubing's<br/>Temperature range<br/>10 °C below ambient<br/>(minimum 4 °C) to 85<br/>°C settable in steps of</p> | <p>components within a<br/>single<br/>chromatographic<br/>separation<br/>- Flexible sampling<br/>rates for normal and<br/>fast LC separations<br/>from 1 to 80 Hz<br/>- Independent<br/>optimization of<br/>sampling rate and<br/>time constant gives<br/>you the ability to tune<br/>your detector to your<br/>separation goals<br/>- Definitive compound<br/>identification &amp; co-<br/>elution detection<br/>- Spectral exposure<br/>optimization to<br/>maximize the signal-<br/>to-noise across the<br/>entire wavelength<br/>range with a single<br/>Deuterium lamp<br/>- Lamp optimization<br/>for the best s/n<br/>performance over the<br/>lifetime of a<br/>Deuterium lamp<br/>- Console software for<br/>simple control,<br/>monitoring, and<br/>diagnostics<br/>- Thermal wander<br/>management for<br/>maximum baseline<br/>stability<br/>- Flow cell options to<br/>match your separation<br/>scale and type<br/>Mobile phase bottles<br/>Empower QS Personal<br/>Single System<br/>Software Add On.<br/>- (US FDA Approved &amp;<br/>21 CFR Part 11<br/>compliant)</p> |                               |                |                              |                      |                                |                              |                           |
| Chairperson<br>Technical Committee                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Member                   |                            |                        | Member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Member                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Member                        | Member         | Member                       | Member               |                                |                              |                           |

| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Kamstech<br>International                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Shalimar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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| <p>Accessories (IQ/OQ) with original documentation. advanced system control data acquisition, and custom reporting features of Software, System must provide documentation to meet GxP and 21 CFR. 7- Accessories:- C18. 4.6x250, Sum (Carbon Load 18%, pH Range 1-12, 130A) 03 Nos. - PM Kit for Diode Array Detector 01 No.- PM Kit for separation module (Pump &amp; Autosampler) 01 No.(PM Kit: one diffuser assembly, one filter insert assembly, four stainless steel solvent filters, four face seals, 2 fluoroloy seals, one syringe, one compression screw, one sealwash injector tube, one needlewash frit, five sealwash seals, two seals, one spacer, two plungers, one PTFE washer, two plunger seal wash, one lithium battery, one</p> |                          |                            |                        | <p>0.1 K<br/>Temperature stability <math>\pm 0.1^{\circ}\text{C}</math><br/>Temperature accuracy <math>\pm 0.5^{\circ}\text{C}</math> (with calibration for <math>40^{\circ}\text{C}</math>)<br/>Temperature precision <math>0.05^{\circ}\text{C}</math><br/>Independent<br/>Temperature zones 2 in single device<br/>Column capacity 4 columns of up to 300 mm length plus InfinityLab Quick-Connect fittings or pre-column<br/>Number of precolumn Quick-Connect Heat Exchangers is scalable – each column can be equipped with individual heat exchanger for best performance 4-column selector valve is available to access each column without replumbing<br/>Heat-up/cool-down time 5 min from ambient to <math>40^{\circ}\text{C}</math> 10 min from <math>40^{\circ}\text{C}</math> to <math>20^{\circ}\text{C}</math> &lt;25 min from <math>25^{\circ}\text{C}</math> to <math>85^{\circ}\text{C}</math><br/>Solvent heat exchangers<br/>Photo Diode Array Detector G7115A<br/>Agilent 1260 Infinity II Diode Array Detector<br/>Detection type 1024-element photodiode array<br/>Light source</p> | <ul style="list-style-type: none"> <li>- original CDS software fully compliant with 21 CFR Part 11 guidelines.</li> <li>- Software have option to multi-vendor system connectivity.</li> <li>- Software must have LIMS / LMS support</li> <li>- System have option to control mass spectrometry data with mass spectrometer upgradation.</li> <li>- Include System suitability for HPLC &amp; Detector</li> <li>- System qualification services (IQ/OQ) with original documentation. advanced system control data acquisition, and custom reporting features of Software, System must provide documentation to meet GxP and 21 CFR.</li> </ul> <p>Waters Fraction Collector<br/>The Fraction Collector III is an easy-to-use, stand-alone fraction collector designed for use with HPLC, Preparative HPLC, and MS applications. Compatible with flow rates as high as 300 mL per minute, the Fraction Collector III handles a variety of adapter racks and collection vessels within a compact footprint. Its flexible</p> |                               |                |                              |                      |                                |                              |                                 |

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Chairperson *Sanjay* Member

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|                  |                          |                            |                        | voltages in major maintenance areas. GLP features RFID for electronics records of flow cell and UV lamp conditions (path length, volume, product number, serial number, test passed, usage) Early maintenance feedback (EMF) for continuous tracking of instrument usage in terms of lamp burn time with user-settable limits and feedback messages. Electronic records of maintenance and errors. Verification of wavelength accuracy with built-in holmium oxide filtered Standard flow cell 10mm, 13uL, 120bar G1364E 1260 Infinity II Preparative Fraction Collector Maximum flow rate up to 100 mL/min. The Fraction Collector must easy-to-use Make Agilent Technologies USA GMA Agilent Technologies USA7115A#018 standalone fraction collector designed for use with HPLC, Preparative HPLC, and MS applications. Compatible with flow | Screw Neck Vial, with Cap and Preslit PTFE/Silicone Septum, 2 mL Volume, 100/pk Branded Desktop Computer Core i5 with 22" LED, Laser jet Printer & Windows Branded Online 3 KVA UPS with stabilizer with 30 min backup Startup accessories for HPLC sample preparations:<br>- Ultra-Sonic Bath<br>- Glass Filtration Assembly<br>- 25 mm x 0.45 um & 25 mm x 0.2 um membrane filters (100 each)<br>he prices are inclusive of the following items with no extra charges.<br>1. Installation at your facility by Kamstec Engineer<br>2. Comprehensive Operators training and front line maintenance at your facility.<br>3. Branded computer with printer & UPS for HPLC system will be provided locally by Kamstec<br>4. All types of chemicals/solvents & glassware are customer responsibility.<br>5. IQ /OQ will be Performed for HPLC systems by Kamstec |                               |                |                              |                      |                                |                              |                                 |

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|--|--|--|--|--|--|--|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
|  |  |  |  |  |  |  | Engineer at no extra charge | <p>rates as high as 100 mL per minute, the Fraction Collector handles a variety of adapter racks and collection vessels within a compact footprint. Its flexible design accommodates fraction sizes compatible with microtiter plates up to multiple liter containers:</p> <p>Multi-purpose functionality in a small footprint</p> <p>Intuitive keypad and screen view make setup easy</p> <p>Review results in real time, or via a post-run results</p> <p>Table Remote management with Software for MS applications, choose from several task-specific</p> <p>sample run modes of operation (time, signal, peak numbers, etc.)</p> <p>Must include one standard rack that holds up to 120 tubes (with 12x18 mm OD &amp; 90 to 180 mm height)</p> <p>Must include HPLC rack of 24x 2 ml vials</p> <p>Must include one multi-purpose rack</p> <p>Scintillation vial rack of 16.5 mm (rack with 120 scintillation</p> |  |  |  |
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| S. No. | Name of the Supplier | Address | Contact No. | E-mail | Website | Pakfills Technologies | Sindh Medical Stores | New Chemical Centre | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores | SU Enterprizes | RAAB Scientific Solutions | RAYS Technologies | Key Scientific Corporations | Technically Qualified | Technically Disqualified |
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|        |                      |         |             |        |         |                       |                      |                     |                   |                        |                            |                |                           |                   |                             |                       |                          |

vials, 16.5 mm OD & 54 mm height.  
 Minimum system flow: Depending on the recommended flow rates of the installed tubing  
 Plates/Trays  
 4 x well-plates full tray (MTP) \* (for use with deep well plates only)  
 2 x well-plates std. tray (MTP) (for use with deep well plates, only) + 10 x 2 mL vials\* (+ 1 half tray)  
 100 x 2 mL in std. tray (+ 1 half tray)\*  
 3 x 40 x 2 mL in half tray\*  
 3 x 15 x 6 mL in half tray\*  
 Full tray with 40 test tubes (30 mm OD, max. height 100 mm, 45 mL / tube)  
 Full tray with 60 test tubes (25 mm OD, max. height 100 mm, 25 mL / tube)  
 Full tray with 126 test tubes (16 mm OD, max. height 100 mm, 12 mL / tube)  
 Full tray with 215 test tubes (12 mm OD, max. height 100 mm, 7 mL / tube)  
 Installed trays are automatically detected and identified.  
 Only one type of well-

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plates can be used at a time in one tray. Only the 96 deep well plates can be used (without closing mats)

Fraction Collector is an easy to use, stand alone fraction collector designed for use with HPLC, Preparative HPLC, and MS

applications: Compatible with flow rates as high as 100 ml per minute, the Fraction Collector handles a variety of adapter vials and collection vessels within a compact footprint. Its flexible design accommodates fraction sizes compatible with microtiter plates up to multiple tier containers.

Multi-purpose functionality in a small footprint, intuitive keypad and screen view make setup easy. Review results in real time, or via a post run results table. Remote management with CDS Software for MS applications. Choose from several task specific sample run modes of operation (time, signal, peak numbers, etc. M818AA

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OpenLab CDS VL  
Workstation Plus  
software  
includes VL software  
with built-in content  
management and 1  
instrument  
connection.  
Software is 21 CFR  
PART II compliant  
Features  
One software for  
Agilent GC, LC,  
GC/MS, LC/MS and  
other vendors'  
instruments provides  
same user experience  
and allows viewing  
data across  
techniques and  
instruments with the  
same user interface.  
Support for Mass  
Spectrometry  
including data  
acquisition, data  
processing, and  
reporting  
Data integrity  
features to ensure  
work quality, manage  
records effectively,  
and enhance data  
security.  
New user interface  
displays only the  
relevant tools and  
information you need  
for your current work.  
Built-in custom  
calculations eliminate  
errors caused by data  
export.  
Software: Complete  
system with original  
CDS software fully  
compliant with 21 CFR  
Part 11 guidelines.

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Software must have option to multi-vendor system connectivity. Software must have LIMS / LMS support. System must control mass spectrometry data with mass spectrometer upgrade. Must include System suitability for HPLC & Detector System qualification services (IQ/OQ) with original documentation. Advanced system control data acquisition, and custom reporting. Features of Software, System must provide documentation to meet GMP and 21 CFR HPCL Column C18, 4.6x250, Sum (Carbon Load 18%, pH Range 1-12, 130A) 2140-0820 PM Kit for Diode Array Detector G1310-68741 PM Kit for 1260 Quaternary Pump Includes seal caps, seal wash gasket 6/pk, PTFE Frits 5/pk, Piston Seal PTFE G7129-68740 PM Kit 1260 Inf II Autosampler Includes: needle assembly (100ul), needle seat, rotor seal, gripper finger caps

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| 551 to 4,500,000 |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                        |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                             |                               |                |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                      |                                                                                                                                                                      |
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|                  | R<br>Q<br>T<br>Y | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                            | Kamstech<br>International                                                                                                                                                   | Shalimar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions                                                                                                                                                                                                                           | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                    | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                      |                                                                                                                                                                      |
|                  |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                            |                        | 5190-9063-100<br>HPLC Vials, ambrscrw<br>write on 2ml 100/pk<br>5185-5820<br>PTFE Caps for HPLC<br>Vials 500/pk<br>Computer<br>Branded Computer<br>(Core i5) with 22"<br>LED and laser jet<br>printer and Microsoft<br>compatible windows<br>Printers<br>Branded online 3KVA<br>UPS with dry batteries<br>30 minutes backup) |                                                                                                                                                                             |                               |                |                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                      |                                                                                                                                                                      |
| 2                |                  | Ice Flake<br>MachineCompact<br>body size to fit to<br>under<br>counterWide<br>door design for<br>easy to take ice<br>out of binSmart<br>protections:<br>Protection from<br>unusual electrical<br>conditionFlask<br>backside for<br>space saving<br>installationIce<br>production<br>capacity:<br>120kg/day with<br>ice storage bin<br>60kg, air cooled<br>type complete<br>unit Operated<br>on: 220V, 50<br>Hzflaked ice<br>machine<br>preferred for lab,<br>clinical and<br>education use.<br>CurranTaylor<br>Scotsman self<br>contained flake<br>(crushed) ice | 1                          | Not Quoted             | Flake Ice<br>Maker<br>Ice making<br>capacity: 250<br>kg / 24<br>hrsIce<br>storage: 60<br>kgPower:<br>1100<br>WRefrigeran<br>t:<br>R134aCoolin<br>g type: Air<br>coolingWate<br>r supply: Tap<br>waterVolutag<br>e: 220 V ; 50<br>HzDimension<br>s: 680 x 740<br>x 1100<br>mmMake:<br>Labotronics<br>Scientific Ltd<br>Canada | Ice Flake<br>MachineModel<br>No / Cat # SIM-<br>200F ice<br>production<br>capacity: 200<br>kg/24 hrs,<br>storage bin: 60<br>kg,<br>temperature :<br>10-43CMake:<br>Stalwart | Not Quoted                    | Not Quoted     | ICE FLAKE MAKERIce<br>making capacity 120<br>Kg per day/24h<br>Ben capacity 129 KG<br>( D105)Air cool<br>compressor CFC<br>refrigerationAutomati<br>c startup ,Operating<br>on 220-240V<br>50HzModel F120 C Ice<br>maticCastle MAC<br>SpAMade in Italy | Compact body<br>size to fit to under<br>counterWide door<br>design for easy to<br>take ice out of<br>binSmart<br>protections:<br>Protection from<br>unusual electrical<br>conditionFlask<br>backside for space<br>saving<br>installationIce<br>production<br>capacity:<br>120kg/day with<br>ice storage bin<br>55kg, air cooled<br>type complete<br>unit Operated on:<br>220V, 50<br>HzModel:<br>SPR120Simag -<br>Italy | Ice Flake Maker Feet:<br>Nr 4 made in plastic<br>material, adjustable in<br>height for<br>levelingDoor: in the<br>front part of the<br>appliance is located<br>the door plasticmade<br>that closes the storage<br>bin Water inlet and<br>outlet: both located in<br>the rear part of the<br>appliance. The water<br>inlet is 3/4" size, while<br>the water outlet is 24<br>mm Ø. Both the pipes<br>for the water inlet and<br>outlet are included in<br>the machine, the one<br>for the inlet is about<br>100 cm long, while the<br>outlet is about 50<br>cmKind of ice:<br>flakeProduction<br>(Kg/24h): 150 Bin<br>capacity (Kg): 40<br>Water consumption<br>(liters/Kg): 1 (version<br>A), 6,4 (version W)<br>Refrigerant: R404a<br>CFC-free Voltage<br>(V/ph/Hz): 220- | Not Quoted                   | Ice Flake<br>Maker•<br>Water inlet<br>and outlet:<br>both located<br>in the rear<br>part of the<br>appliance.<br>The water<br>inlet is 3/4"<br>size, while<br>the water<br>outlet is 24<br>mm Ø. Both<br>the pipes for<br>the water<br>inlet and<br>outlet are<br>included in<br>the machine,<br>the one for<br>the inlet is<br>about 100 cm<br>long, while<br>the outlet is<br>about 50 cm•<br>Kind of ice:<br>flake•<br>Production<br>(Kg/24h):<br>150• Bin<br>capacity (Kg): | • SU<br>Enterprizes •<br>Shalimar<br>Scientific<br>Store•<br>Sind<br>medicalS<br>tores •<br>New<br>Chemical<br>Store | • RAAB<br>Scientific<br>SolutionsAu<br>thorization<br>letter not<br>attached•<br>Key<br>Scientific<br>Corporatio<br>nsAuthoriz<br>ation letter<br>is not<br>attached |

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Member

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Member







| Particulars/To<br>get particulars<br>must be<br>attached. |                                                                                                                                                                                                                                       |                                                                                                                                                                |                     |                   |                        |                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                      |                                                                                                                                                                            |                                                                          |                                                                                                                      |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------|------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Sl. No.                                                   | Particulars                                                                                                                                                                                                                           | Sindh Medical Stores                                                                                                                                           | New Chemical Centre | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores                                           | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                    | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                | RAVS Technologies                                                                                                                                                                                                    | Key Scientific Corporations                                                                                                                                                | Technically Qualified                                                    | Technically Disqualified                                                                                             |
| 44                                                        | MICRO Analytical balance:<br>60/220gram/0.01 mg/0.1mg<br>Internal Automatic Calibration<br>Pan size: Ø85mm<br>Counting pieces Under-hook weighing<br>RS232 output connection<br>Unit Display : gF, mg, ct<br>3 Sliding Doors for wind | Double Display Balance Weighing capacity: 1000 g Minimum weighing: 0.01 g Pan size: 115 mm Operational temperature : 5 °C - 25 °C Calibration system: External | Not Quoted          | Not Quoted        | Not Quoted             | preventing liquids from entering the instrument<br>Witeg LMS Germany | elegant appearance<br>• High capacity Li-ion battery enable long runtime of operation<br><br>Aspirate Speeds 25ml < 7s<br>Dispense Speeds Motor / Gravity<br>Battery Lithium-Ion<br>Battery Service Life More than 8 Hours of<br>Intermittence Use Charging Time 2~3 Hours<br>Pipette Types Glass or Plastic<br>Pipette (0.1~100ml), Pasteur Pipettes Filter 0.45 µm Hydrophobic<br><br>Model: Levo ME DLAB - USA | • Digital Microprocessor Controlled<br>• Dual-Range semi-micro with Latest Unblock Technology,<br>• Automatic calibration by pressing keys with internal calibration weight<br>• Easy setting, expanded piece counting function, comparator function, formulation modes<br>Technical: Weighing Capacity: | Electronic Analytical Balance Digital Microprocessor Controlled<br>Dual-Range semi-micro with Latest Unblock Technology, Automatic calibration by pressing keys with internal calibration weight, Easy setting, Easy | Electronic Analytical Balance Digital Microprocessor or Controlled Dual-Range semi-micro with latest Unblock Technology, Unblock designs replaces 70 parts of Electromagne | • Rays Technologies<br>• Shalimar Scientific Stores<br>• 5 U Enterprises | • Sindh Medical Stores:<br>weight is not according to our requirement 60/220gram/0.01mg/0.1mg/ provided 0.01 g-1000g |

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| QTY                                                                                                                                                                                                                                                                                                                                                                                                                    | Pakfills Technologies | Sindh Medical Stores                                                                                                            | New Chemical Centre | H. A. Shah & Sons | Kamstech International | Shalimar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                        | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RAAB Scientific Solutions                                                                                                                                                                                                                                                             | RAVS Technologies                                                                                                                                                                                                                                | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Technically Qualified                                                                                                                  | Technically Disqualified |
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| Dimensions<br>WxHxD (mm):<br>210x335x335<br>Chamber<br>Dimensions<br>WxHxD (mm):<br>172x230x172<br>Optional<br>Anti-Vibration Table<br>Printers<br>Density kit for solids and liquids<br>Rack for under-hook weighing.<br>Additional LCD display<br>Computer software<br>Germany or UK or Japan or USA or equivalent<br>Note: Valid authorized certificate from the manufacturers/foreign principals must be attached. |                       | calibration Interface: RS232<br>Display Dual: LCD (optional)<br>Power: 220 V / 110 V<br>Make: Labotronics Scientific Ltd Canada |                     |                   |                        | LCD<br>Tare Range (Subtractive) 82g/220g<br>Span Drift In +10...+30°C ± 2 ppm/°C<br>Interface RS232<br>Windshield Type And Dimensions<br>3 sliding windows / 162x171x225 mm<br>Working Temperature 5 - 35°C (15-30°C for verified models)<br>Power Supply 110-230Vac. 50/60Hz, output 24V 500mA 13VA<br>Power Consumption (Max) 2 Watt<br>Balance Dimensions (W X L X H) 215 x 345 x 345 mm<br>Model HPBG 2285Di<br>Bel Engineering Made in Italy | 0.8 PPM/K<br>Units Milligram, Gram, Kilogram, Ounce, Pound, Carat, Pennyweight, Ounce Troy, Grain, Newton, Hong Kong Tael, Singapore Tael, Taiwan Tael, Momme, Tical (MM), Mesghal, Tola (India), 1 Custom unit<br>Units (Approved Models) g, mg, ct<br>Applications Basic Weighing, Parts Counting, Percent Weighing, Animal Weighing, Density Determination<br>Pan Size 80mm dia<br>Power Supply<br>Power Input: 240V ~ 200mA 50 - 60Hz 12 - 18VA<br>Power Output: 12 VDC 0.5A<br>Communication RS232 and USB<br>Operating Temperature Range 10 °C to 30 °C<br>Model: PX225D<br>Ohaus - USA | 220gm/82gm<br>Minimum display: 0.1mg/0.01mg<br>Pan size (mm): Ø80 approx.<br>Operated on 220V<br>Model AUW-220D Shimadzu, Japan<br><br>OPTIONAL FOR ABOVE IF REQUIRED<br>i. Local Anti-Vibration Table<br>ii. Printers<br>iii. Density kit<br>iv. LCD display<br>Additional if needed | expanded piece counting function comparator function, formulation modes<br><br>Technical: Weighting Capacity: 220gm/82gm Minimum display: 0.1mg/0.01mg Pan size (mm): Ø80 approx.<br><br>Operated on 220Volts.<br>Model AUW-220D Shimadzu, Japan | balances and ensures stable results<br><br>Technical Specification: Weighting Capacity: 220gm/82gm Minimum display: 0.1mg/0.01mg Pan size (mm): Ø80 approx.<br><br>Features:<br>- Automatic calibration by pressing keys with internal calibration weight<br>- Easy setting, expanded piece counting function comparator function, formulation modes<br>- Windows direct communication on function, send balance data to excel without any data software with optional RS232C interface. | • RAAB Scientific Solutions Authorization letter is not attached<br>• Key Scientific Corporations Authorization letter is not attached |                          |

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|    |                                                                                                                                                                                                                                                                                                                        |   |                       |                      |                     |                   |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                          | unit, operated on 220Volts. Model AUW-220D Shimadzu, Japan.<br><br>OPTIONAL FOR ABOVE<br><br>a. Anti-Vibration Table Local<br>b. Printers<br>c. Density kit<br>d. Additional LCD display<br><br>Note:- Computer software no need built-in with balance |                                                           |                                                                                                                           |
| 45 | Vacuum Pressure Pump:<br>Vacuum Pump<br>PTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, all pumping parts in contact with pumped media are made of Chemically Resistant Fluoroplastics. PTFE Diaphragms | 2 | Not Quoted            | Not Quoted           | Not Quoted          | Not Quoted        | Not Quoted             | Vacuum PumpPTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, all pumping parts in contact with pumped media are made of Chemically Resistant Fluoroplastics. PTFE Diaphragms increase Reliability and Extended Operation Life. MZ1C is Equipped with a Gas ballast Valve for Continuous Condensate Purge with Built in manual | Not Quoted     | Vacuum PumpPTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, all pumping parts in contact with pumped media are made of Chemically Resistant Fluoroplastics. PTFE Diaphragms increase Reliability and Extended Operation Life. MZ1C is equipped with a Gas ballast Valve for Continuous Condensate Purge with Built in manual Vacuum Regulator | PTFE Diaphragm Chemistry Design two stage provides the advantageous combination of High Pumping Speed and low Ultimate vacuum Suitable for Rotary Evaporators, all pumping parts in contact with pumped media are made of Chemically Resistant Fluoroplastics. Technical Number of Head/ | Vacuum Pump PTFE Diaphragm Chemistry Design two stage Technical Number of Head / Stages 2Maximum Pumping Speed 0.75 m3h/0.9 m3hUltimate Vacuum 12 mbarUltimate Vacuum with Gas Ballast 20 mbarOperated on 220V Model MZ1C Vacuumbrand Germany          | •RAAB Scientific solutions<br>• Shalimar Scientific Store | •Key Scientific Corporation's Authorization letter is not attached•Rays Technologies Authorization letter is not attached |

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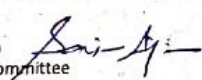
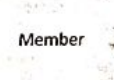
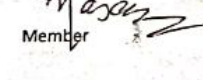
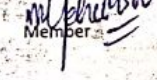
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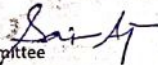
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| R<br>Q<br>ty | Pakfills<br>Technologies                                                                                                                                              | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                    | SU Enterprizes                                                                                                                                                       | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                       | RAYS<br>Technologies                                                                                                                                                                               | Key Scientific<br>Corporations                                                                                                                 | Technica<br>lly<br>Qualified                                                         | Technically<br>Disqualifie<br>d                                                                                         |
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|              |                                                                                                                                                                       |                            |                        |                   |                           | Vacuum Regulator<br>Valve with Lid Gauge<br>for Adjustment of<br>Pumping Speed<br>Technical<br>Specification Number<br>of Head / Stages<br>2Maximum Pumping<br>Speed 0.75 m3h/0.9<br>m3hUltimate Vacuum<br>12 mbarUltimate<br>Vacuum with Gas<br>Ballast 20 mbar MZ1<br>C Vaccu brand<br>Supplier LMS<br>Germany |                                                                                                                                                                      | Valve with Lid Gauge<br>for Adjustment of<br>Pumping Speed<br>Technical Specification<br>Number of Head /<br>Stages 2Maximum<br>Pumping Speed 0.75<br>m3h/0.9 m3hUltimate<br>Vacuum 12<br>mbarUltimate Vacuum<br>with Gas Ballast 20<br>mbar, Operated on<br>220 Volts Model MZ1C<br>Vacuubrand Made in<br>Germany | Stages<br>2Maximum<br>Pumping Speed<br>0.75 m3h/0.9<br>m3hUltimate<br>Vacuum 12<br>mbarUltimate<br>Vacuum with<br>Gas Ballast 20<br>mbarOperated<br>on 220V Model<br>MZ1C<br>Vacuubrand<br>Germany |                                                                                                                                                |                                                                                      |                                                                                                                         |
| 46           | Professional<br>Analytical<br>Balance:<br>- 1200g/10mg<br>Programmable IR<br>Proximity sensors<br>for<br>Zeroing/Tarring/<br>Printout<br>Weighing Pan -<br>195*195 mm | Not Quoted                 | Not Quoted             | Not Quoted        | Not Quoted                | Professional Analytical<br>Balance<br>With resolution from<br>0.001g to 0.1g this<br>serie offers a wide<br>choice of models for<br>many application with<br>the simplicity of a<br>touch screen<br>interface.<br>Capacity 4200g                                                                                 | Analytical Balance<br>Capacity (g)<br>6200<br>Readability (g)<br>+0.01<br>Repeatability std<br>(g) +0.01<br>Linearity (g)<br>+0.02<br>Stabilization Time<br>(sec) ≤1 | Electronic balance<br>digital top loading<br>with Uni-block<br>technology,<br>Fully automatic<br>calibration with touch<br>key at any time with<br>Readability: 0.01gm,<br>Capacity: 4200gm<br>Built in under<br>weighing hook, piece                                                                              | Electronic<br>balance digital<br>top loading<br>with Uni-block<br>technology,<br>Fully automatic<br>calibration with<br>touch key at<br>any time with<br>internal weight<br>or by                  | Electronic<br>balance digital<br>top loading with<br>Uni-block<br>technology,<br>Fully<br>automatic<br>calibration<br>with touch<br>key at any | • Shalimar<br>Scientific<br>Stores<br>• S U<br>Enterprizes<br>• Rays<br>Technologies | • RAAB<br>Scientific<br>Solutions<br>Authorizati<br>on letter<br>not<br>attached<br>• Key<br>Scientific<br>Corporations |

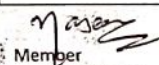
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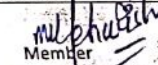
| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                          | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                            | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Key Scientific<br>Corporations                                                                                                                                                                                                                                                                                                                                                                                 | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d                |
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| Wide Range of<br>Applications -<br>Animal Weighing,<br>Parts Counting,<br>GMP/GLP,<br>Percentage<br>Weighing, Air<br>Density<br>Correction,<br>Density<br>Determination,<br>Statistics, Filling<br>and more<br>Display - Touch<br>Screen<br>Electronic Level<br>Indicator<br>Internal<br>Calibration<br>Metal Anti-Draft<br>Shield<br>Large Database<br>which enables<br>various users and<br>recording<br>Weighments,<br>Products, Tarring<br>and ALIBI<br>Memory<br>Interfaces -<br>2xUSB, 2xRS 232,<br>1xEthernet, Wi-Fi<br>802.11 b/g/n, 4<br>inputs / 4<br>outputs (digital)<br>Optional<br>Accessories<br>Thermal Printer<br>Anti Vibration<br>Table<br>Additional display<br>monitor<br>Computer<br>Software<br>Density<br>determination kit<br>Germany or UK<br>or Japan or USA |                          |                            |                        |                   |                           | Resolution 0.01g<br>Calibration Automatic<br>internal<br>Pan size Ø 160mm<br>Repeatability 0.01g<br>Response time (sec.)<br>≤3<br>Linearity ±0.04g<br>Display TOUCH-<br>SCREEN 5"<br>Tare Range<br>(Subtractive) 4200 g<br>Interface RS232<br>Database Capacity<br>3000<br>Working Temperature<br>5 - 35°C<br>Power Supply 110-<br>230Vac. 50/60Hz,<br>output 9V 1.2A 10VA<br>Model MS-L4202i Bel<br>Engineering Italy | Power<br>Requirements AC<br>Adapter Input:<br>100-240 VAC 0.6A<br>50-60 Hz<br>Operating<br>Humidity Range<br>20% to 85%<br>Display Type Full-<br>color VGA graphic<br>display, 4-wire<br>resistive touch<br>screen<br>Display Size 5.7<br>in / 145 mm<br>(diagonal)<br>Communication<br>RS232, USB<br>Operating Temp<br>Range 50°F (10°C)<br>to 86°F (30°C)<br>Storage<br>Conditions -14°F (-<br>10°C) to 140°F<br>(60°C) at 10% to<br>90% relative<br>humidity, non-<br>condensing<br>Pan Size 130mm<br>(dia)<br>IR Sensor 04 Nos<br>Software<br>Included<br>Density<br>Determination Kit<br>Included<br>Model: EX6202<br>Ohaus - USA | counting function built<br>in,<br>RS 232C Data<br>interface, overload<br>protection, windows<br>direct function,<br>No software required,<br>stainless steel pan<br>170x180mm with<br>draft shield,<br>Operated on 220<br>volts, Model UW-<br>4200H, Shimadzu,<br>Japan | temperature<br>detection and<br>or user preset<br>times.<br>One single<br>block non<br>breakable, this<br>brings various<br>advantages fast<br>Response, high<br>stability, long<br>life operation,<br>Readability:<br>0.01gm<br>Capacity:<br>4200gm<br>Built in under<br>weighing hook,<br>piece counting<br>function built<br>in,<br>RS 232C Data<br>interface,<br>overload<br>protection,<br>windows<br>direct<br>function,<br>No software<br>required,<br>stainless steel<br>pan<br>170x180mm<br>with draft<br>shield,<br>Operated on<br>220 volts,<br>Model UW-<br>4200H,<br>Shimadzu,<br>Japan | time with<br>Readability:<br>0.01gm,<br>Capacity:<br>4200gm<br>Built in under<br>weighing<br>hook, piece<br>counting<br>function built<br>in,<br>RS 232C Data<br>interface,<br>overload<br>protection,<br>windows<br>direct<br>function,<br>No software<br>required,<br>stainless steel<br>pan<br>170x180mm<br>with draft<br>shield,<br>Operated on<br>220 volts,<br>Model UW-<br>4200H,<br>Shimadzu,<br>Japan |                              | Authorizati<br>on letter is<br>not<br>attached |

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| Q  | ty                 | Pakfills Technologies | Sindh Medical Stores | New Chemical Centre | H. A. Shah & Sons                                                                                                | Kamstech International | Shallmar Scientific Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RAYS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                                                                                         | Technically Qualified                                                                                                                                                                                                                                                                                                                                                                             | Technically Disqualified                                                                               |                                                                                                                                   |
|----|--------------------|-----------------------|----------------------|---------------------|------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|    |                    |                       |                      |                     |                                                                                                                  |                        |                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | c. Density kit<br>d. Additional LCD display<br><br>Note:- Computer software no need built-in with balance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                        |                                                                                                                                   |
| 47 | lab referigerator: | 1                     | Not Quoted           | Not Quoted          | Lab Refrigerator Model No / Cat # STF-395P capacity: 395 L, Tempearure 2~8°C Refrigerant CFE free Make: Stalwart | Not Quoted             | Not Quoted                 | Lab Refrigerator Total capacity : 519 L ( Freezer 204 L, Refrigerator 315 L) Upper Part (refrigerator) : Temperature range : 2 to 8°C Cooling performance : 2°C Shelves : 4 storage rack 1 shelf Interior lighting : LED Internal dimension (WxDxH) : 750x610x740 mm Door lock : yes Cooling : Forced air cooling Lower Part (freezer) : Freezer section : -10 to -40°C Cooling performance : -40°C Drawers : 3 ( 2 sections on each drawer) Interior lighting : LED Door lock : yes Insulation thickness : 50 mm Cooling : Direct cooling Internal dimension (WxDxH) : 650x560x565 mm Common features : | Controller Smart Display 4.3" + touch screen Network LAN USB YES (saving registration data saving events) Keypad Numeric Main Screen Dashboard (all relevant data visible from one main window) Programs 5 Program name Free number assigned Priority Parameters Segments 6 Data registry max. 10,000 measurement data stored for a maximum of 6 months Events registry Yes Statistics YES - only the current cycle Temperature protection class 2.0 Device name Fixed (serial number) | Cold Cabinet Temperature uniformity, Sample safety and protection, Condensation prevention, Microprocessor controller simplifies operation, Intuitive design, Flexible storage options, Timer-Controlled Off-Cycle Defrosting<br><br>Technical Data:<br>External dimensions 610 x 716 x 1886(W x D x H)mm<br>Internal dimensions 516 x 550 x 1467(W x D x H) mm<br>Volume 400 Liters<br>Temperature control range +4°C to +14°C<br>Controller Microprocessor with non-volatile memory<br>Temperature display Digital<br>Temperature sensor Thermistor<br>Cooling method Forced cool air circulation<br>Defrost method Timer Cycle defrost<br>Refrigerant HFC | Refrigerators that are designed for general laboratory storage with user-friendly features. The combination of temperature control accuracy, interior temperature uniformity, quick recovery and resistance to high ambient temperature delivers a quality storage refrigerator that characterizes our commitment to engineering, storage safety and reliability<br><br>Technical Data:<br>External dimensions 610 x 716 x 1886(W x D x H)mm<br>Internal dimensions | Temperature control: 2°-14°C<br>Temperature display Digital (1° C increments)<br>Interior dimensions: 720W x 350D x 1435H mm<br>External Dimensions 800W x 465D x 1800H mm<br>Effective capacity: 340 liters (12.0 cu.ft.)<br><br>Net Weight 100Kg (220lbs)<br>Internal cabinet: Stainless steel.<br>Insulation polyurethane foam<br>Doors: Sliding glass doors, double-paned glass<br>With heat- | •Shalima r Scientific Store<br>•SU Enterprizes<br>•Key Scientific Corporati on<br>•New Chemical Centre | •Rays Technologi es<br>Authorizati on letter is not attached<br>•RAAB Scientific Solutions: Authorizati on letter is not attached |

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| RAQ | PakRills Technologies | Sindh Medical Stores | New Chemical Centre | H. A. Shah & Sons | Kamstech International | Shallmar Scientific Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Key Scientific Corporations                                                                                                                                                                                                                                                                                                                                                                         | Technically Qualified | Technically Disqualified |
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|     |                       |                      |                     |                   |                        | <p>Ambient temperature : 16 to 32°C<br/>Rollers for portability : 4 wheels<br/>Inner material : Stainless steel<br/>External material : Steel with powder coating<br/>Compressor : 2<br/>Door with heater : Yes, hot gas surrounding<br/>External lock : optional<br/>Display : digital<br/>Access test port : 2<br/>Insulation thickness : 100 mm<br/>Packaging dimension : 990x855x2062 mm<br/>Power Supply : 110V/220V, 60Hz /50Hz<br/>Model LRFC-A15<br/>Labtron UK</p> | <p>Alarm Bar Yes<br/>Quick change Yes<br/>Type: Digital microprocessor controlled<br/>Housing: Stainless steel<br/>Interior stainless steel OH17 (DIN 1.4016) interior<br/>Door: solid door with internal glass door or Glass Door<br/>Refrigeration type Forced air circulation.<br/>Capacity: 300 liters<br/>Temperature range: 0°C to +15°C<br/>Temperature resolution: 0.1°C<br/>temperature protection class: 1.0<br/>Shelves: 2 stainless steel wire shelves, adjustable slides, max unit workload 20kg<br/>Access port <math>\varphi = 30</math> mm<br/>Memory: Test results memory<br/>Port: USB<br/>Lock: Door lock<br/>Alarm: Open door alarm<br/>Light: Internal LED light<br/>Model: CHL 5 CS Smart</p> | <p>(CFC-Free)<br/>Insulation Rigid polyurethane foamed insulation (CFC-free)<br/>Exterior material Painted steel<br/>Interior material Vacuum molding (ABS resin)<br/>Outer doors 1 (Plastic sash with 2-layer glass window)<br/>Outer door lock Y (Cylinder key lock)<br/>Shelves 5 (polyethylene-coated wire)<br/>Casters 4 (2 levelling foot)<br/>Alarms High temperature &amp; Low temperature<br/>Operated on 220Volts<br/>Model LPR-400-PE<br/>PHCBI (New Name of Panasonic) Japan</p> | <p>516 x 550 x 1467(W x D x H) mm<br/>Wire Volume 400 Liters<br/>Temperature control range +4°C to +14°C<br/>Controller Microprocessor with non-volatile memory<br/>Temperature display Digital<br/>Temperature sensor Thermistor<br/>Cooling method Forced cool air circulation<br/>Defrost method Timer Cycle<br/>Defrost Refrigerant HFC (CFC-Free)<br/>Insulation Rigid polyurethane foamed insulation (CFC-free)<br/>Exterior material Painted steel<br/>Interior material Vacuum molding (ABS resin)<br/>Outer doors 1 (Plastic sash with 2-layer glass window)<br/>Outer door lock Y (Cylinder key</p> | <p>reflective film<br/>Shelves: Hard Steel Wire<br/>Lighting / Casters: LED/2 casters<br/>Compressor Hermetic type, 160 W<br/>Refrigerant HFC<br/>Defrosting cyclical<br/>defrosting &amp; evaporator temp. detection system<br/>Defrosting heaters 101 W<br/>Door ajar alarm: Buzzer/door ajar lamp<br/>Complete as above MPR-5313<br/>Panasonic / PHCBI (New Name of Panasonic) Made in Japan</p> |                       |                          |

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| R<br>Q<br>ty | Pakfills<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | RAAB Scientific<br>Solutions | RAYS<br>Technologies                                                                                                                                                                                                                            | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d       |
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|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                            |                        |                   |                           |                               | Poleko – Poland<br>(Europe)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              | lock)<br>Shelves 5<br>(polyethylene-<br>coated wire<br>Casters 4 (2<br>levelling foot)<br>Alarms High<br>temperature &<br>Low<br>temperature<br><br>Operated on<br>220Volts Model<br>LPR-400-PE<br>PHCBi (New<br>Name of<br>Panasonic)<br>Japan |                                |                              |                                       |
| 48           | Ice Buckets:<br>multi-purpose<br>containers are<br>highly insulative,<br>stackable,<br>unbreakable,<br>lightweight and<br>leak-proof.<br>Containers will<br>not "sweat" or<br>deform and have<br>a textured finish<br>on the bottom to<br>prevent slipping<br>on the benchtop.<br>Ideal for use with<br>ice, dry ice (-<br>78°C), liquid<br>nitrogen (-196°C),<br>alcohol or saline<br>solutions, or<br>warm solutions<br>(+93°C). Available<br>in five sizes and<br>seven vibrant<br>colors. It can be<br>cleaned with<br>soap and water,<br>10% bleach or<br>70% alcohol. | 2<br>0                     | Not Quoted             | Not Quoted        | Not Quoted                | Not Quoted                    | ICE BUCKETSice pans<br>and buckets are multi-<br>purpose pans and<br>buckets that are a<br>great non-toxic<br>alternative to<br>conventional ice pans.<br>EVA has little or no<br>odor, is inert and used<br>in biomedical<br>engineering<br>applications such as<br>drug delivery devices.<br>The multi-purpose<br>containers are highly<br>insulative, stackable,<br>unbreakable,<br>lightweight and leak-<br>proof. Containers will<br>not "sweat" or deform<br>and have a textured<br>finish on the bottom<br>to prevent slipping on<br>the benchtop. Ideal<br>for use with ice, dry<br>ice (-78°C), liquid<br>nitrogen (-196°C),<br>alcohol or saline<br>solutions, or warm<br>solutions (+93°C). | Not Quoted                   | Not Quoted                                                                                                                                                                                                                                      | Not Quoted                     | Not Quoted                   | •Shalima<br>r<br>Scientific<br>stores |

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|    | Q<br>ty | Technologies | Medical<br>Stores | New Chemical<br>Centre                                                                                                                                                | H. A. Shah & Sons | Kamstech<br>International | Shallmar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                       | Key Scientific<br>Corporations                                                                                                                                                                             | Technica<br>lly<br>Qualified                                    | Technically<br>Disqualifie<br>d                                                                                                                                                            |
|----|---------|--------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |         |              |                   |                                                                                                                                                                       |                   |                           | Available in five sizes and seven vibrant colors. It can be cleaned with soap and water, 10% bleach or 70% alcohol sixe 250x230 Cat # FBT-RD01 Crystal Germany                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                            |                                                                 |                                                                                                                                                                                            |
| 49 | 1       |              | Not Quoted        | Laminar Flow Cabinet Horizontal Model No / Cat # L-H-13 external size: 1300*820*2040mm, internal size: 1200*500*570mm work surface height: 750mm Make: Medfuture, USA | Not Quoted        | Not Quoted                | Horizontal Laminar Flow Cabinet External dimension : 1300 x 820 x 2040 mm Internal dimension : 1200 x 500 x 570 mm Work surface height : 750 mm Display : LCD Airflow velocity : Average of 0.3 to 0.5 m/s Material main body : Cold rolled steel with anti- bacteria power coating Material work table : 304 stainless steel Side and Front windows : 5 mm touchened glass, anti UV Pre- filter : Polyester fiber, washable HEPA Filter : 99.999% efficiency at 0.3 µm Noise : < 65 dB Front window : Motorized Max opening : 430 mm Illuminating lamp : LED lamp 12 W x 1 UV Lamp : 30 W x 1 Emission of 253.7 nanometer Caster : Universal | Internal Dimension (WxDxH) in mm:940 x 580 x 540 Display: LED digital display Pre-filter: Disposable, non washable polyester filter Filter efficiency: > 99.999% at 0.3µm Airflow velocity: average of 0.3 to 0.5m/s Noise level: <60dBA Fluorescent lamp: 21W UV Lamp: 20W Power consumption: 340W Front sash: Tempered glass, no less than 5mm, anti-ultraviolet radiation Main Body Material: Adopting cold roll steel plate with corrosion proof coating Base stand height: 650mm | Horizontal Laminar Flow Cabinet Space-saving desk-top type with compact design, Open type large air exhaust area for airflow uniformity, Adjustable fan unit & one-button velocity selection, High efficiency & low power consumption Technical Data: Exterior Dimensions 1220*650*920 (W x D x H (mm) Work Zone Dimensions 1120*490*575 (W x D x H (mm) Work Zone Height 40 (cm) Blower AT Blower Noise dB (A) <65 HEPA Filter H13,299.99% (@≥0.3µm) (Country of Origin: China) Operated on 220 Volts Model HD-1220-U, Airtech, Japan | Space-saving desk-top type with compact design Open type large air exhaust area for airflow uniformity SUS304 working area Adjustable fan unit & one-button velocity selection High efficiency & low power consumption (Country of Origin: China) Technical Specifications: Exterior Dimensions 1220*650*920 (W x D x H (mm) Work Zone Dimensions 1120*490*575 (W x D x H (mm) Work Zone Height 40 (cm) Controller Switch Blower AT Blower | • Space-saving desk-top type with compact design • Open type large air exhaust area for airflow uniformity • Adjustable fan unit & one-button velocity selection • High efficiency & low power consumption | • Rays Technologies • Shalimar Scientific Store •SU Enterprizes | •New Chemical Centre • Athorization letter is not valid •RAAB Scientific SolutionsAu thorization letter not attached •Key Scientific Corporatio ns • Authorizati on letter is not attached |

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| Q | Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Medical Stores | New Chemical Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Kamstech International | Shalimar Scientific Stores | SU Enterprises                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | RAAB Scientific Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RAVS Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Key Scientific Corporations                                                                                                                                                                                                  | Technically Qualified                                                                                                                                                   | Technically Disqualified |
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|   | accuracy photometric (microplate) < ±0.006 OD ±1.0%, 0-2 OD<br>Photometric accuracy (cuvette) < ±0.005 OD ±1.0%, 0-2 OD<br>Photometric precision < ±0.003 OD ±1.0%, 0-2 OD<br>Baseline flatness < 0.001 OD<br>Stray light < 0.05% @ 230 nm<br>Light source Xenon flash lamp<br>Microplate read time (normal mode) 96 wells in 9 seconds<br>384 wells in 29 seconds<br>Microplate read time (speed read mode) 96 wells in 5 seconds<br>384 wells in 16 seconds, Temperature regulation<br>Temp. range Ambient +4°C to 45°C<br>Temp. uniformity (microplate) ±0.5°C at 37°C<br>General specifications Dimensions (in.) 8.6 (H) x 22.8 (W) |                |                     | Plate Type 6-48, 96 and 384 well plates, Thermo Scientific<br>Microplate Readers Cuvettes No<br>Wavelength Selection Monochromator<br>Wavelength Range 200-1000 nm<br>Bandwidth < 2.5 nm<br>Photometric Linearity 0-2.5 Abs, 2% @ 450 nm<br>Resolution 1 nm<br>Accuracy (Photometric) 1.0% + 0.003 Abs (0-2.0 Abs), 2.0% (2.0-2.5 Abs) @ 450 nm<br>Incubator Temperature Ambient + 2°C to 45°C<br>Shaking Linear<br>Measurement Speed 96-well microplate: 6 seconds (fast mode) 384-well microplate: 10 seconds (fast mode)<br>Spectral Scanning Speed 10 s from 200 to 1000 nm<br>Interface Touchscreen display and Skant PC software<br>Software Language Versions English, German, French, Spanish, Italian, Portuguese, Russian, Chinese, Japanese<br>Depth (Metric) 44.5 cm<br>Depth (English) 17.5 in.<br>Width (Metric) 29.5 cm |                        |                            | routine biology tests, protein analysis, nucleic acid.<br>• Nano-V can analyze DNA/RNA quantities, (Micro volume plate / 24well supported)<br>• Plate capable of quantitative analysis with 2ul.<br>• The light source of INNO is the Xenon lamp.<br>• The software to be supplied with INNO-M; Abs, UV-Abs, and modes, Endpoint, Kinetic and Spectral scanning.<br>• INNO-M is able to report result graphics in excel file format.<br>• INNO-M software supports Linear, Quadratic regression, Cubic regression, Log regression, Exponential regression, Linear logarithmic regression, point-to-point, and 4PL regression graphic options.<br>Wavelength Accuracy ±2 nm<br>Electrical Requirements ±2 nm<br>Micro plate type 6 - 384 well plate | Standard Curve, Substrate, Equation Editor<br>Life Science Applications DNA, RNA, Oligo.<br>Fluorescent Dye, Tm Calculation, Protein Dye, Protein UV and Colorimetric protein methods<br>Measurement Time <4 seconds<br>Wavelength Range 190 - 1100 nm<br>Wavelength Accuracy ±2 nm<br>Wavelength Reproducibility ±1 nm<br>Spectral Bandwidth 5 nm<br>Stray Light <0.5 %T @ 220 nm NaI, <0.5%T @ 340 nm NaNO2<br>Photometric Accuracy ±0.01A + 1.5% of the reading @ 546 nm<br>Photometric Reproducibility ±0.003A (0 to 0.5A), ±0.007A(0.5 to 1.0A)<br>Noise 0.005A peak to peak, 0.002A RMS<br>Power Input 120 to 240V~ 50/60Hz, 40VA<br>Max Dimensions Height 190 mm x Width 280 mm x Depth 410 mm (521 mm with printer)<br>Weight Approx. 3.55 kg (4 kg with printer), Complete unit with 10 mm cuvette holder and 0.5 mm micro-volume port<br>Model Biotop Duo4, | Spectral Scanning, Well-Area Scanning<br>Microplate Types 6 to 384 well Microplate well Microplate<br>Power 100-240 V AC, 50/60Hz<br>Dimensions/Weight 396 x 364 x 207 mm/ 9.0 kg<br>Reader Specification Xenon Flash Lamp<br>Detector Photodiode<br>Wavelength Selection Monochromator<br>Wavelength Range 185-1,000 nm (1nm increments)<br>Monochromator Bandwidth 5nm<br>Dynamic Range 0-4.00D<br>Resolution 0.00010D<br>Wavelength Accuracy ± 1.0 nm<br>Wavelength Reproducibility ±0.1 nm<br>Pathlength Correction Available<br>OD Accuracy ± 1% at 2.0 OD, 3% at 3.0 OD<br>Operated on 220Volts | 5nm<br>Dynamic Range 0-4.00D<br>Resolution 0.00010D<br>Wavelength Accuracy ± 1.0 nm<br>Wavelength Reproducibility ±0.1 nm<br>OD Accuracy ± 1% at 2.0 OD, 3% at 3.0 OD<br>Operated on 220Volts, Model MOBI MicroDigital Korea | options are not mentioned required 96 and 384 well/provide not mentioned. Microplate read times not mentioned required 96 wells in 9 seconds 384 wells in 29 seconds/pr |                          |

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| Technique                                                                                                                                                                                                                                                                                                                                                   |                                          |                            |                        |                                                                                                                                                                                                               |                           |                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |                                             |                                |                              |                                 |  |
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| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                | Pakfills<br>Technologies                 | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                             | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | RAAB Scientific<br>Solutions | RAYS<br>Technologies                        | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |  |
| 25 (D)<br>Dimensions (cm)<br>22 (H) x 58 (W) x<br>38 (D)<br>Weight 30 lbs.<br>(13.6 kg)<br>Power<br>consumption <<br>250 watts<br>Power source<br>100-240 Vac, 4 A<br>50/60 Hz<br>Germany or UK<br>or Japan or USA<br>or equivalent<br>Note: Valid<br>authorized<br>certificate from<br>the<br>manufacturers/fo<br>reign principals<br>must be<br>attached. |                                          |                            |                        | Width (English) 11.6<br>in<br>Height (Metric) 26.5<br>cm<br>Height (English) 10.4<br>in.<br>Weight (Metric) 10.8<br>kg<br>Weight (English) 23.8<br>lbs<br>Unit Size Each<br>Make: Thermo<br>Fisher Scientific |                           |                               | Detector<br>Photodiode<br>Light source<br>Xenon flash<br>Wavelength<br>Range 200 to<br>999 nm<br>Wavelength<br>selection<br>Monochromatic<br>Application<br>Wavelength<br>scanning, end<br>point, Kinetic,<br>Area scan<br>Dynamic range<br>0 ~ 4.0 OD<br>OD accuracy 0 ~<br>2 OD ±1%<br>OD linearity 0 ~<br>2 OD ±1%<br>OD repeatability<br>0 ~ 2 OD ±1%<br>Shaking Two<br>step speed<br>DNA/RNA Micro<br>Volume plate<br>(NANO-V) 24well /<br>2ul Sample<br>(Option)<br>Software INNO<br>X (Windows<br>Software)<br>Supported<br>software<br>regression Linear,<br>Quadratic, Cubic,<br>Log, Exponential,<br>Linear logarithmic,<br>point-to-point,<br>4PL<br>Model: Inno<br>LTEK – Korea | Biochrom, Made in<br>USA     | Model MOBI<br>MicroDigital<br>Made in Korea |                                |                              |                                 |  |
| 51                                                                                                                                                                                                                                                                                                                                                          | CO2 Regulator<br>Two Stage:<br>Two stage | 2                          | Not Quoted             | Not Quoted                                                                                                                                                                                                    | Not Quoted                | Not Quoted                    | CO2 Regulator Two<br>Stage Two stage<br>regulator is designed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Not Quoted                   | Not Quoted                                  | Not Quoted                     | Not Quoted                   | Shalimar<br>Scientific<br>Store |  |

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| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                                                | Pakfills<br>Technologies                 | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | RAAB Scientific<br>Solutions     | RAYS<br>Technologies                                 | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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| <p>15 (D)<br/>dimensions (cm)<br/>22 (H) x 58 (W) x<br/>38 (D)<br/>Weight 30 lbs.<br/>(13.6 kg)<br/>Power<br/>consumption &lt;<br/>250 watts<br/>Power source<br/>100-240 Vac, 4 A<br/>50/60 Hz<br/>Germany or UK<br/>or Japan or USA<br/>or equivalent<br/>Note: Valid<br/>authorized<br/>certificate from<br/>the<br/>manufacturers/fo<br/>reign principals<br/>must be<br/>attached.</p> |                                          |                            |                        | <p>Width (English) 11.6<br/>in<br/>Height (Metric) 26.5<br/>cm<br/>Height (English) 10.4<br/>in.<br/>Weight (Metric) 10.8<br/>kg<br/>Weight (English) 23.8<br/>lbs<br/>Unit Size Each<br/>Make: Thermo<br/>Fisher Scientific</p> |                           |                               | <p>Detector<br/>Photodiode<br/>Light source<br/>Xenon flash<br/>Wavelength<br/>Range 200 to<br/>999 nm<br/>Wavelength<br/>selection<br/>Monochromatic<br/>Application<br/>Wavelength<br/>scanning, end<br/>point, Kinetic,<br/>Area scan<br/>Dynamic range<br/>0 ~ 4.0 OD<br/>OD accuracy 0 ~<br/>2 OD ±1%<br/>OD linearity 0 ~<br/>2 OD ±1%<br/>OD repeatability<br/>0 ~ 2 OD ±1%<br/>Shaking Two<br/>step speed<br/>DNA/RNA Micro<br/>Volume plate<br/>(NANO-V) 24well /<br/>2ul Sample<br/>(Option)<br/>Software INNO<br/>X (Windows<br/>Software)<br/>Supported<br/>software<br/>regression Linear,<br/>Quadratic, Cubic,<br/>Log, Exponential,<br/>Linear logarithmic,<br/>point-to-point,<br/>4PL<br/>Model: Inno<br/>LTEK - Korea</p> | <p>Biochrom, Made in<br/>USA</p> | <p>Model MOBI<br/>MicroDigital<br/>Made in Korea</p> |                                |                              |                                 |
| 51                                                                                                                                                                                                                                                                                                                                                                                          | CO2 Regulator<br>Two Stage:<br>Two stage | 2                          | Not Quoted             | Not Quoted                                                                                                                                                                                                                       | Not Quoted                | Not Quoted                    | CO2 Regulator Two<br>Stage Two stage<br>regulator is designed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Not Quoted                       | Not Quoted                                           | Not Quoted                     | Not Quoted                   | Shalimar<br>Scientific<br>Store |

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| R<br>Q<br>ty                                                                                                                                                              | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SU Enterprizes                                                                                                                                                                                                                                                                                                                                 | RAAB Scientific<br>Solutions                                                                                                                                                                                                                                                                                                                                                                                      | RAYS<br>Technologies                                                                                                                                                                                    | Key Scientific<br>Corporations                                      | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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| Germany or UK<br>or Japan or USA<br>or equivalent<br>Note: Valid<br>authorized<br>certificate from<br>the<br>manufacturers/fo<br>reign principals<br>must be<br>attached. |                          |                            |                        | Resolution 1 nm<br>Accuracy<br>(Photometric) 1.0% +<br>0.003 Abs (0-2.0 Abs),<br>2.0% (2.0-2.5 Abs) @<br>450 nm<br>Incubator<br>Temperature Ambient<br>+ 2°C to 45°C<br>Shaking Linear<br>shaking<br>Measurement Speed<br>96-well microplate: 6<br>seconds (fast<br>mode) 384-well<br>microplate: 10<br>seconds (fast mode)<br>Spectral Scanning<br>Speed 10 s from 200<br>to 1000 nm<br>Interface Touchscreen<br>display and SkanIt PC<br>software<br>Software Language<br>Versions English,<br>German, French,<br>Spanish, Italian,<br>Portuguese, Russian,<br>Chinese, Japanese<br>Depth (Metric) 44.5<br>cm<br>Depth (English) 17.5<br>in.<br>Width (Metric) 29.5<br>cm<br>Width (English) 11.6<br>in<br>Height (Metric) 26.5<br>cm<br>Height (English) 10.4<br>in.<br>Weight (Metric) 10.8<br>kg<br>Weight (English) 23.8<br>lbs<br>Unit Size Each<br>Make: Thermo<br>Fisher Scientific |                           | filters 3-9nm<br>Read-out range<br>D-4.000Abs<br>Linearity (405nm)<br>0-2.000Abs <+1%,<br>2-4.000Abs <+2%<br>Resolution<br>0.001Abs<br>Accuracy (405nm)<br>+1% (0-<br>3.Abs)/+2% (3-<br>4Abs)<br>Precision (405nm)<br>CV 0.2% (0-3) Abs/<br>CV 1.0% @-4 Abs<br>Test speed <6<br>sec. for 96 well<br>plate<br>Temperature<br>Control Ambient<br>+5°C<br>ro50°C/Accuracy<br>±0.5°C@ 37°C/<br>Uniformity ± 0.5°C<br>@ 37°C<br>Shaking 3<br>modes: slow,<br>medium and fast<br>User interface<br>integrated<br>software, touch<br>screen control<br>Storage 200<br>programs and<br>100,000 test<br>records<br>Ports USB<br>ports, for PC,<br>printer, mouse<br>and flash drive<br><br>Model:<br>MARTREADER 96<br>Cat # MR9600-T-E<br>Accuris<br>Instruments – USA | photodiode<br>Reading Speed 25<br>seconds<br>Linearity 0.25% and<br>0.0025 OD from 0.1 -<br>2.5 OD at 492 nm<br>Computer Interface<br>USB 2.0<br>Optical System Filters<br>Mode of Operation<br>PC Control<br>Analysis Software<br>Galapagos Software<br>only<br><br>Operated on 220 Volts<br>Model EZ Read 400<br>Biochrom Made in<br>England | Wavelength<br>Range 400-<br>750nm<br>Detection<br>System Single<br>channel silicon<br>photodiode<br>Linearity<br>0.25% and<br>0.0025 OD from<br>0.1 -2.5 OD at<br>492 nm<br>Computer<br>Interface USB<br>2.0<br>Optical System<br>Filters<br>Mode of<br>Operation PC<br>Control<br>Analysis<br>Software<br>Galapagos<br>Software only<br>Operated on<br>220 Volts<br><br>Model EZ Read<br>400 Biochrom<br>England | Optical<br>System<br>Filters<br>Mode of<br>Operation<br>PC Control<br>Analysis<br>Software<br>Galapagos<br>Software only<br>Operated on<br>220 Volts<br><br>Model EZ<br>Read 400<br>Biochrom<br>England | to our<br>requirement<br>required<br>touch<br>screen/no<br>provided |                              |                                 |

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| R<br>Q<br>ty                                                                                                                                                                                                                                                                                                                                                                                                                                     | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores                                                                                                                                                                                                                        | New Chemical<br>Centre                                                                                                                                                    | H. A. Shah & Sons                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                                                                                                                                                                                                                       | SU Enterprizes                                                                                                                                                                                                                                                                                                                                                                                                 | RAAB Scientific<br>Solutions                                                                                                                          | RAYS<br>Technologies                                                                                                                                                                                           | Key Scientific<br>Corporations                                                                                                                                                                                    | Technica<br>lly<br>Qualified                                                                                     | Technically<br>Disqualifie<br>d                                                               |
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| ouch operation,<br>Electronic speed<br>control for<br>constant speed<br>even during<br>changes in load,<br>Steel base,<br>silicone feet for<br>ultra stability and<br>vibration<br>damping, Speed<br>range 0-<br>2500rpm,<br>Shaking<br>movement<br>Orbital, 4mm<br>diaGermany or<br>UK or Japan or<br>USA or<br>equivalent Note:<br>Valid authorized<br>certificate from<br>the<br>manufacturers/fo<br>reign principals<br>must be<br>attached. |                          | Circular<br>Shaking<br>(Vortexing)S<br>haking Orbit:<br>4.5<br>mmLoading<br>Capacity: (1<br>tube) 50<br>mLMotor<br>Input /<br>Output<br>Power: 1.2<br>W / 0.8<br>WDimension<br>s: Ø110 x 80<br>mmMake:<br>Labotronics<br>Scientific Ltd<br>Canada | tube and<br>container<br>(Included<br>Convex Pad<br>(Included),<br>Speed range 0-<br>2500rpm,<br>Shaking<br>movement<br>Orbital, 4mm<br>dia, power:<br>60WMake:<br>BT Lab | Analysis (COA),<br>Certificate of Analysis<br>(COA)Dimensions (L x<br>W x H) Exterior 8.1 in.<br>x 5.9 in. x 5.2 in., 20.5<br>cm x 15.1 cm x 13.1<br>cmModel Digital<br>Vortex<br>MixerWarranty 2<br>YearsSpeed 200-3000<br>rpmHeight (English)<br>Exterior 5.2 in.Length<br>(English) Exterior 8.1<br>in.Width (English)<br>Exterior 5.9 in.Height<br>(Metric) Exterior 13.1<br>cmLength (Metric)<br>Exterior 20.5<br>cmWidth (Metric)<br>Exterior 15.1 cmLoad<br>Bearing Capacity<br>0.5kgShipping Weight<br>(English) 6.6 kg / 14.6<br>lbsShipping Weight<br>(Metric) 6.6 kg / 14.6<br>lbsVoltage<br>230VPlatform<br>Material Rubber,<br>plasticHertz<br>50/60HzItem<br>Description Digital<br>Vortex Mixer, 230V<br>EU/UK/CHN<br>PlugOperating Modes<br>Touch,<br>ContinuousPlug Type<br>230V EU/UK/CHN<br>PlugFor Use With<br>(Equipment) Rocker,<br>Rotator,<br>mixerElectrical<br>Requirements AC<br>100VFor Use With<br>Rocker, Rotator,<br>mixerDimensions (L x<br>W) 390 x 370 x 340<br>mm / 15.4 x 14.6 x<br>13.4 in.Unit Size Pack |                           | 3,300 rpm orbital<br>motion inclusive<br>platform head Ø76<br>mm and pop-off cup<br>head 3-position power<br>switch for continuous<br>run or „touch-on“<br>step less adjustable<br>speed by turning the<br>dial-knob tough metal<br>housing and reliable<br>suction cups ensure<br>stable motion, low<br>noise and safe<br>working Model VM-10<br>Witeg LMS Germany | separately)Conti<br>uous or touch<br>operationElectron<br>ic speed control<br>for constant<br>speed even during<br>changes in<br>loadSteel base,<br>silicone feet for<br>ultra stability and<br>vibration<br>dampingSpeed<br>range: 0-<br>2500rpmShaking<br>movement:<br>Orbital, 4mm<br>diaMotor type:<br>Eccentric, oil less<br>bearingsPower:<br>60WMotor rating<br>output:<br>10WModel: MX-<br>SDLAB - USA | to 3000 rpm Vibration<br>orbit 4.5 mm,<br>switchOperating<br>modes: touch,<br>continuousOperated<br>on 220 Volts, Model<br>ZX3, Velp Made in<br>Italy | controlElectroni<br>c speed<br>regulation: up<br>to 3000 rpm<br>Vibration orbit<br>4.5 mm,<br>switchOperatin<br>g modes: touch,<br>continuousOper<br>ated on 220<br>Volts, Model<br>ZX3, Velp Made<br>in Italy | controlElectr<br>onic speed<br>regulation:<br>up to 3000<br>rpm Vibration<br>orbit 4.5 mm,<br>switchOperati<br>ng modes:<br>touch,<br>continuousOp<br>erated on 220<br>Volts, Model<br>ZX3, Velp<br>Made in Italy | imar<br>Scientific<br>Stores•Si<br>nd<br>medical<br>stores•H<br>A Shah<br>and Sons<br>•New<br>Chemical<br>Centre | attached•K<br>ey Scientific<br>Corporatio<br>nsAuthoriz<br>ation letter<br>is not<br>attached |

Chairperson  
Technical Committee

Member

Member

Member

Member

Member





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| em | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores | SU Enterprizes | RAAB Scientific<br>Solutions | RAYS<br>Technologies | Key Scientific<br>Corporations | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d |
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1,000°C Ambient to 1,500°C TG  
Baseline drift 1): <10 ug TG  
Baseline Stability 2): <10 ug DSC  
Function: Standardly equipped Specific Heat Capacity Measurement: Available  
Temperature Precision: +/- 0.07°C  
Temperature Accuracy: +/- 0.2°C Gas Control: Integrated Mass Flow controller, Germany or UK or Japan or USA or equivalent  
Note: Valid authorized certificate from the manufacturers/foreign principals must be attached.

|    |                                                                                                                                                                                                                      |   |            |            |            |            |                                                                                                                                                                                                                                                                   |            |                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                       |                                                                                                                                                                                           |                     |                                                                                                                                          |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|------------|------------|------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 56 | Bomb Calorimeter:<br>Working temperature: 15-70°C<br>Storage temperature: 0-70°C<br>Temperature Resolution: 0.000001°C<br>Reproducibility/Repeatability: <0.01% RSD<br>Resolution: 0.0001 MJ/Kg<br>Results per hour: | 1 | Not Quoted | Not Quoted | Not Quoted | Not Quoted | Design Bomb Calorimeter<br>Temperature measurement range: 15-70°C<br>Temperature resolution: 0.0001°C<br>Repeatability error: <0.2%<br>Endured pressure in oxygen bomb: 20 MPa<br>Operation environment temperature: 15-28°C<br>Temperature fluctuation: Not high | Not Quoted | Bomb Calorimeter<br>Working Temperature: 15-70°C<br>Storage Temperature: 0-70°C<br>Temperature Resolution: 0.000001°C<br>Reproducibility/Repeatability: <0.01% RSD<br>Resolution: 0.0001 MJ/Kg<br>Results per hour: Up to 8-9 samples per hour<br>using 3 bayonet bomb | Working (Operating) Temperature: 15-70°C<br>Storage Temperature: 0-70°C<br>Temperature Resolution: 0.000001°C<br>Reproducibility/Repeatability: <0.01% RSD<br>Resolution: 0.0001 MJ/Kg<br>Results per | Working Temperature: 15-70°C<br>Storage Temperature: 0-70°C<br>Temperature Resolution: 0.000001°C<br>Reproducibility/Repeatability: <0.01% RSD<br>Resolution: 0.0001 MJ/Kg<br>Results per | • Rays Technologies | • Shalimar Scientific Stores<br>Max. Temperature range is not according to our specifications required 5-70°C/ provided 10-35C<br>• RAAB |
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Chairperson *[Signature]* Member

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| of item                                                                                                                                                                                                                              | R<br>Q<br>ty | Pakfills<br>Technologies | Sindh<br>Medical<br>Stores | New Chemical<br>Centre | H. A. Shah & Sons | Kamstech<br>International | Shalimar Scientific<br>Stores                                                                                                                                        | SU Enterprizes | RAAB Scientific<br>Solutions                                                                                                                                                      | RAYS<br>Technologies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Key Scientific<br>Corporations                                                                                                                                                                                                                                        | Technica<br>lly<br>Qualified | Technically<br>Disqualifie<br>d                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------|----------------------------|------------------------|-------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12 samples per<br>hour using 3<br>bayonet bomb<br>vessels<br>Measuring range<br>max: 99MJ,<br>99000MJ<br>Working<br>temperature min:<br>0°C Working<br>temperature<br>max: 50°C<br>Germany or UK<br>or Japan or USA<br>or equivalent |              |                          |                            |                        |                   |                           | than 10C during a test<br>Ambient humidity:<br>Less than 85%<br>Heat capacity:<br>14000~15000J/K<br>Power supply: AC<br>220V±5%, 50Hz<br>Model LBC-C21<br>Labtron UK |                | vessels and 2 Air<br>Coolers<br>Measuring range<br>max.: 99MJ, 99000J<br>Working temperature<br>min.: 1°C<br>Working temperature<br>max.: 50°C<br>Model 3K-F, DDS<br>South Africa | hour Up to 8-9<br>samples per<br>hour using 3<br>bayonet bomb<br>vessels and<br>2 Air Coolers<br>Measuring<br>range max.<br>99MJ, 99000J<br>Working<br>temperature<br>min. 1°C<br>Working<br>temperature<br>max. 50°C<br>Temperature<br>Measurement<br>Resolution<br>10ppm (parts<br>per million)<br>Cooling<br>Medium Air<br><br>Model 3K-F,<br>DDS South<br>Africa<br><br>Terms &<br>Conditions:-<br><br>Offer Validity :<br>180 days<br>Delivery Period<br>: 90 days<br>Warranty : One<br>year from the<br>date of<br>installation by<br>our engineer. | hour: Up to 8-9<br>samples per<br>hour<br>using 3<br>bayonet<br>bomb vessels<br>and 2 Air<br>Coolers<br>Measuring<br>range max.:<br>99MJ, 99000J<br>Working<br>temperature<br>min.: 1°C<br>Working<br>temperature<br>max.: 50°C<br>Model 3K-F,<br>DDS South<br>Africa |                              | Scientific<br>Solutions<br>Authorizati<br>on letter is<br>not<br>attached<br>• Key<br>Scientific<br>Corporatio<br>ns<br>Authorizati<br>on letter is<br>not<br>attached |

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