



## **Central Council for Research in Unani Medicine**

(An autonomous Organization under Ministry of Ayush, Govt. of India)  
61-65, Institutional Area, Opp. D-Block, Janakpuri, New Delhi- 110058.

### **LIMITED TENDER NOTICE**

On behalf of the Director General, CCRUM, New Delhi, the Deputy Director, Regional Research Institute of Unani Medicine (RRIUM), Chennai invites sealed limited tender/Quotations from reputed firms in single bid system (Techno-commercial) for the supply of 12 instruments for IMR project on Shelf life study of Unani formulations. The detailed specifications of the instruments are either may be downloaded from CCRUM website or may be obtained from the office of the Deputy Director, Regional Research Institute of Unani Medicine, No.1 West Mada Church Road, Royapuram, Chennai-13.

The last date for the receipt of Limited Tender/Quotation is 27<sup>th</sup> January 2023 at 5.00PM. For details please visit CCRUM website [www.ccrum.res.in](http://www.ccrum.res.in)

  
Deputy Director (U)  
RRIUM, Chennai

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**Annexure to Limited Tender/Quotation Enquiry for following 12 Instruments**  
**for IMR project on Shelf life study of Unani formulations**

S.No.	Instrument/equipment/furniture	Specification
1	Stability Chamber	<ul style="list-style-type: none"> <li>Chamber designed as per ICH Guidelines for precise monitoring of temperature and humidity conditions required for long term, intermediate &amp; accelerated stability studies.</li> <li>GMP compliant</li> <li><b>Internal volume(liters):</b> 500 – 550</li> <li><b>No. of tray:</b> 6</li> <li><b>Internal dimension W x D x H (mm):</b> 660 x 655 x 1250</li> <li><b>Temperature range &amp; accuracy:</b> 10C to 60C <math>\pm</math> 1C</li> <li><b>Humidity range (Rh) &amp; accuracy:</b> 40% to 95% <math>\pm</math> 3%</li> <li><b>Temperature &amp; humidity control:</b> Micriprocessor with capacitance type sensor</li> <li><b>Display:</b> 4" LCD screen , large size display for ease of reading</li> <li><b>Power failure alarm:</b> Visual alarm</li> <li><b>Door open alarm:</b> Audio visual alarm in case door open for over one minute</li> <li><b>Humidity/ temperature variation alarm:</b> Set humidity <math>\pm</math> 3% Rh set temperature <math>\pm</math> 1C audio visual alarm</li> <li><b>Illumination:</b> 8 watts fluorescent tube</li> <li><b>Internal body material:</b> stainless steel -316 grade</li> <li><b>External body material:</b> Stainless steel -304 grade</li> <li><b>Insulation:</b> 70 mm minimum for body &amp; 80mm for door, CFC free polyurethane foam</li> <li><b>Noise level:</b> Less than 65 db(A)</li> <li><b>Recommend voltage stabilizer:</b> VS-04</li> </ul>
2	pH meter	<ul style="list-style-type: none"> <li>Digital pH meter, Laboratory Research Grade</li> <li>pH Range: -2.0 to 20.0 pH, -2.00 to 20.00 pH, -2.000 to 20.000 pH</li> <li>pH Resolution: 0.1, 0.01, 0.001 pH</li> <li>pH Accuracy: <math>\pm</math>0.1 pH, <math>\pm</math>0.01 pH, <math>\pm</math>0.002 pH <math>\pm</math>1 LSD</li> <li>pH Calibration: automatic, up to five point calibration with eight standard buffers (1.68, 3.00, 4.01, 6.86, 7.01, 9.18, 10.01,12.45) and five custom buffers</li> <li>pH Temperature Compensation: automatic or manual from -20.0 to 120.0 <math>^{\circ}</math>C</li> <li>mV Range; mV Resolution; mV Accuracy and mV Relative Offset: <math>\pm</math>2000 mV; 0.1 mV; <math>\pm</math>0.2 mV <math>\pm</math>1 LSD and <math>\pm</math>2000 mV</li> <li>ISE Range: <math>1 \times 10^{-6}</math> to <math>9.99 \times 10^{10}</math> concentration</li> <li>ISE Resolution: 1; 0.1; 0.01; 0.001 concentration</li> <li>ISE Accuracy: <math>\pm</math>0.5% (monovalent ions); <math>\pm</math>1% (divalent ions)</li> <li>ISE Calibration: automatic, up to five point</li> </ul>

		<p>calibration, with seven fixed standard solutions (0.01, 0.1, 1, 10, 100, 1000, 10000 choice of concentration) and five custom solutions</p> <ul style="list-style-type: none"> <li>• Temperature Range: -20.0 to 120.0 °C, -4.0 to 248.0 °F, 253.15 to 393.15 K</li> <li>• Temperature Resolution: 0.1 °C, 0.1 °F, 0.1 K</li> <li>• Temperature Accuracy: ±0.2 °C, ±0.4 °F, ±0.2 K</li> <li>• Input Channels: 2 - pH/ORP/ISE</li> <li>• pH Electrode: glass body pH electrode with BNC connector and 1 m (3.3') cable (included)</li> <li>• Temperature Probe: stainless steel temperature probe with 1 m (3.3') cable (included)</li> <li>• Logging Type: automatic, manual, AutoHold</li> <li>• Logging Memory: 100,000 data point storage, 100 lots with 50,000 records/lot</li> <li>• Logging Interval: settable between 1 second and 180 minutes max log time</li> <li>• Connectivity: USB</li> <li>• GLP: calibration data including date, time, buffers used, offset and slope</li> <li>• Display: color graphic LCD with on-screen help, graphing, and custom color configuration</li> <li>• Power Supply: 12 VDC adapter (included)</li> <li>• Environment: 0 to 50°C (32 to 122°F; 273 to 323 K), RH max 95% non-condensing</li> <li>• Dimensions: 160 x 231 x 94 mm (6.3 x 9.1 x 3.7")</li> <li>• Weight: 1.2 kg (2.64 lbs.)</li> <li>• Accessories</li> </ul>
3	Ultrasonicator	<ul style="list-style-type: none"> <li>• Fully made of Stainless Steel</li> <li>• Operating frequency 30KHz ± 3 KHz</li> <li>• Micro-controller based digital timer range 0 to 15 minutes</li> <li>• Thermostatically controlled heater</li> <li>• Tank capacity 3.5 liters</li> <li>• Tank working chamber (L x B x H): 300 x 150 x 100 mm</li> </ul>
4	Melting/boiling point apparatus (Digital)	<ul style="list-style-type: none"> <li>• Material: Mild steel</li> <li>• Temperature: 350C</li> <li>• Display type: Digital</li> <li>• Frequency rate: 50/60Hz</li> <li>• Accuracy: +/-0.05%</li> </ul>
5	Tablet disintegration apparatus	<ul style="list-style-type: none"> <li>• Beaker System: Dual Beaker System</li> <li>• Tablet System: Dual Basket with 6 Tubes &amp; Guide Disc</li> <li>• Time Display: 5 Digit Red LED ½ " Display</li> <li>• Up and Down Speed: 30 rpm ± 2 rpm</li> <li>• Accuracy: 2%</li> <li>• Resolution: 1 sec.</li> <li>• Operating Temp. Range: 0 – 100°C</li> <li>• Power: 230V ± 10%, 50Hz.AC</li> <li>• Dimensions: (With Rods) 320 x 290 x 370mm (L x B x H)</li> </ul>

		<ul style="list-style-type: none"> <li>Accessories: Dust Cover, Operation Manual, Glass Jar, Basket with 6 Tubes &amp; Guided Disc</li> </ul>
6	Moisture determination apparatus (IC Filtrator)	<ul style="list-style-type: none"> <li>Halogen based moisture analyzer</li> <li>With drying temperature up to 160C</li> <li>Graphical display with backlight &amp; drying chart displaying</li> <li>Report edition with pc keyboard</li> <li>Capacity of storing 20 drying programs</li> <li>Equipped with USB, PS interface, with software</li> <li>Report GLP/GMP compliant</li> <li>Capacity 120g</li> <li>Resolution: 0.001</li> <li>Moisture resolution: 0.01%</li> <li>PAN: Ø 90</li> <li>Humidity measure repeatability: <math>\pm 0.1\%</math> (sample 2g), <math>\pm 0.04\%</math> (sample 5g)</li> <li>Humidity readout precision: <math>1\% &lt; 0.5\text{g sample}</math>, <math>0.1\% &lt; 5\text{g sample}</math>, <math>0.01\% &gt; 5\text{g sample}</math></li> <li>With accessories, calibration thermometer, printer, software etc.</li> </ul>
7	Tablet friability tester (Vinsyst VFT 2 Digital Tablet Friability Tester 25 r/min)	<ul style="list-style-type: none"> <li>Dual drum with quick change system</li> <li>Digital LED display</li> <li>Cylinder radius: 300 mm dia</li> <li>Cylinder depth: 35 mm</li> <li>Tablet falling height: 156 mm</li> <li>Rotary speed range: 25 r/min</li> <li>Rotary speed accuracy: <math>\pm 1</math> r/min</li> <li>10 degree tilting function</li> <li>Digital timer</li> <li>Inbuilt auto-alarm &amp; indication</li> <li>Accessories</li> </ul>
8	Tablet dissolution tester	<ul style="list-style-type: none"> <li>Microprocessor dissolution test apparatus with 8 stations</li> <li>Touch screen display</li> <li>PC interface with software through USB port</li> <li>Programmable stirrer speed control</li> <li>Three programming modes, routine, sustain and control</li> <li>Storage facility: 200 samples</li> <li>Stirrer speed: 25 – 200 RPM</li> <li>Resolution: 1 RPM</li> <li>Accuracy: <math>\pm 1</math> RPM</li> <li>Temperature range: 30 – 50C (accuracy <math>\pm 0.2\text{C}</math>)</li> <li>Temperature control: Microprocessor based using semiconductor</li> <li>Reaction vessel: 1000ml jar with acrylic cover stirrer pedal and mesh basket</li> <li>Heater: 0.5KW</li> <li>Power: 230V, <math>\pm 10\%</math>, 50 Hz, AC</li> </ul>
9	Tablet Hardness tester	<ul style="list-style-type: none"> <li>Hardness measurement by load cell upto 5 kg, 500N</li> <li>Measurement in N, Kg</li> <li>Programmable upper &amp; lower tolerance limit</li> </ul>



		<ul style="list-style-type: none"> <li>• LCD display with backlit</li> <li>• Display of 10 test values and calculate the average of memorized values</li> <li>• PC and printer connectivity</li> <li>• Rechargeable battery</li> <li>• Resolution: 0.01Kg, 0.1N</li> <li>• Accuracy: <math>\pm 0.5\%</math></li> <li>• Tablet range: 2 – 28mm</li> </ul>
10	Bulk density Apparatus	<ul style="list-style-type: none"> <li>• Processor based control</li> <li>• Programmable timer mode</li> <li>• Programmable Tap Counter Mode</li> <li>• Inbuilt bulk density %age calculator</li> <li>• Soft touch keypad</li> <li>• Rotation speed: 30RPM (<math>\pm 1</math> RPM)</li> <li>• Timer: 100 Hrs</li> <li>• Counter: 1 – 99999</li> <li>• Display: 16 x 2 a-Numeric LCD</li> <li>• No. of Cylinder: 2</li> <li>• Capacity: 50ml</li> <li>• Drive system: AC motor</li> <li>• Dimension: 255mm x 213 mm x 360 mm</li> </ul>
11	Refractometer (Digital)	<ul style="list-style-type: none"> <li>• Application: To check Brix / sugar, oil</li> <li>• Measurement: 0-50% 0-90%</li> <li>• Accuracy: <math>\pm 0.2\%</math></li> <li>• Battery: with the capacity of approx. 20,000 measurement</li> <li>• Brix value: 0-50% 0-90%</li> <li>• Dimension: 58(W)X25(D)X121(H)mm</li> <li>• Measurement time: 2 sec. approx</li> <li>• Measuring range: 0.990 – 1.484</li> <li>• Minimum sample volume: 0.2ml</li> <li>• Power supply: AAA alkaline battery</li> <li>• Sugar content range: 0-50% 0-90%</li> <li>• Sugar content resolution: 0.1</li> </ul>
12	Sieve Metallic	<ul style="list-style-type: none"> <li>• Laboratory grade stainless steel sieves of different mesh sizes</li> <li>• Mesh Size nos.: 20, 40, 60, 80, 100, 120</li> <li>• Body &amp; Mesh: SS 316</li> <li>• Evenly tensioned &amp; precision mesh with no soldering</li> <li>• Natural filter, allowing free flow of sample onto the sieving medium</li> </ul>

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