

**DEPARTMENT OF CHEMICAL ENGINEERING  
INDIAN INSTITUTE OF TECHNOLOGY - DELHI  
HAUZ KHAS, NEW DELHI – 110016**

**Dated: 30<sup>th</sup> Aug 2012**

**NOTICE INVITING QUOTATIONS**

Sub: Purchase of “LANGMUIR TROUGH”

Sealed quotations in separate envelopes of technical and commercial bid kept in a one sealed outer envelope are invited for purchase of a Langmuir Trough as per specifications given below.

**SPECIFICATIONS:**

Serial No.	Description	Specification	Unit
1	<b>Two-in-One Langmuir Trough as for the above subject instrument</b>	<ul style="list-style-type: none"> <li>• Double Barrier</li> <li>• Symmetric Compression</li> <li>• Fully Automatic &amp; Computer Controlled</li> <li>• Pressure Range: 0-100 mN/m</li> <li>• Film Balance Resolution: 0.005 mN/m</li> <li>• Sensitivity: Better than 0.5 mN/m</li> <li>• Accuracy: <math>\pm 0.1</math> mN/m</li> <li>• Dipping &amp; Lifting Speed: 0.5-90 mm/min</li> <li>• Barrier Speed: 0.5-150 mm/min</li> <li>• Speed Adjustment: 0.1 mm/min Increments</li> <li>• Unlimited Deposition Cycles</li> <li>• Depth of Dipping Area: 60 mm (Maximum)</li> <li>• Working Area: 600 mm X 200 mm</li> <li>• Trough Dimension: 630 mm X 230 mm</li> <li>• Trough Material: Total Teflon</li> <li>• Barrier Material: Total Teflon</li> <li>• Barrier Movement Resolution: 0.01 mm</li> <li>• Dipper Movement Resolution: 0.005 mm</li> <li>• Operating Voltage: 200-230 V; AC (50-60 Hz)</li> <li>• Compression Isotherm Recording</li> <li>• Pressure Area Isotherm Measurement</li> <li>• Surface Pressure vs. Time Measurement at Constant Area</li> <li>• Constant Surface Pressure Measurement in the Confined Area</li> <li>• Mono &amp; Multi-layer Transfer to Solid Substrates</li> </ul>	1
2	<b>Aspirator Pump</b>		1
3	<b>Environmental Dust-hood</b>		1
4	<b>Branded PC compatible with LB-2007DC System</b>		1
5	<b>Micro-syringe - 250 <math>\mu</math>l</b>		2
6	<b>External Water Circulation Bath incorporated in Teflon Trough</b>		1
7	<b>Semi-micro Balance with Wilhelmy Plate used as Pressure Sensor</b>		1
8	<b>Teflon Bricks used as sub-phase volume reducer</b>		10
9	<b>WinLB Software</b>		1
10	<b>Paper Wilhelmy Plates (in nos.)</b>		250
11	<b>Fixed 'X' positioning stage on top of the Dust Hood for the Automatic Movement of the Balance with Wilhelmy Plate for Multipoint Surface Pressure Measurement through the appropriate channel on the Dust Hood. The Balance should be moved up to 10 cm bi-</b>		1

	<b>directional</b>		
12	<b>Accessories</b>	Align Key Set / Screw Driver Set/Coupling Rubber Tube / Tweezers/ Micro Switch/Magnetic Torpedo Level / Silk Thread / Extension Board Filter Paper / Hook/ Tissue Paper / Inlet-Outlet Pipe	1

### Terms and conditions

1. Quotations must be in sealed envelope; technical and commercial bid must be sent separately in two sealed envelopes & then put together in one envelope. The quotes must reach the following address by 21<sup>st</sup> September 2012, 17:00 hours latest.

**Prof. A. N. Bhaskarwar**

**Department of Chemical Engineering.**

**Indian Institute of Technology, Delhi**

**Hauz Khas New Delhi – 110016.**

**[Kind Attn: Lab II-384]**

2. Price must be quoted CIF New Delhi.
3. Please specify warranty period.
4. Indian agency certificate must be enclosed if applicable.
5. Proprietary certificate might be enclosed if applicable.
6. Payment through L/C.
7. Validity of quotations should be at least 3 months.
8. Period of delivery should be mentioned.
9. Educational discount should be mentioned.
10. No advance payment will be made.

**Remarks: The Institute reserves the right to accept or reject any of quotations without assigning the reason thereof.**

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