

# DEPARTMENT OF CHEMISTRY, UNIVERSITY OF KERALA

(Re – accredited by NAAC with 'A' Grade)

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Reference Number: (Provided along with each instrument)

Date: 17/03/2016

# **QUOTATION NOTICE**

Competitive quotations are invited from various firms for the following laboratory equipments as per the specifications mentioned towards the purchase of equipments for the specific project on "Design and Development of Functional Materials for Energy Related Applications". The quotations in the sealed covers addressed to the Professor & Head, Department of Chemistry, University of Kerala, Kariavattom, 695581 should reach the department on or before 22.03.2016, at 11.00 hrs.

### **List of Equipments**

Sl.no:	Instruments	Reference no:	Specifications
1.	Vertical Electrophoresis With PowerPac	DC/ST/Eq-9/2015-16, dt-3/3/2016	Mini Protein Tetra Cell, 10 Well, 1 mm thickness, 2-Gel System includes 5 combs, 5 sets of glass plates, casting stand, 2 casting assemblies, electrode assembly, tank, lid with power cables, mini cell buffer dam. Basic Power Supply.
2.	Horizontal Electrophoresis	DC/ST/Eq10/2015-16, dt-3/3/2016	Wide Mini Sub Cell GT Cell , includes Sub-Cell unit, 15 x 10 cm UV-transparent tray, gel caster, two 1.5 mm fixed height combs [15 and 20 well]
3.	Orbital Shaking Incubator	DC/ST/Eq11/2015-16, dt-3/3/2016	Temp- Range: 5 ° C– 60 ° C Shaking speed: 50 – 250 RPM platform size Capacity 360 x 360 mm Capacity: 16 flaks X 250mml
4a.	Deep Freezer – Horizontal (Chest Type) Up to – 20 <sup>0</sup> C	DC/ST/Eq12/2015-16, dt-3/3/2016	Inn. Dimension [W x D x H]: 500x380x600 mm  Max.Temp <sup>-</sup> 20 <sup>0</sup> C Volume: 115 Ltrs  Digital Temperature Controller with single compartment having accuracy.

4b.	Deep Freezer – Horizontal [Chest Type] Up to -35 <sup>0</sup> C	DC/ST/Eq13/2015-16, dt-3/3/2016	Inn. Dimension [WxDxH]: 500x380x600 mm Max.  Temp: -35° C Volume: 115 Ltr Digital Temperature  Digital Controller with single compartment having accuracy.
5.	Refrigerated Centrifuges	DC/ST/Eq14/2015-16, dt-3/3/2016	Display LED, Digital Parameters Feather touch keys Brushless motor, Max.Speed 20000 rpm Max. 37570 RCF G Max.Tube Size 100 ml Max.Capacity 400 ml Lowest Temp8 ° C ,WxDxH mm 775x575x475 mm Supply:220-240 Volts 50 Hz single Phase
6.	Quartz Double Distiller	DC/ST/Eq15/2015-16, dt-3/3/2016	Output Capacity(Approx) 1.0ltr/hr Power Rating(approx) 2KW Minimum Cooling Water Requirement (approx) 2 Ltr/min 2.5 Ltr/min
7.	Hybrid quartz photoelectrochemic al cell kit	DC/ST/Eq16/2015-16, dt-3/3/2016	a) Quartz Cell kit For Flat , all type & shape of samples Quartz Glass Electrolyte reservoir (75 ml ~100ml).  Teflon Holder & SS Screws type Flat sample Holder.  Light entry arrangement is provided.  Electrode ports & Purge ports provided. Sample exposed area 1 cm2.  Maximum Sample Width: 25mm.  b) Quartz glass Cell kit for photo reactor studies (3/pack)  Includes.  Horizontal type Quartz Glass Electrolyte reservoir (50 ml) with 2 gas collection port , silicon tube , 1 glass joint & 1 glass dummy cap. 1 pack.

			Measuring range: 3000PRO:
8.	Coating thickness gauge	Ref: DC/ST/EQ/Specific Project/Eq.6, dt: 3/3/2016	0 - 60.00 mils / 0 - 1500 μm <b>Minimum measurement</b>
			area: 5 mm x 5mm/0.2" x 0.2" Minimum substrate
			thickness: 0.2mm/8 mils (for F-versions); 50 μm/2
			mils (for N-versions) <b>Operating temperature:</b> 0 °C to
			50 °C (storage temperature - 20 °C to +60 °C. <b>Surface</b>
			<b>temperature:</b> -15° C - 60° C (standard); 15° - 150° C
			(w/3000-HTF)
			15° - 300° C (w/3000-HTF-300C) <b>Power supply:</b> 2 x
			round cell (AA) 1.5 V up to 60 hours of operating time
9.	Rack Cluster		Rack Cluster with two compute nodes and Dual power
		Ref:	supply
		DC/ST/EQ/Specific	Compute node: Minimum configuration required:
		Project/Eq.3, dt:	2X Intel Xeon E5-2420 v2 (Hexa core)
		03.03.2016	2.2GHz, 15 Mb Cache, 7.2GT/s QPI Turbo,16 GB
			memory, 300GB 15k rpm, 6Gbps SAS 3.5in.

Note: Please send separate quotations for each item with its specific reference number.

## **Terms and conditions:**

- 1. Please send separate quotations for each item with its specific reference number.
- 2. The price should be quoted in Indian Rupees which should be for supply, installation, demonstration and testing at the University campus, Kariavattom, Trivandrum.
- 3. The price should be inclusive of all taxes. It should also include all incidental expenses, if any, till complete satisfactory demonstration.
- 4. Two years comprehensive Warranty is required wherever applicable. The supplier should be fully equipped to render after sale service during warranty and thereafter.
- 5. Suppliers with service centers in South India, preferably in Kerala shall be an added advantage.
- 6. The University of Kerala reserves the right to accept or reject any or all tenders without assigning any reason thereof. In case of any dispute the decision of the University Authority shall be final.
- 7. All the previous quotations received in respect of the purchase of Coating Thickness Gauge stands cancelled and hence fresh quotation should be submitted.

#### Sd/-

#### The Associate Professor and Head