

**CORRIGENDUM-1**

<b>Last date of submission of E-Tender</b>	<b>04.06.2019 (Tuesday) before 3pm</b>
<b>Opening of Techno-Commercial Bid</b>	<b>04.06.2019 (Tuesday) at 4pm</b>

**Revised Technical Specifications of ISOTHERMAL CALORIMETRIC TITRATION (ITC) for Tender No. RGIPT/JAIS/E-OPN/LAB/2019-20/01 dated 18.04.2019**

**Preamble:** Isothermal Calorimetric Titration (ITC) for the estimation of thermodynamic and kinetic parameters of biophysical properties- covering interactions of protein/polymer/DNA-Nanostructures, protein/polymer/DNA-Drug, protein-polymer and others. ITC system must have a robust design and latest version of superior hardware and software product features to quantify the parameters. Installation certificate will be issued only after successful installation, commissioning and onsite training at Rajiv Gandhi Institute of Petroleum Technology Jais.

**Terms & Conditions:**

1. Vendor (s) will have to make arrangements for all the other accessories, infrastructure (suitable Table for instruments stability) including UPS, etc. essential for the successful operation of the equipment.
2. The service visit should be made within 48 hours after the report of the problem and instrument should be up and running within 5 working days.
3. ITC system must be stable and run for a long time without much trouble. The maintenance cost of the equipment must be minimal.
4. All the claims made by the various vendors in terms of the specifications mentioned below should be validated by means of authenticated documentary evidence in the tender document being submitted by them. In the absence of authenticated documentary evidence available in the submitted tender, it may be considered as disqualified/cancelled.

**Isothermal Calorimetric Titration (ITC) Specifications:**

Minimum Detectable Heat	0.1 $\mu$ J or better
Maximum Detectable Heat	5000 $\mu$ J or better Maximum signal in linear range
Low Noise Level	0.0025 $\mu$ Watt or better Averaged Standard Deviation with no stirring
Baseline Stability	0.02 $\mu$ Watt/hr or better
Temperature Stability	0.0002 $^{\circ}$ C at 25 $^{\circ}$ C or better
Operating Temperature Range	2-80 $^{\circ}$ C or better
Sample Cell Size	0.5 mL or better (with dead volume)
Response Time	Hastelloy: 18 Seconds or better Time for a detected signal from the first inflection from baseline to reach 60% of maximum peak with 250 rpm stirring Or better
Cell Geometry	Fixed Cylinder or Coin shaped
Cell Composition	Hastelloy

Degassing Station	Stirring platform, vacuum chamber, vacuum port, temperature control and electronic timer for proper sample preparation. 96-deep well plates, 1L Side-arm Vacuum Flask must be included. <b>Or a better method</b>
Test Kit	Sufficient volume of reagents to perform no. (10) ITC titration expt.
Burette Assembly:	Easy fill, removable titration syringe allows for quick and simple exchange. The syringe can be cleaned while removed from the burette assembly.
Loading syringe volume and injection precision	<b>40 µL or lower, &lt;1% at 2.0 µL</b>
Mixing speed	<b>Variable speed upto 1000 rpm or higher</b>
Hardware Communication:	Communication with the computer through a USB port.
Computer and Workstation Software:	Two latest PCs (one for instrument, separate one for data analysis) with necessary hardware and Windows 10 or Higher OS software required to operate all the specified equipment/data analysis and future upgradation to higher OS should be free of Cost. <u>Minimum configuration for PC or better configuration that suits the requirements:</u> CPU (i7 Intel processor ), RAM (DDR3 min. 8 GB (4 x 4 GB)), HDD (min. 2 Tb), video card with 1 GB memory, DVD writer with double layer writing capability, USB drive, laser printer, minimum 21 inch flat screen colour monitor or better configuration. All the necessary software should be provided in the CD with legal licenses
	<b>Data Analysis Software Features:</b> Heat of binding data must be easily and quickly integrated Should allow corrections for heats of dilution and blank effects User adjustable auto-equilibrate for baseline Must include Preprogrammed fitting models Easy addition of custom fitting models Experimental Design Wizard: Must allow to saves time and expensive samples by providing a preview of anticipated thermodynamic results by inputting experimental parameters.
<b>WARRANTY:</b> The equipment must be covered under full comprehensive warranty for service and all the spares parts (electronic boards & hardware consumables, etc.) for the <b>first three years</b> , after successful installation, commissioning and training. No conditional warranty will be accepted.	
<b>ACCESSORIES:</b>	
UPS	Online UPS – <b>3 KVA</b> cum stabilizer for the MS and accessories with One hours backup.
Spares & Consumables	Essential Spares and parts for routine maintenance should be included.

**The changes in Technical Specifications have been made after the pre-bid meeting, which are highlighted.**

The other terms & conditions remain unchanged.

This issues with the approval of Competent Authority.

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