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Ref. No. RMLIMS/MM(eq)/2019-20/ 4046

Date:- 26. 10.2019

**Corrigendum Notice-I**

Corrigendum-I against e-tender notice no. RMLIMS/MM(eq)/2019-20/2676 dated 03.10.2019 for the supply of Medical Equipments for various departments, some corrections have been made in Infra-Red Spectroscope (IR Spectroscope). Corrected specifications are attached with this notice. Last Date of submission of only for above item has been extended upto 16.11.2019 till 4:00 P.M. and Opening of technical bid is 18.11.2019.

Other terms and conditions will remain same.

**Director**

## **Modified Technical Specifications for Infra-Red Spectroscopy (IR Spectroscopy)**

1. Optical system: Vibration isolated baseplate. Sealed and desiccated enclosure must offer extended intervals between desiccant replacements, at least 5 years.
2. Wavelength range: 8300 cm<sup>-1</sup> to 375cm<sup>-1</sup>
3. Spectral resolution: 0.5 cm<sup>-1</sup> or better as standard (without any adjustment)
4. Wavelength Accuracy: 0.1 cm<sup>-1</sup> or better
5. Wavelength precision: 0.01 cm<sup>-1</sup> or better
6. S/N ratio: 50000:1 Peak-Peak per minute
7. Interferometer: Rotary Michelson interferometer, High stability, self-compensating for dynamic alignment changes due to a tilt and shear.
8. Optics: Kinematically mounted, zero alignment optics with high reflectivity and a low-angle off axis design. OpticsGuard system for extended desiccant life and additional optical component protection.
9. Source: Long-life source/ durable source. User replaceable from outside instrument
10. Detector: Temperature-stabilised / thermoelectrically cooled/ room temperature DTGS detector
11. Beam splitter: Dedicated extended range KBr beam splitter to cover whole range 8300 – 375 cm<sup>-1</sup>
12. Sampling Accessories: All required accessories for Solid and liquid sample analysis for carrying out 100 samples along with demonstration to complete installation.
13. Sampling Accessories: Diamond ATR accessory for solid, Liquid and film type of sample analysis to cover range 7800 to 400 cm<sup>-1</sup>
14. Operating Conditions: 5 -45 °C
15. Typical Desiccant lifetime: 5 years at 25 C and 90% relative humidity
16. Software -Data processing function: Latest version windows based packaged incorporating instrument control data manipulation, comparison of two or more spectra, analysis and flexible report facilitations, operating assistant with simple step by step operating procedure from menus; multitasking functions with built in software, accept store and apply multi-point calibration curves for concentration with various curve fitting techniques, Quantitative analysis as per Beers Law or classical least squares.
17. Sigma-Delta conversion: System must be incorporated with Sigma-Delta converters to reduce spectral artifacts and increase ordinate linearity to produce accurate, reproducible results.

18. Automatic validation of Hardware & Software: Std internal validation to provide complete reassurance of quality of measurement conforming ASTM with NIST traceable external polystyrene film & and an Internal Schott NG11 filter for ordinate repeatability

19. Future Upgradability: System must have future upgradability option with TGA and GCMS to work as TG-IR-GCMS triple hyphenated solution for EGA (evolved gases analysis) & System should have Microscopy and imaging upgrade capabilities.

20. Work Station (PC) Compatible branded wall mountable touchscreen PC with i5 processor, 500 GB storage with 1 TB hard disc, wireless mouse and wireless keyboard must be quoted along with system. Two granite top vibration-free tables with shelves to keep instrument and accessories with must be quoted with the equipment.

21. Application training is must before installation.