



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY
MATERIALS MANAGEMENT DIVISION
 Powai, Mumbai 400076.

(PR No. 1000042864)

(Rfx No. 6100001951)

Technical Specification for Spectrometer

Sr. no	Item Description	Complied (Yes/No)	Additional Info if any
1	<p>Spectrometer</p> <p>FT/IR Spectrometer, with ATR and integrating sphere accessories and data processing software</p> <ol style="list-style-type: none"> 1. Measurement wavenumber range: at least 4000 to 400 cm^{-1} (2.5 to 25 microns wavelength) 2. Resolution: 1.0 to 4.0 cm^{-1} 3. Signal-to-noise ratio: 10,000:1 to 35,000:1 4. Detector type: DLATGS 5. Beam splitter Standard: Either KBr or Ge/KBr or ZnSe 6. Light source: High-intensity ceramic source 7. Interferometer: Michelson interferometer 8. Purging: Sample and detector compartment 9. A/D converter: 24-bit A/D converter 10. Communication: USB 2.0 11. Vibration-proof: Vibration-proof design mounting 12. Required power: AC 100 to 240 V, 50/60 Hz, maximum 50 VA 13. Operation environment: Temperature: 17 to 27 $^{\circ}\text{C}$ / humidity: less than 70 % 14. Data processing software including measurement modes, quantitative analysis, wavelength scan (Abs, %T, %R, Sample, Reference), time scan (Abs, %T, %R, Sample, Reference), Abs/%T monitor, baseline correction etc. 15. Operating system: Windows 10/11 Pro (64-bit) 16. Computer and printer 17. UPS online 18. ATR accessory: Single-reflection ATR 19. Integrating Sphere accessory: should be able to handle solid thick samples, and powders. Should be able to handle diffuse reflectance and transmittance; Room temperature detector (DTGS detector) 20. Warranty: Minimum 3 years for interferometer; 1 year for instrument 		