

FOURIER TRANSFORM INFRARED SPECTROMETER-1No.
Doc. No: ST/12/FTIR/2016-17/28

APPLICATIONS:

1. Assessment of body composition using ISOTOPIC methods
2. Validation of total body water measurements by bioelectrical impedance analysis
3. Assessment of breast milk volume using isotopic methods

REQUIRED FEATURES AND SPECIFICATIONS

1. Single beam optical system
2. Michaleson interferometer
3. WAVE number range : $7,800\text{cm}^{-1}$ to 350cm^{-1} with KBr beam splitter
4. wave no. accuracy: $\pm 0.01\text{cm}^{-1}$
5. resolution : 0.5cm^{-1}
6. sample compartment size: approximate and tentative dimensions 20cm(W) x 25cm(D) X18 (H)
7. temperature controlled Detector with high sensitivity
8. signal to noise ratio : should be $> 20,000 : 1$
9. Light source: High intensity ceramic source or / any other suitable source of light

SOFTWARE:

1. powerful single software for controlling the equipment operation
2. suitable software for data processing, and analysis work for applications of :
 - a) Assessment of body composition using ISOTOPIC methods
 - b) Validation of total body water measurements by bioelectrical impedance analysis
 - c) Assessment of breast milk volume using isotopic methods

Software features:

Spectrum measurement, atmospheric correction, simple measurement, peak detection, baseline correction, peak area calculation normalization

Peak height, multipoint calibration curve etc data processing, measurement, quantitative Calculations features

Essential accessories required

1. Latest configuration and suitable P.C., PRINTER, MONITOR for FTIR equipment
2. Online U.P.S. of suitable capacity for one hour backup for total operation of equipment.
3. Polystyrene film for calibration should be supplied.

OPERATING VOLTAGE FOR TOTAL EQUIPMENT : 230 V A.C. / 50 HZ / Single phase

TERMS AND CONDITIONS:

1. The equipment should carry a 3 years comprehensive warranty and 2 years non comprehensive Warranty from the date of installation at the required location
2. The above given specifications and features are only approximate and for the information of bidder to quote for a similar model and make, available.
3. Director N I N reserves the final right to accept or reject a particular make and model based on the technical suitability as per final requirement and need
4. The accessories supplied like U P S, P.C., PRINTER etc should also be covered under WARRANTY upto 5 years from installation with main equipment
5. The bidder should accept the above terms and conditions in writing