

## Technical specifications for FTIR spectrometer with DRIFTS attachment

### Scope

IIT Madras is looking to investigate catalytic systems using in-situ DRIFTS analysis over a range of operating temperatures and pressures. The requirement is of a complete end-to-end system for this purpose. The following specifications should be met to qualify the technical bid.

### **Requirements:**

FTIR spectrometer with following specifications

Ready for DRIFTS accessory

Upgradeable to include ATR, GC and Raman modules

Compatible with FTIR microscope and TGA accessory

Spectral resolution:  $< 0.1 \text{ cm}^{-1}$

One touch sampling operation

Liquid nitrogen cooled MCT Detector (Mercury Cadmium Telluride) with 4500-600  $\text{cm}^{-1}$  range.

ZnSe window, of suitable dimensions

Complete set of spectral data processing tools

Complete library of infrared spectra

Software with capability to perform background corrections in an automatic mode.

Compatible Diffuse reflectance accessory

High Temperature Reaction Chamber with dome for DRIFTS Accessory

2 KBr IR transparent windows and 1 observation window

Operating T 25-900 °C

Dewar flask

Sampling cups

Compatible computer

Power cord: 230 V, 50-60 Hz, Indian socket

One Year Warranty and extra two years of AMC should be quoted separately

Two separate Performance certificates from two clients.

On –site Installation & training to be quoted.