

DST (FIST) – VIT Project on High Resolution Powder X-Ray Diffractometer (P-XRD) FACILITY - I SCHOOL OF ADVANCED SCIENCES (SAS), VIT , VELLORE-632014

❖ Introduction

VIT Vellore houses Powder X-Ray Diffractometer since 2008 with Model of **Bruker D8 Advance, Germany worth Rs. 89 Lakhs funded combined by DST-FIST & VIT.**

Source: **2.2 KW Cu anode, Ceramic X-ray tube**

Detector : **Lynx Eye detector (silicon strip detector technology)**

Beta Filter : **Ni filter**

Sample Holder : **Zero background sample holder, PMMA sample holder**

❖ Applications

- XRD is a rapid analytical technique primarily used for phase identification and quantification of crystalline material and its unit cell dimensions.
- Used in structural determination of poly-crystalline and single-crystalline materials.
- Used for the stress analysis of poly-crystalline Ceramic, Metal and Polymer powder samples and Pellet samples.
- Useful for multiple disciplines of research such as Physics, Chemistry, Material Science, Biology, Metallurgy, Nanoscience and Nanotechnology



Powder X-Ray Diffractometer - Bruker D8 Advance

❖ Analysis Charges

- Normal Scan: **Rs.350/- (for academic institutions), Rs.750/- (for industry)**
- Slow Scan : Based on experimental conditions (Before sending the samples contact us)
- **Mode of Payment: Online payment only**
- **Qty. of samples required: 250-500mg: Preferable: 500mg**

Faculty In-Charge:

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