

**X-RAY DIFFRACTOMETER USER FORM**  
Sophisticated Analytical Facility, Academic Block-2, Room No:18

**USER INFORMATION** (External Users only)

Username: \_\_\_\_\_ User Designation: \_\_\_\_\_  
Contact No: \_\_\_\_\_ Email ID: \_\_\_\_\_  
Affiliation: \_\_\_\_\_ Department: \_\_\_\_\_  
Supervisor (for students & research scholars only): \_\_\_\_\_

**SAMPLE INFORMATION**

(Put a tick in the appropriate option)

No. of samples:

- Sample Name: 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_
- Sample Type: (Solid \_\_\_\_\_ / Film \_\_\_\_\_ / Powder \_\_\_\_\_) (Tick Appropriate)
- Scan Rate: ..... (For normal scan: **Powder:10°/min, Thin film: 5°/min**)
- Range of theta (2θ): .....
- Grazing Incidence Angle (For thin film XRD) .....
- Sample is Toxic/ Hazardous/ Explosive.: YES/NO, if yes Nature of toxicity or precaution to be taken should be mentioned below  
.....  
Sample required to be preserved or not: Yes/ No (If NO mode of disposal): .....  
Low Background Sample Holder: Yes/No (only for powder sample only), if quantity is less than 3 gm

**DECLARATION**

- I hereby declare that above information is correct to my knowledge and no further claim shall be made other than the above mentioned.
- I certify that my samples do not present any danger to the personnel or equipment and I have provided the appropriate handling instructions for safety to the operator before analysis.
- I have correctly given information about the nature (flammable/radioactive/ biologically hazardous) of the sample submitted.
- I agree to acknowledge the facility if the data are used in publications or thesis. I shall also forward the citation details to the In-charge of the facility by email within a month of such publication.
- I am aware that the facility has no liability as to any loss/damage of my samples during storage/transport/imaging at the lab.
- I have read the User Instructions & Sample requirement guidelines.

<b>Date</b>	<b>User</b>	<b>Supervisor</b>
		(for students & research scholars only)
<b>For Official Use Only</b>		
<b>Date:</b>	<b>Time Slot:</b>	<b>XRD operator/In-charge</b>
<b>Transaction ID:</b>		<b>Amount (INR):</b>
Scientific Officer	Asst-Director, Research	Director, Research

## **User Instructions**

1. **Sample Requirement guidelines:** Bring your samples along with this requisition forms in properly sealed cover.

The sample can be sent in the form of

Powder: Amount of the sample  $\geq 3\text{gm}$

Thin film: Dimension (LxB) of the sample: min 5mm x 5mm, max 4-inch dia.

Substrate /Glass slide thickness:  $\leq 5\text{mm}$

Solid/Pallet: Dimension (LxB) of the sample: Less than 20mm x 20mm

thickness:  $\leq 5\text{mm}$

2. Please bring moisture sensitive samples in a desiccator.
3. Samples are liable to be destroyed /disposed of after measurements and if to be returned, they have to be collected in person.
4. User must report at the XRD lab as per the scheduled appointment (date & time). The users shall be allotted the time slots as per the availability.
5. User should be present during the analysis of his samples. If user has any specific instructions regarding the analysis, he/she can discuss with the operator.
6. Data will be supplied in the CD provided by the user. Only new CDs will be accepted for data copying.
7. XRD will be in powder mode by default. On obtaining enough requests, the mode will be changed to high temperature and thin film. The priority will be in the order of high temperature and thin film. Powder and thin film mode will be functional at least once in a month even if there is one sample. The Lab in-charge will decide the mode of the equipment and change over from one mode to another.