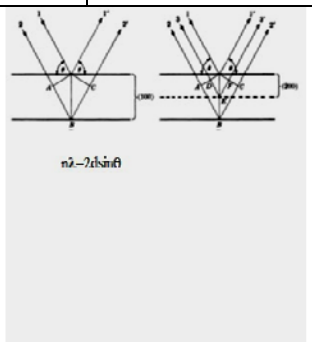
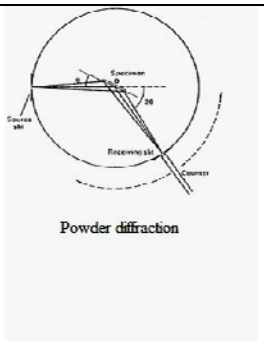
Name of Machine	X-Ray Diffraction (XRD)		
Make	PANalytical, Netherland	Model	X'PERT^3 Powder





Specification

The salient features/Specifications of the system are as follows:

1. X- ray diffraction facility at BSIP has state of the art facility which offers a wide range of materials characterization using X-rays for Bulk materials, nano materials, geological samples.
2. Grazing incidence diffraction for thin films.
3. Grazing incidence diffraction for powder samples.
4. X'pert Powder – Multifunctional XRD Cu LFF High Resolution X-ray tube (designed and manufactured by PANalytical)
5. Flat Sample Stage for mounting powder samples as well as MPSS (multipurpose sample stage)
6. **Detector**: PIXcel – World's most advanced linear detector developed by Medipix Technology in collaboration with CERN.
7. ICDD Database,PDF 4 Database available.

Working principle:

Powder method: polycrystalline sample, variable θ, fixed λ used in the determination of crystalline structure of materials in powder form.

Application

- Geological samples(bulk minerology and clay minerology)
- Nanomaterials
- Particle size determination
- Stress determination
- Polymer Characterization

User Instruction

1. For Bulk mineralogy sample weight should be ~5-6gm.
2. For XRD analysis of bulk sediment samples, -200 mesh powder sample will be accepted otherwise grinding charges will also applicable as per the rate list.
3. For clay mineral analysis oriented slides should be provided by the user otherwise clay separation charges will applicable as per the rate list.
4. In the rate list only, single scan charges are given. For clay mineral analysis scanning after glycolation and heat treatment additional charges will be applicable as per total number of scans.
5. Only scan result will be provided; Identification and Quantification will not be provided.
6. Minimum ~1-2 gm powder samples should be provided by the user for nanoparticles and other crystalline samples.

Contact Person

In-Charge	Dr.Anupam Sharma (0522-2742974); ***Email*** *anupam110367@gmial.com; anupam_sharma@bsip.res.in*
Staff:	Dr. Kamlesh Kumar: kamlesh_kumar@bsip.res.in (0522-2742969)
	Amrit Pal Singh Chaddha: apsingh.chaddha@bsip.res.in (0522-2742978)

charges without GST

S. No.	Instrument/ Analysis	Research Students	Govt. Organization (University/Research Institutes)	Private sector/ Industry	Remarks (if any) (Rates quoted = Rs.)
1.	**XRD Lab (regular scan)**	700.00/ scanning	800.00/scanning	1600.00/ scanning	Sample should be crushed and brought in powder form, else charges will apply
	Thin Films	1000.00	1200.00	2000.00	
	Micro diffraction	2500	3500.00	5000.00	

Guideline

1. The analytical data/spectra provided cannot be used as certificates in legal disputes.
2. Service charges (including GST)will be payable in advance (Draft/RTGS/NEFT) in favour of "The Director, BSIP, Lucknow". Payable at Lucknow
3. Separate samples should be sent for different analysis. Samples will not be analysed until payment is received.
4. In case of prepared samples, the user must specify the procedure that how the sample was prepared (complete methodology).
5. In all correspondence related to analysis, our reference number must be mentioned.
6. Individual Scientists and Research fellows should send their application and samples through their project head. Discount in analysis charges for research fellows of universities/institutes will be decided by the Director in consultation with respective lab.
7. Interpretation of data/spectra will NOT be done.
8. It is mandatory for user to acknowledge the facility in their research work and communicate the same tothe respective laboratory and the Director, BSIP, Lucknow for onward communication to DST, New Delhi.

For Lab visit, it is mandatory to take prior appointment from Director, BSIP before your visit.
The application should be send through department/Senior official of institution/Company.
No deviation will be allowed for the timings.

To be filled in by the user while submitting the form

Job No as ASE CF
Date of submission:

(Sample Information Form)

REQUISION FORM

BIRBAL SAHNI INSTITUTE OF PALAEOSCIECES, LUCKNOW

53, University Road, Lucknow, Ph. 0522-2740008, 2740399

(ASE Central Facility)

Website: www.bsip.res.in, E mail: gcms.bsip@gmail.com

Geochemistry Lab

(Information to be filled in by the user)

Name: _____

Address: _____

_____

Email and Mobile No.: _____

Category (In-house/sponsored/Govt. organization/private): _____

Number of samples: _____

Sl. No.	Sample ID	Type/Nature of Sample	Quantity	Year of collection	Lat./Long.	Remarks, if any
1						
2						
3						
4						
5						

To be filled in by the user while submitting the form

Job No as ASE CF
Date of submission:

SAMPLE REQUISION FORM

BIRBAL SAHNI INSTITUTE OF PALAEOSCIECES, LUCKNOW

53, University Road, Lucknow, Ph. 0522-2740008, 2740399
(ASE Central Facility)
Website: www.bsip.res.in, E mail: gcms.bsip@gmail.com
Geochemistry Lab

(Information to be filled in by the user)

Name: _____

Address: _____

_____

Email and Mobile No.: _____

Category (Inhouse/inhouse sponsored/Govt. organization/private): _____

Number of samples: _____

Nature of samples (with details): _____

Scientific Objective of this study: _____

_____

Additional information, if any: _____

_____

Location (Lat & Long):_____

Exposed Section/Trench/Core/Others: _____

(For office use only)

Lab Reference No.:

R.P.C.C./ Registrar : Kindly raise the bill for the above

Total Charges:

Taxes:

Grand Total: