
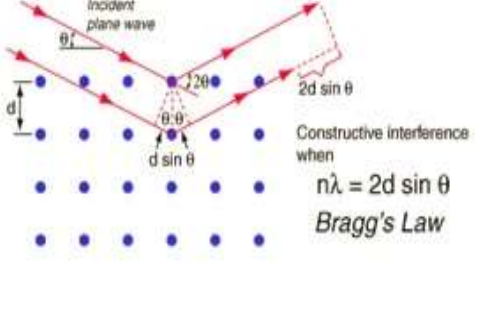
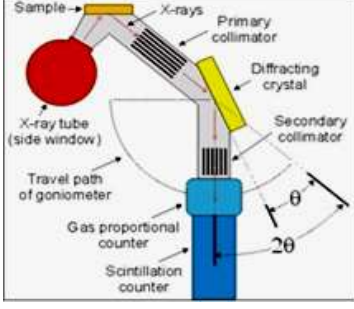


<b>Name of Machine</b>	<b>X-Ray Fluorescence (XRF)</b>				
<b>Make</b>	<b>PANalytical, Netherland</b>		<b>Model</b>	<b>Axios<sup>MAX</sup></b>	
	 <p style="text-align: center;">Constructive interference when <math>n\lambda = 2d \sin \theta</math> <b>Bragg's Law</b></p>				
<b>Specification</b>					
<p>The salient features/Specifications of the system are as follows:</p> <ol style="list-style-type: none"> <li>1. Wavelength dispersive (WD-XRF) Machine (power: - 3KW,60kV-160mA) is used for detecting the elements.</li> <li>2. It is a nondestructive analysis technique for the Major oxides and Trace elements present in the sample covering elements from Boron to Uranium.</li> <li>3. Analysis can be done on pressed powder pellets made from fine powder.</li> </ol>					
<b>Working principle:</b>					
<p>A wavelength dispersive detection system physically separates the X-Rays according to their wavelengths, the x-rays are directed to a crystal, which diffracts (according to Bragg's Law) the X-Rays in different directions according to their wavelengths (energies).</p>					
<b>Application</b>					
<ul style="list-style-type: none"> <li>• Quantification the elements in Hard rocks and sediment/Soil of geological past</li> <li>• Quantification of Metals &amp; alloys in synthetic material,</li> <li>• Geological samples,</li> <li>• Filter samples.</li> <li>• Environmental Applications</li> </ul>					
<b>User Instruction</b>					
<ol style="list-style-type: none"> <li>1. For Major oxides and trace elements, samples should be provided in powder (-200 mesh) form otherwise grinding charges will also applicable as per the rate list.</li> <li>2. Sample weight should not be less than 20gm for analysis.</li> <li>3. Data generated will be provided on CD (Compact Disc) or DVD (Digital Versatile Disc).</li> <li>4. Students/Research scholars will prepare pellets for analysis by their own.</li> </ol>					
<b>Contact Person</b>					
<b>In-Charge</b>	Dr. Anupam Sharma (0522-2742974); <b>Email</b> <a href="mailto:anupam110367@gmail.com">anupam110367@gmail.com</a> ; <a href="mailto:anupam_sharma@bsip.res.in">anupam_sharma@bsip.res.in</a>				
<b>Staff:</b>	Dr. Kamlesh Kumar: <a href="mailto:kamlesh_kumar@bsip.res.in">kamlesh_kumar@bsip.res.in</a> (0522-2742969) Amrit Pal Singh Chaddha: <a href="mailto:apsingh.chaddha@bsip.res.in">apsingh.chaddha@bsip.res.in</a> (0522-2742978)				
<b>charges</b>					
<b>S. No.</b>	<b>Instrument/Analysis</b>	<b>Research Student</b>	<b>Govt. Organization (University/Research Institutes)</b>	<b>Private sector/ Industry</b>	<b>Remarks (if any) (Rates quoted = Rs. )</b>

1.	<b>XRF Lab</b> <b>a. Major elements</b> (max. 10 elements in Geological samples) <b>b. Trace elements</b> (up to 5 elements and Rs. 150/- will be charged extra for each additional element)	500.00  500.00	800.00  750.00	1800.00  1500.00	<ul style="list-style-type: none"> <li>• Sample should be crushed and brought in powder form, else charges will apply. Only solid samples in powder form with particle size &lt;60µm.</li> <li>• Minimum quantity of 5gm</li> </ul>
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#### 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 to the 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 sent 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)

REQUISITION FORM

**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, LUCKNOW**

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

(ASE Central Facility)

Website: [www.bsip.res.in](http://www.bsip.res.in), E mail: [gcms.bsip@gmail.com](mailto: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 REQUISITION FORM  
**BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES, LUCKNOW**

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

(ASE Central Facility)

Website: [www.bsip.res.in](http://www.bsip.res.in), E mail: [gcms.bsip@gmail.com](mailto: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: