Name of Machine	**Isotope ratio mass spectrometer (IRMS) with peripheral**

Make Thermo Finnegan, Germany

Model

a. Isotope Ratio Mass Spectrometer (IRMS): MAT 253
b. **Peripheral parts**: Elemental analyzer- Flash 2000HT; Gas Bench II.

Specification

EI source, mass range m/z 1-150, Mass resolution 200 (C, N, O, S), Estimation of C, O, H, N and S isotopes and percentage.

Working principle:

A mass spectrometer generates multiples ions from the samples and then separates them according to their specific mass-to-charge ratio (m/z) and records the relative abundance of each ion type. Stable isotope facility at BSIP provides stable C, O, N, H and S isotopic ratio measurement of various natural and artificial substance using elemental analyser and gas bench interfaced to a continuous flow IRMS.

Application

In the field of oceanography, atmospheric sciences, biology, paleoclimatology, geology, environmental sciences, food and drug authentication, and forensic.

User Instruction

- Send samples using courier or registered post. Trackable courier dispatch or registered post is recommended.
- All samples must be accompanied with a copy of the Submission Form you have filled in and emailed to the lab (available for download above) to identify each individual sample, identify the material and also give the full name and contact address of the submitter, with telephone and fax numbers and email address.
- Provide details of any prior treatment of the sample, such as cleaning, drying, and treatment with solvents or preservatives.
- Contact the concerned authorities at the institute to enquire about the

minimum sample size requirements for each isotope.

- Please contact us to ensure your samples are in a suitable format for processing.
- Send samples in small, labeled vials. Unused portions of samples after analyses shall be returned at your cost provided informed well in advance.
- Indicate if any samples are likely to be toxic or corrosive.
- Reporting time may be longer if large batches of samples are submitted or if the nature of the material is such that special processing methods are required. We may be able to process urgent samples within several days at a priority rate, subject to current laboratory workloads.

Contact Person	
In-Charge	Dr.Anupam Sharma (0522-2742974); ***Email*** *anupam110367@gmial.com; anupam.sharma@bsip.res.in*
Staff:	Dr. Shailesh Agrawal ***(0522-2742969)***;
	Mr. Sandeep Kohri (0522-2742969)