

Isotope Hydrology Section

BARC, Mumbai

Facilities Available

(a) **Environmental Stable Isotope Laboratory**

Mass spectrometers (Model 602E VG Isogas, UK) for Deuterium, Oxygen-18, Carbon-13 measurement along with preparation systems. These mass spectrometers are being upgraded and a new mass spectrometer (Europa Geo 20-20) has been procured for measurement of above isotopes as well as Sulfur-34, Nitrogen-15 etc.

b) **Environmental Radioisotope Laboratory**

Liquid Scintillation Counters for environmental Tritium and Carbon-14 analysis.

Sample preparation systems

- (a) Electrolytic Enrichment and pre and post enrichment distillation set-up for tritium.
- (b) CO₂ preparation line, CO₂ absorption set-up and benzene synthesis line for Carbon-14.
- (c) Intrinsic Germanium Detector coupled with Multi Channel Analyser for environmental Cesium-137 analysis.

c) **Artificial Radiotracer Laboratory**

Production of Radiotracers, Measurement instruments - Field Ratemeter/Scaler with NaI (TI) scintillation probe.