HYDROLOGICAL INVESTIGATIONS DIVISION
NATIONAL INSTITUTE OF HYDROLOGY

LABORATORY FACILITIES

Measurement Capabilities

1. Dating of groundwater using Tritium Carbon-14
2. Estimation of sedimentation rates in water bodies using 210-Pb dating techniques
3. Dating of waters and sediments using ^{222}Rn, ^{226}Ra, & ^{238}U
4. Estimation of health hazard using ^{90}Sr etc.
5. Study of irrigation return flow and recharge to ground-water due to precipitation using artificial tritium
6. Discharge measurement of mountainous rivers using set-up artificial tritium as tracer
7. Seepage/leakage from water bodies
8. Study of soil moisture and density variation and movement in unsaturated zone and recharge to ground water
9. For the study of sedimentation rates in water bodies using ^{137}Cs radiometric techniques
10. Study of discharge measurement of mountainous rivers using γ-ray emitting tracers
11. Study of seepage / leakage from water bodies using γ- ray emitting tracer

Available Instruments

Major Equipment

1. Duel- Inlet Isotope Ration Mass Spectrometer
2. Continuous Flow Isotope Ration Mass Spectrometer
3. Ultra Low Level Liquid Scintillation Spectrometer
4. Normal Liquid Scintillation Spectrometer
5. Neutron moisture and Density probe
6. Multi-channel Gamma-ray spectrometer with HP-Ge & NaI(Tl) Detectors
7. Geology Rate meter with NaI(Tl) detector

Supporting facilities

1. Benzene synthesiser
2. CO2-absorbtion line
3. Tritium Enrichment system
4. Liquid Nitrogen Plant
5. Sediment corer
6. Lead separation (from sediment) facility
7. Sediment digestion facility
8. Pre-enrichment distillation (^{3}H)
9. Post-enrichment distillation (^{3}H
10. Soil moisture extraction set-up
11. Soil moisture determination setup