^{2}H OF WATER SAMPLES (H_2O) BY ISOTOPE RATIO MASS SPECTROMETRY

Sample Analysis:

Samples are injected into a Finnigan Mat, DeltaPlus IRMS system coupled with a Heraeus elemental analyzer (EA). Water samples are converted to hydrogen gas (H_2) via a chromium reduction tube in the EA System at 950°C. The produced H_2 gas is then transferred to the IRMS by a He carrier gas where the hydrogen isotopic ratios are measured. The instrument is equipped with a high precision autosampler, which allows for a consistent injection volume of 0.5µL of sample water. Three to four calibrated internal standards are included at the beginning and end of every run, as well as after every 10 samples. The employed internal standards have been calibrated to VSMOW, GISP, and SLAP. The results are evaluated and corrected against standards that bracket the samples, and then reported against the international reference material.

The analytical precision for analysis is ± 1.0‰.

695 Rupert St. - Unit B - Waterloo - Ontario - N2V 1Z5 - Canada
Tel: 519-886-5555 - Fax: 519-886-5575 - Email: info@it2isotopes.com - www.it2isotopes.com