Tritium and Water Dating Laboratory

Price List

Valid from 1 July 2026 until 30 June 2027

Version: 15 September 2026

Earth Sciences New Zealand Te Whatu Ao

Parameter	Methods used & detection limit		Price per sample (NZD)	Sample size	Turnaround time
Tritium	Radiometric detection. Electrolytic enrichment + low level scintillation detectors. TR = 0.02–0.03, Bq/kg = 0.004–0.005		$940	1 Litre	3–4 months
SF6 (Includes Halon–1301 analysis)	Gas Chromatography with Electron Capture Detection. ***Must use bottles supplied by the lab.***		$465	1 Litre	2–3 months
CFCs (Includes duplicate measurements of CFC–11, CFC–12 and CFC–113)	Gas Chromatography with Electron Capture Detection (Ar & N_2 are also determined). ***Must use bottles supplied by the lab.***		$465	150ml	2–5 months
Assessment of groundwater security (Includes Tritium, CFCs, SF6 and interpretation) *Only samples from New Zealand*	***Must use bottles supplied by the lab.***		$3,500		6 months
Radon	Radiometric detection. Low level scintillation detectors. Bq/L = 0.1		$120	25ml	1–2 weeks
$\delta^{18}O$	IRMS	Submission of 1–5 samples Submission of 6+ samples	$106 $97	10ml	4–6 weeks
$\delta^{2}H$	IRMS	Submission of 1–5 samples Submission of 6+ samples	$106 $97	10ml	4–6 weeks
$\delta^{18}O$ & $\delta^{2}H$	IRMS	Submission of 1–5 samples Submission of 6+ samples	$177 $161	10ml	4–6 weeks
$\delta^{15}N$ & $\delta^{18}O$ in Nitrate (NO_3^-) dissolved in water (N concentration required)	IRMS	Submission of 1–5 samples Submission of 6+ samples	$348 $316	100ml	6–8 weeks
$\delta^{15}N$ in Ammonia (N concentration required)	IRMS	Submission of 1–5 samples Submission of 6+ samples	$348 $316	100ml	6–8 weeks
Radiocarbon (14C)	AMS	Submission of 1–5 samples Submission of 6–10 samples Submission of 11+ samples	$980 $930 $845	500ml	8–12 weeks
Sulfur–35 (^{35}S)	*Coming soon*				
Additional fees (per sample)					
Extra distillation of samples for Tritium analysis. Waters which require excessive work for purification			$98		
Hydrogen sulphide removal (per sample) for Radiocarbon analysis			$260		
Multiple extractions needed (per additional extraction) for Radiocarbon analysis			$260		

Prices can vary depending on the sample size/number and interpretation required. We would be happy to work with you to build a project plan and pricing structure to suit your requirements. The laboratory analysis prices quoted above will provide you with the concentration of each tracer in the sample. Costs for interpretation and reporting are additional, please contact us. Prices are exclusive of import inspection fees, local taxes, withholding taxes and New Zealand GST that may be applicable. All prices are quoted in NZ dollars and may be reviewed at any time.

Interpretation of groundwater ages

Most groundwaters are mixtures of water of different ages because of the nature of flow in porous media. The age distribution depends on the hydrogeologic attributes of the aquifer concerned, as well as characteristics of the sampling point such as bore depth and screen length. Well-defined flow models, which describe the distribution of ages of water from different flow lines contributing to a groundwater sample, are used to calculate the mean age and mixing parameter.

TRITIUM AND WATER DATING LABORATORY
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