

# Iso-Analytical Limited

## *Report of Analysis*

### IA-R025 – Barium Sulphate

This laboratory standard is intended to provide a sample of known isotope composition with  $^{34}\text{S}/^{32}\text{S}$  isotope ratios stated in parts per thousand difference (‰) from V-CDT (Vienna - Canyon Diablo Troilite) isotope ratio standards. This laboratory standard is not certified, but is provided to allow routine checking of the overall quality of measurements performed by continuous-flow isotope ratio mass spectrometry, and may be used as part of a quality control program. It is not intended for use as a substitute for calibration materials or inter-comparison materials distributed by NIST or IAEA.

#### Analysis

The  $^{34}\text{S}/^{32}\text{S}$  isotope ratio of the laboratory standard was measured by elemental analyser continuous-flow isotope ratio mass spectrometry using NBS-127 (Barium Sulphate) as the calibration material. The  $^{34}\text{S}/^{32}\text{S}$  isotope ratio in the laboratory standard was measured six times on three separate occasions.

#### Isotope Abundance

The laboratory standard IA-R025 is compared to V-CDT for the  $^{34}\text{S}/^{32}\text{S}$  isotope ratio. The isotope composition of the laboratory standard in ‰ relative to V-CDT:

Laboratory Standard	$\delta^{34}\text{S}_{\text{V-CDT}}$ (‰) $\delta_m \pm \sigma_1$
IA-R025	+8.53 ± 0.16

Note:  $\delta_m = \sum_{i=1}^n \delta_i/n$  ;  $\sigma_1 = \sqrt{\sum_{i=1}^n (\delta_m - \delta_i)^2/(n - 1)}$  ; n = 18

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