

# Proficiency Testing

LGC

## Forensics

ISO/IEC 17043

### FIRMS

#### Forensic Isotope Ratio Mass Spectrometry

Isotope Ratio Mass Spectrometry (IRMS) is a specialised technique that precisely measures small differences in the abundances of isotopes such as  $2\text{H}/1\text{H}$ ,  $13\text{C}/12\text{C}$ ,  $15\text{N}/14\text{N}$  and  $18\text{O}/16\text{O}$ . Subtle variations to the 'natural' abundance of these isotopes may be introduced during biological, chemical and physical processes.

These changes enable the differentiation of materials that otherwise may not be separated such that IRMS is used in many fields, such as archeology, medicine, geology, food authenticity and forensics.

Participation in the LGC FIRMS scheme will help laboratories demonstrate competence in this analytical technique.

The scheme is operated by LGC Proficiency Testing and is supported by the FIRMS Network which provides input for the choice of test materials and scheme performance.



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Test Material\*

Analyte\*

**Range of products  
in sealed amber  
vials**

Variations in isotope ratios.

\* The full range and availability of test materials and analytes is determined on an annual basis and may be added or removed. For accredited and non-accredited status please see current application form/scheme description.

LGC is the accredited provider of the PT scheme.



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