## Elemental Microanalysis Ltd

# Certificate of Analysis (Elemental Composition)

Protein (Casein) Standard OAS Cat no. B2154 – Certificate no.354736

#### General

This Organic Analytical Standard (OAS) consists of a homogenous batch of Protein (Casein) standard for use as a routine working microanalytical standard for the determination of Nitrogen.

#### **Certified Values and Uncertainty**

The uncertainty in the certified value is expressed as expanded uncertainty, U, at 95% confidence and is calculated in accordance with ISO/IEC17025 according to GUM (Guidelines to Uncertainty in Measurement). Confidence limits include those due to sampling variation, weighing, calibration and measurement errors. The certified values are based upon the results of 24 to 29 determinations.

The certified value for Nitrogen were determined by elemental analyser calibrated to Cystine 143d from National Institute of Standards and Technology (NIST), Maryland, USA.

Element	Certified value	Uncertainty
	(% w/w)	(+/- %)
Nitrogen	13.32	0.40

#### **Expiration of Certification**

The certification of this OAS is valid until 15 June 2025 within the measurement uncertainties specified.

#### Storage and use

This OAS should be stored between 20°C to 25°C and should be kept tightly sealed away from light and moisture. It is non-hygroscopic under normal conditions and can be used without preliminary drying.

### **Certification Information**

The technical aspects involved in the preparation, certification and issuance of this (In)Organic Analytical Standard (IAS/OAS) were carried out at Elemental Microanalysis Ltd, Okehampton, Devon EX20 1UB UK, Tel +44 1837 54446, Fax +44 1837 54544, Email <a href="mailto:info@microanalysis.co.uk">info@microanalysis.co.uk</a>.

For and on behalf of Elemental Microanalysis Ltd

> Elemental Microanalysis

Jon Davies Technical Director