

Certificate of Analysis

(Elemental Composition)

Low Organic Content Soil Standard OAS
Cat No. B2153 – Certificate No. 324704

General

This Organic Analytical Standard (OAS) consists of a homogenous batch of Low Organic Content Soil standard for use as a routine working microanalytical standard for the determination of Carbon, Nitrogen and Sulphur.

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 25-30 determinations.

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

<i>Element</i>	<i>Certified value</i> (% w/w)	<i>Uncertainty</i> (+/- %)
Carbon	1.86	0.14
Nitrogen	0.122	0.018
Sulphur	0.012	0.003

Expiration of Certification

The certification of this OAS is valid until 13-Feb-2022 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 info@microanalysis.co.uk.

For and on behalf of
Elemental Microanalysis Ltd

Jon Davies
Technical Director



Certificate of Analysis (Isotopic Composition)

Low Organic Soil Standard OAS
Cat No. B2153 – Certificate No. 324704

General

This Organic Analytical Standard (OAS) consists of a homogenous batch of Low Organic Content Soil standard for use as a routine working microanalytical standard for the determination of the Carbon and Nitrogen isotopes ^{13}C , ^{15}N

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 10 determinations.

The certified value for Carbon was determined by EA-IRMS traceable to IAEA-CH-6 and IAEA-CH-7 (IAEA, Vienna).

The certified value for Nitrogen was determined by EA-IRMS traceable to IAEA-N-1 (IAEA, Vienna).

<i>Isotope</i>	<i>Certified value (‰)</i>	<i>Uncertainty (+/- ‰)</i>
$\delta^{13}\text{C}_{\text{V-PDB}}$	-22.88	0.40
$\delta^{15}\text{N}_{\text{AIR}}$	+5.78	0.10

Expiration of Certification

The certification of this OAS is valid until 13th Feb 2022 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 enquires@microanalysis.co.uk

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Jon Davies
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