Elemental Microanalysis Ltd

Certificate of Analysis

Coal CHNS Standard
Cat. No B2323 – Certificate no. 780713

General

This Organic Analytical Standard (OAS) consists of a homogenous batch of coal for use as a routine working micro-analytical standard for the determination of Carbon, Hydrogen, Nitrogen and Sulphur

Certified Values and Uncertainty

The uncertainty in the certified value is expressed as expanded uncertainty (2σ) with a 95% confidence interval (k=2). Confidence limits include those due to sampling variation, weighing, calibration, and measurement errors.

The certified values are based upon the results of an Inter-laboratory analysis programme (ILAP).

The data for oxygen reported and enclosed by a parentheses ( ) is NOT certified and given for information purposes only. The value given is a calculated value ("oxygen by difference") in accordance with ASTM D3176.

Elemental Composition – Dry Weight Basis*

Element	*Certified value (% w/w)*	*Standard deviation (2σ) (+/- %)*
Carbon	**60.98**	**0.85**
Hydrogen	**4.16**	**0.43**
Nitrogen	**1.09**	**0.08**
Sulphur	**3.61**	**0.06**
(Oxygen	**6.47**	**----)**

Expiration of Certification This CRM is valid for **two** years from date of opening.

Please record the date of opening / expiry HERE: _____

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.

*This material is hygroscopic should be dried to the following protocol:
The sample to be analysed should be oven dried for a minimum of 70 minutes at 107+/- 3 deg C until a steady mass is achieved.
Place in a dessicator and allow to cool to ambient temperature

For and on behalf of
Elemental Microanalysis Ltd

Jon Davies
Technical Manager