



# Certificate of Analysis

**AR1705, Lot# 240509**

**Proximate Coal CRM**

AR1705, Lot# 240509 - Certified Values (Dried Basis)						
	Method	Mean	St Dev	Expanded Uncertainty	n	k
<b>% Sulfur</b>	ASTM D4239-18	1.44	0.03	0.06	30	2.0

**Primary (NMI)/GUIDE 34/ISO 17034 Reference Standards Employed:**

	Primary Reference Standards
<b>NIST</b>	2692c, 1632d, 2683c
<b>NCS</b>	FC28010e
<b>AR</b>	AR1706-706717

AR1705 is a Certified Reference Material (CRM) traceable to the above-mentioned reference standards. All reference materials should be verified as fit for purpose prior to use. Analytical values are accredited under Alpha Resources, LLC ISO/IEC 17025 and ISO 17034 accreditation issued by ANSI National Accreditation Board (ANAB). Please refer to certificates and scopes of accreditation AT-1200 and AR-1920. This material is intended to be dried or corrected for moisture as per the test methods used. Each bottle contains 50 g of fine coal powder (-60 mesh). Typical sample size for analytical testing is dependent upon the test method and instrumentation used.

The intended use of this Proximate Coal CRM is for the verification and calibration of sulfur by resistance furnace combustion analyzers with infrared detection in accordance with the above-listed test methods. The mean analytical values were derived by separate data sets with traceability to the above-mentioned reference standards. Metrological traceability is to the SI derived unit of mass fraction expressed as percent. The precision values represent the estimated mean value and uncertainty derived from the data sets utilizing ANOVA, ISO Guide 35, and the Guide to Uncertainty Measurement. Refer to the test method for additional information related to measurement uncertainty.

While unable to determine a definite shelf life, this reference material should be reviewed 20 years from the date of certification. Once packaging is opened this certificate is valid for two years. Keep sealed tight and store under normal laboratory conditions. This certificate cannot be reproduced except in full. Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages. Produced in accordance with ISO 17034.

Certification Date: May 31, 2024

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