ALPHA RESOURCES® Value Beyond Measure

AR1703 Coal Certified Reference Material

AR1703, Lot# 240530 – Certified Values (Dried Basis)					
Element	**Value**	**(+/-)**	**Method & Detection**	**n**	**k**
% Sulfur	0.83	0.04	Combustion/IR	42	2.02

Note: (+/-) refers to an expanded uncertainty derived from the uncertainty multiplied by a coverage factor.

Method of Analysis: ASTM D4239-18, ARI-LAB-616

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

NIST	2692c, 2682c
NCS	FC28004b
AR	AR1704-704413, AR1723-704607, AR2778-778418

AR1703 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, however, 0.3 to 0.5 g is recommended.

The intended use of this 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.

Once packaging is opened certification of this product 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: June 18, 2024

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ANAB
ANSI National Accreditation Board
ACCREDITED
ISO 17034
REFERENCE MATERIAL PRODUCER