

Alpha Resources, Inc. Certificate Of Analysis

AR-1721

COAL STANDARD

LOT # 721409 LID # 773409
DRIED BASIS VALUE

MEAN WEIGHT % SULFUR	=	0.56
STANDARD DEVIATION	=	0.02
MEAN WEIGHT % ASH	=	7.33
STANDARD DEVIATION	=	0.16
MEAN WEIGHT % VOL. MATTER	=	42.96
STANDARD DEVIATION	=	0.91
BTU	=	11195
STANDARD DEVIATION	=	45
FIXED CARBON (calculated)	=	49.71

Methods Employed:

SULFUR	ASTM	D 4239
ASH	ASTM	D 3174, D5142
VOL. MATTER	ASTM	D 3175, D5142
BTU	ASTM	D 5865

Notes:

The material used in production of this standard was sampled in accordance with ARI 031. The precision values represent the standard deviation ($k=1$) obtained through analytical testing, and are given for reference only. Normal ASTM procedures should be employed when using this standard, this includes using the *reproducibility* and *repeatability* factors of the method for establishing analytical uncertainty. When necessary, professional judgment is applied toward consideration of data and statistical information. The statistical analysis and the overall direction and coordination of the analytical measurements leading to certification were performed by K.E. Dyer at Alpha Resources.

The samples for round robin testing were selected in accordance with ARI 014. The above values relate only to the material used to produce this standard. The analytical samples were dried under a nitrogen atmosphere for a minimum of 70 minutes at $107^{\circ} \text{C} \pm 3^{\circ} \text{C}$ until a steady mass is achieved

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. This is a Certified Reference Material (CRM). For good laboratory practice it is recommended that all standards be verified prior to use.

EXPIRATION DATE
THIS CRM IS VALID FOR TWO YEARS FROM THE DATE OF OPENING

CERTIFIED May 14, 2009

