

# Alpha Resources, Inc. Certificate Of Analysis

AR-1720

COAL STANDARD

LOT # 720606      LID # 720606

DRIED BASIS VALUE

MEAN WEIGHT % SULFUR	=	0.27
STANDARD DEVIATION	=	0.03
MEAN WEIGHT % ASH	=	5.68
STANDARD DEVIATION	=	0.14
MEAN WEIGHT % VOL. MATTER	=	44.21
STANDARD DEVIATION	=	0.62
BTU	=	11,469
STANDARD DEVIATION	=	95
FIXED CARBON	=	50.12

Methods Employed:

SULFUR	ASTM	D 4239 METHOD C
ASH	ASTM	D 3174
VOL. MATTER	ASTM	D 3175
BTU	ASTM	D 3286

Notes:

The material used in production of this standard was sampled in accordance with ARI 031. The above values relate only to the material used to produce this standard.

The overall direction and coordination of the analytical measurements leading to certification was performed by J.R. Shingledecker at Alpha Resources.

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 PURCHASE WHICH**  
**APPEARS ON THE BOTTLE**

*J.R. Shingledecker*