

# Alpha Resources, Inc. Certificate Of Analysis

AR-2045

## CRUDE OIL STANDARD

LOT # 045708

LID # 045708

WEIGHT PERCENT SULFUR = 0.600  
STANDARD DEVIATION = 0.039

The certified mean values were statistically derived from the values reported to Alpha Resources through Round Robin.

Methods:  
ASTM D 2622  
ASTM D 4294  
ASTM D 5453-93

Traced to N.I.S.T. SRM 1621e

Before use, the contents of the bottle should be mixed through vigorous shaking. The contents should not be exposed to air for a lengthy period of time.

Normal ASTM procedures should be employed when using this standard. This includes using the *reproducibility* and *repeatability* factors. Use the reproducibility factor when establishing the first set of data, and then establish an internal repeatability factor as your guideline.

The statistical analysis of the certification was performed by J.R. Shingledecker at Alpha Resources.

The overall direction and coordination of the analytical measurements leading to certification were 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), and is traceable to the above-mentioned standards. 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**

*J.R. Shingledecker*