

# Alpha Resources, Inc. Certificate Of Analysis

AR-3181

## HIGH VISCOSITY RESIDUAL OIL STANDARD

LOT # 893405

LID # 893405

WEIGHT PERCENT SULFUR = 0.292  
STANDARD DEVIATION = 0.011

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

Methods:  
ASTM D 2622  
ASTM D 5453

This Certified Reference Material was traced to N.I.S.T. SRM 1624c

### Notes:

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.

This is a Certified Reference Material (CRM), and is traceable to the above-mentioned standard. For good laboratory practice it is recommended that all standards be verified prior to use.

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.

The test results were validated on May 21, 2014 against NIST 2717 and 1622d. These test results are accredited under the Alpha Resources Inc. laboratory's ISO/IEC 17025 accreditation issued by ANSI-ASQ National Accreditation Board/ACLASS. Refer to certificate and scope of accreditation AC-1200.

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

*J.R. Shingledecker*