

National Bureau of Standards

Certificate of Analysis

Standard Reference Material 1621a

Sulfur in Residual Fuel Oil

Sulfur Content. 0.94 ± 0.01 weight percent

This Standard Reference Material is intended for use as an analytical standard in the determination of sulfur in residual fuel oil. It is a commercially available fuel oil which has the following properties that are supplied for information only: density at 20 °C, 0.928 g-cm^{-3} ; flash point, 45 °C (Pensky-Martens); pour point, 6 °C; and viscosity (kinematic) at 40 °C, 164.0 cSt.

Sulfur was determined by ion-chromatography after combustion in an oxygen bomb, and by using an oxygen bomb combustion coupled with a barium sulfate precipitation. No significant difference was observed between the two methods. The certified value is based on 22 determinations utilizing the two independent methods.

The estimated uncertainty represents a 95 percent confidence interval and includes the combined effects of method imprecision and material variability.

The residual fuel oil was supplied by the Exxon Research and Engineering Company of Linden, New Jersey. Analyses for certification were performed by W. F. Koch and E. R. Deardorff of the Inorganic Analytical Research Division.

The overall direction and coordination of the technical measurements leading to certification were performed under the chairmanship of E. L. Garner, Chief of the Inorganic Analytical Research Division.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by T. E. Gills.

Washington, D.C. 20234
February 1, 1980

George A. Uriano, Chief
Office of Standard Reference Materials