XRF Petroleum Standard

Sulfur (S)

Product #: VHG-SCRD-1.25P-50

Matrix: Crude Oil   Lot #: 710771087

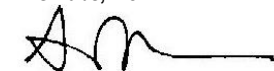| Element	Concentration and Uncertainty		
S	Certified W/W	**12,500 µg/g** **(1.25 wt. %)**	+/- 3% relative

This solution is intended for use as a calibration or reference standard for sulfur in various petroleum products with x-ray fluorescence spectrometry (XRF). It was manufactured and certified in accordance with ASTM D-2622 or D-4294 methods.

Certification: This standard was prepared from di-n-butyl sulfide (NDBS) to a nominal concentration of 12,500µg/g utilizing gravimetric methods. The certified concentration is based upon the actual assayed concentration of the raw material and all gravimetric procedures used in the preparation of this certified standard. The uncertainty associated with each certified concentration is +/-3% relative, which is the sum of the estimated errors due to the assay and purity of the raw material, the gravimetric preparation of the solution and transpiration through the container wall. Secondary verification of the certified concentration was done using x-ray fluorescence spectrometry (XRF) and these data are traceable to NIST SRM 2721.

Tools: The balance used to weigh materials used in the preparation of this standard is accurate to ± 0.0001g and is calibrated regularly using mass standards, which are traceable to NIST.

Recommendations: VHG guarantees the accuracy of this solution for **24 months** from the certification date shown below, provided it is kept tightly capped in its original container and stored under normal laboratory conditions.   Do not freeze, heat, or expose to direct sunlight. Minimize exposure to moisture or high humidity. We recommend that the solution is thoroughly mixed by repeated shaking or swirling of the bottle immediately prior to use. To achieve the highest accuracy the analyst should: (1) use only pre-cleaned containers and transfer-ware, (2) never pour used product back into the original container.

VHG Labs, Inc.

_____
Q.A. Manager

See Exp. on Container
Certification Date

VHG Labs, Inc. waives all responsibility for any damages resulting from the usage and/or implementation of the products/data described herein.

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ISO 9001
ISO Guide 34
ISO/IEC 17025
ISO/IEC 17043