



REPORT OF ANALYSIS

VHG Labs Quality Product

Diesel Fuel Dilution RM

5% (w/w) Devolatilized Diesel Fuel

Product #: VHG-DSLFD-5PW-100

Matrix: 75 cSt Hydrocarbon Oil

Lot #: 1004190-1

| Analyte | Certified Concentration & Uncertainty | |
|---------------------------------------|---------------------------------------|---------------|
| Devolatilized High Cetane Diesel Fuel | 5.0% (w/w) | ± 1% relative |
| | 5.2% (v/v) | ± 1% relative |

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for fuel contamination determination in in-service oils by gas chromatography (GC), fuel dilution meter (fuel sniffer), or flash point analyzer. This solution contains high cetane diesel fuel in 75 cSt hydrocarbon oil. It is designed for use in accordance with ASTM Method D7593 or D3524, the standard test methods for determination of fuel dilution for in-service engine oils by gas chromatography.

Certification & Traceability: VHG Labs RMs are manufactured, processed, and/or certified under a quality management system that is registered/accredited to **ISO 9001**, **ISO Guide 34**, and **ISO/IEC 17025**. This RM was prepared gravimetrically to contain 5% (w/w) of devolatilized (10% light volatiles removed) high cetane diesel fuel in 75 cSt hydrocarbon oil. The balances used in the preparation of VHG RMs are calibrated regularly with traceability to NIST, using a calibration provider that is accredited to ISO/IEC 17025 by a mutually recognized accreditation body. All volumetric dilutions are performed in Class A calibrated glassware. The certified concentration is based upon the gravimetric preparation of the RM. The uncertainty associated with the certified concentration is ± 1% relative, which is the sum of the estimated errors due to the assay of the raw material, the gravimetric preparation of the RM, and transpiration through the container wall. Secondary verification of the certified concentration was performed using gas chromatography (GC-FID) in accordance with ASTM D7593.

Instructions for Use: We recommend that the solution be 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 transferware, (2) not pipette directly from the RM's original container, and (3) never pour used product back into the original container. The solution should be kept tightly capped and stored under normal laboratory conditions. Do not freeze, heat, or immerse the bottle or its contents, and avoid exposure to direct sunlight. Minimize exposure to moisture or high humidity.

Period of Validity: LGC ensures the accuracy of this solution for **12 months** from the certification date shown below, provided the instructions for use are followed. During the period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution.

Chuck Goudreau, Certifying Officer

See Exp. date on container
Certification Date



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