



REPORT OF ANALYSIS

VHG Labs Quality Product

Water Analysis RM

Total Organic Carbon Standard

Product #: VHG-TOC1K-500

Matrix: H₂O

Lot #: 1001009-7

Analyte	Certified Concentration
Total Organic Carbon (TOC)	999.9 mg/L

Intended Use: This solution is intended for use as a reference material (RM) or calibration standard for the analysis of total organic carbon (TOC).

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 to the concentration shown above by gravimetric methods using high purity potassium hydrogen phthalate (KHC₈H₄O₄) dissolved and diluted with filtered (0.22µm), 18 M-ohm deionized water. 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. Secondary verification of the certified concentration was performed using a TOC analyzer. The uncertainty associated with the certified concentration is ± 0.5% 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. This represents the expanded uncertainty at the 95% confidence level using a coverage factor of k=2.

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, (3) never pour used product back into the original container, (4) make dilutions using calibrated balances or certified class A volumetric flasks and pipettes, and (5) dilute with the same matrix as the original RM or other chemically suitable matrix. 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.

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.