

QC Check Sample (WS – Water Supply)

Product: WS Residual Chlorine

Product Number: QWPRCL-2

Lot Number: 710262142B

Revised: 26 June 2020

This product is intended for use as a quality control check for methods related to the parameters certified below. This standard has been prepared as a concentrate and must be diluted prior to analysis. This concentrate is not preserved. Since the diluted standard is not stable, it must be analyzed **immediately** after the concentrate is diluted.

Instructions for Use: Precautions should be taken to ensure that the water used to dilute the Residual Chlorine concentrate is both chlorine and organic free. Add 100-200mL of organic/chlorine-free water to a clean 1000mL class A volumetric flask. Carefully snap the top off of the Residual Chlorine ampoule. Using a clean, dry, class A pipet, volumetrically pipet 1.0mL of the concentrate into the 1000mL volumetric flask. Dilute the flask to final volume with organic/chlorine-free water. Cap the flask and mix well. **Immediately** analyze the diluted sample by your normal procedures. Report your results as mg/L for the diluted sample.

Certification: The certified value is based upon the gravimetric preparation of the solution. The uncertainty associated with each certified value is based upon the preparation and analytical verification of the product, and is the total propagated uncertainty at the 95% confidence level. The uncertainty applies to the product as supplied and does not take into account any dilutions and/or preparations the end-user may perform.

The QC Acceptance Limits reflect any inherent biases in the method and approximate a 95% confidence interval of the performance that should be achieved by experienced laboratories that are using accepted environmental methods. The Performance Acceptance Limits are calculated based on the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Mean value, percent recovery, and number of data points (n) are based upon data generated from an inter-laboratory (round robin) study. Whenever available, these data are traceable to the specified NIST SRM.

Parameter	Units	Certified Value	Uncertainty (% relative)	QC Acceptance Limits	Performance Acceptance Limits	Mean	Round Robin Data Recovery	n	NIST SRM #	NIST Traceability Recovery
Total Residual Chlorine	mg/L	1.80	7.43%	1.44-2.05	1.29-2.22	1.78	98.9%	180	N/A	N/A

Recommendations: VHG guarantees the accuracy of this solution for **12 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 or expose to direct sunlight. Minimize exposure to moisture or high humidity.

VHG Labs, Inc.



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.