

# Certificate of Analysis

**Water, ACS Reagent Grade, ASTM Type I, ASTM Type II**  
**Packaged in glass containers**

**Lot Number:** 4203D42

**Product Number:** 9151

**Date Packaged:** MAR 16, 2022

**Expiration Date:** AUG 2023

Packaged in glass for applications requiring extremely low levels of organics. This product is manufactured by a continuous process that has been validated to produce high purity Water meeting, as a minimum, the specifications below at the time of packaging. Although this water is not distilled, it has a chemical purity equal to or better than double distilled water. The analysis results are from the most recent scheduled monitoring. This product also meets ASTM Type III and Type IV specifications.

## Contains

H<sub>2</sub>O CAS No. 7732-18-5 MW 18.02

Test	Specification	Result
Appearance	Colorless liquid	Passed
Chloride (Cl)	max 1 ppb	0.11 ppb
Conductivity at 25°C	max 0.056	0.055 µS/cm
Heavy Metals (as Pb)	max 0.01 ppm	< 0.01 ppm
Nitrate (NO <sub>3</sub> )	max 0.4 ppm	< 0.00002 ppm
Organic Carbon (TOC)	max 50 ppb	28 ppb
Oxidizable Substances (Permanganate Retention)	To Pass Test	Passed
Phosphate (PO <sub>4</sub> )	max 1.0 ppm	< 0.00002 ppm
Silicate (as SiO <sub>2</sub> )	max 3 ppb	< 1 ppb
Sodium (Na)	max 1 ppb	0.07 ppb
Sulfate (SO <sub>4</sub> )	max 1.0 ppm	< 0.00005 ppm

Specification	Reference
ASTM Type II Water	EPA (SW-846) (7197)
ASTM Type II Water	EPA (SW-846) (7195)
Deionized, distilled water (ASTM Type II)	EPA (200.7)
Reagent Water	ACS (N/A)
Reagent Water	EPA (SW-846) (N/A)
Reagent Water, Type I	ASTM (D 1193)
Reagent Water, Type II	ASTM (D 1193)
Reagent Water, Type III	ASTM (D 1193)
Reagent Water, Type IV	ASTM (D 1193)

This water is specially purified by conventional water softening, prefiltration, activated carbon organic adsorption, reverse osmosis, mixed bed triple deionization, ultraviolet light irradiation, and 0.2 micron membrane filtration. Consult RICCA CHEMICAL COMPANY Technical Reference Document TRD02 (for lot numbers starting with 1) or TRD03 (for lot numbers starting with 2) for details of the water purification process.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
9151-1	4 L amber glass	18 months

**Recommended Storage:** 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/16/2022)

Production Manager

This Certificate of Analysis is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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