



CLIENT & SAMPLE INFORMATION

Client

Quantum-Labz

Certified Date

08/27/2026

Lot / Batch

RSC-010-QL-01

Product Name

BAC Water (Standard)

Preservative

Benzyl Alcohol 0.9%

Container

Glass Vial

This Certificate of Analysis certifies that the bacteriostatic water sample listed herein was tested for preservative content, sterility, and physicochemical properties in accordance with applicable USP/EP methods.

BENZYL ALCOHOL ASSAY (GC)

Parameter	Specification	Result	Status
Appearance (Color)	Colorless	Colorless	PASS
Appearance (Form)	Liquid	Liquid	PASS
Benzyl Alcohol Content	0.9% +/- 10%	0.90%	PASS
Purity (GC)	≥ 99.5%	99.9%	PASS
GC Impurity 1	≤ 0.50%	< 0.01%	PASS
GC Impurity 2	≤ 0.50%	ND	PASS
Refractive Index (20C)	1.540 - 1.542	1.541	PASS

Reference: CAS 100-51-6 | C_7H_8O | MW 108.14 g/mol | Method: Gas Chromatography per USP <621>

Parameter	Specification	Result	Status
Additional Screens			
pH Analysis	4.5 - 7.0	5.6	PASS
Endotoxin	≤ 0.5 EU/mL	< 0.10 EU/mL	PASS
Sterility / Microbial	No Growth	No Growth	PASS
Overall Determination			PASS

TESTING METHODOLOGY SUMMARY

Benzyl Alcohol Assay (GC)

The preservative content was quantified using Gas Chromatography per USP <621>. This method separates and measures benzyl alcohol concentration to verify the 0.9% w/v specification. Sample preparation involves dilution in appropriate solvent, followed by injection into the GC system equipped with a flame ionization detector (FID). Peak area is compared against certified reference standards to determine concentration. Impurity profiles are simultaneously assessed to ensure product purity meets pharmacopeial requirements.



ADDITIONAL QUALITY SCREENS

PH ANALYSIS

Method	USP <791>
Specification	4.5 - 7.0
Result	5.6
Status	PASS

ENDOTOXIN SCREEN

Method	LAL (USP <85>)
Limit	≤ 0.5 EU/mL
Result	< 0.10 EU/mL
Status	PASS

STERILITY / MICROBIAL SCREEN

Method	Rapid Sterility
Specification	No Growth
Incubation	2 days
Result	No Growth
Fungi	Not Detected
Status	PASS

