

Certificate of Analysis

Product: Benzalkonium Chloride 50% Solution Item Number: BZKNF50 Grade: USP/NF Lot Number: 5000701/1.1 Manufacture Date: 11/29/2023 Expiration Date: 11/28/2026 Country of Origin: United States

Tested Property	Specification		Analysis
Assay, Total alkyl ammonium chloride	47.5 -52.5 wt%		49.8
Description	Clear liquid to slightly yellow		Clear Liquid
Odor	Slightly aromatic odor		Aromatic odor
Identification A	A white precipitate is formed		Passes
Identification B (Chloride)	To pass the test		Passes
Identification C	Orange-Red color is produced		Passes
Identification D	Retention time corresponds to standard		Passes
Alkyl Chain C12	≥40.0 %		69.5
Alkyl Chain C14	≥20.0 %		25.0
Alkyl Chain C12 + C14	≥70.0 %		94.5
Alkyl Chain C16	As reported, %		5.4
Limit of Amine and Amine Salts	No Perceptible odor		Passes
Limit of Amine and Amine Salts	\leq 5.0ml, corresponding to \leq 0.1mmol/g		3.1ml
Alcohol Content if added	None Added		None detected
Benzyl Alcohol	≤0.5 %		0.001
Benzaldehyde	≤0.15 %	None Detected	l @ 0.0001% limit
Chloromethyl Benzene	≤0.05 %	None Detected	l @ 0.0001% limit
Acidity or Alkalinity	≤0.1ml 0.1N HCL or 0.1N NaOH		0.02ml 0.1N HCl
Microbial Enumeration			
	USP61 Aerobic Plate count <10cfu/g		Passes

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USP61 Yeast & Mold <10cfu/g	Passes
USP62 canidida albicans	None Detected
USP62 Aspergilus brasiliensis	None Detected
USP62 Bile Tolerant Gram-Neg.	None Detected
USP62 Clostridia sp.	None Detected
USP62 Escherichia coli	None Detected
USP62 Staphylococcus sp.	None Detected
USP62 Pseudomonas aeruginosa	None Detected
USP62 Salmonella sp.	None Detected
USP60B Cepacia Complex	Negative
6.0 - 8.0	6.6

pH of a 10% solution

Benzalkonium Chloride 50% Solution

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