

Certificate of Analysis

Product: Benzalkonium Chloride 50% Solution

Item Number: BZKNF50

Grade: OPEN

Lot Number: 5001081/1.1

Manufacture Date: 08/22/2024

Expiration Date: 08/21/2027

Country of Origin: United States

| Tested Property | Specification | Analysis |
|--------------------------------------|---|-----------------|
| Assay, Total alkyl ammonium chloride | 47.5 -52.5 wt% | 50.1 |
| 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 % | 68.0 |
| Alkyl Chain C14 | >/=20.0 % | 26.5 |
| Alkyl Chain C12 + C14 | >/=70.0 % | 94.5 |
| Alkyl Chain C16 | As reported, % | 5.5 |
| Limit of Amine and Amine Salts | No Perceptible odor | Passes |
| Limit of Amine and Amine Salts | Max 5.0ml, corresponding to <0.1mmol/g | 4.0ml |
| Alcohol Content if added | None Added | None detected |
| Benzyl Alcohol | </=0.5 % | 0.001 |
| Benzaldehyde | </=0.15 % None Detected @ 0.0001% limit | |
| Chloromethyl Benzene | </=0.05 % None Detected @ 0.0001% limit | |
| Acidity or Alkalinity | <0.5ml 0.1N HCL or 0.1N NaOH | 0.05ml 0.1N HCl |
| Microbial Enumeration | USP61 Aerobic Plate count <10cfu/g | Passes |

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| | | |
|----------------------|--------------------------------|---------------|
| | USP61 Yeast & Mold <10cfu/g | Passes |
| | USP62 candida albicans | None Detected |
| | USP62 Aspergillus 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 |
| pH of a 10% solution | 6.0 - 8.0 | 7.0 |
| FT-IR Identification | Match the standard | Passes |

[Benzalkonium Chloride 50% Solution](#)

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