

## PRODUCT SPECIFICATION SHEET

### Benzalkonium Chloride 50%

NF Grade

Test	Specification	Typical Results
Assay, Total Alkylbenzenedimethyl ammonium chloride	47.5 -52.5% w/v	49.9% w/v
Description	Clear liquid to slightly yellow Slightly aromatic odor	Clear Liquid Aromatic odor
Analysis	A white precipitate is formed and then dissolved after adding 5ml alcohol	Pass
Chloride	A solution it in a mixture of equal volumes of water and alcohol meets requirements	Pass
Identification C	Orange-Red Color is produced	Pass
HPLC Retention Time	Retention Time Corresponds to Standard	Pass
Alkyl Chain C <sub>12</sub>	≥40.0%	62.5%
Alkyl Chain C <sub>14</sub>	≥20.0%	37.5%
Alkyl Chain C <sub>12</sub> + C <sub>14</sub>	≥70.0%	100.0%
Limit of Amine and Amine Salts	≤5.0 ml of 0.1M tetra butyl ammonium hydroxide solution	1.9ml of 0.1M tetra butyl ammonium hydroxide used
Alcohol Content if added	None Added	0.0000% None Detected
Benzyl Alcohol	≤0.5%	0.03%
Benzaldehyde	≤0.15%	0.02%
Chloromethyl Benzene	≤0.05%	0.0000% None Detected
Acidity or Alkalinity	≤0.5ml, 0.1N Hydrochloric acid or 0.1N Sodium Hydroxide to change the color of the indicator	0.09 ml, 0.1N Hydrochloric acid used

Appropriate/legal use of this product is the responsibility of the user.

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