

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

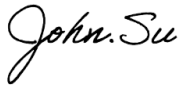
Date of Testing: 2023-03-04 15:40:28  
 Date of Next Testing: 2027-03-03 15:40:28  
 Product Name: **Tetramethylammonium chloride**  
 CAS Number: 75-57-0  
 Specifications & Purity: for molecular biology, ≥99.0% (AT)  
 Lot #: B2320583  
 SKU #: **T139946**  
**Analysis:** **180889**  
 Storage Temperature: Desiccated

Parameter	Limit Values	Result
Strontium(Sr)	0-5 (ppm)	0.00 ppm
UV Absorbance 260nm	0-0.02	0.02
Chromium (ICP)	0-5 (ppm)	0.00 ppm
Sodium(ICP)	0-50 (ppm)	0.00 ppm
Arsenic traces(MHS-AAS)	0-0.1 (ppm)	0.00 ppm
Cobalt(ICP)	0-5 (ppm)	0.00 ppm
Total sulfur as SO <sub>4</sub> (ICP)	0-50 (ppm)	44.00 ppm
Copper(ICP)	0-5 (ppm)	0.00 ppm
Potassium(K)(ICP)	0-50 (ppm)	0.00 ppm
Magnesium(Mg)	0-5 (ppm)	0.00 ppm
Lithium (ICP)	0-5 (ppm)	0.00 ppm
Barium (ICP)	0-5 (ppm)	0.00 ppm
Zinc(ICP)	0-5 (ppm)	0.00 ppm
Calcium(Ca)	0-10 (ppm)	0.00 ppm
Manganese(ICP)	0-5 (ppm)	0.00 ppm
Nickel(ICP)	0-5 (ppm)	0.00 ppm
Iron(ICP)	0-5 (ppm)	0.00 ppm
Molybdenum (ICP)	0-5 (ppm)	0.00 ppm
UV Absorbance 280nm	0-0.02	0.01
Cadmium(Cd)	0-5 (ppm)	0.00 ppm
Bismuth (ICP)	0-5 (ppm)	0.00 ppm
Lead (ICP)	0-5 (ppm)	0.00 ppm
Dimethyl Sulfoxide(NMR)	0-5 (ppm)	0.00 ppm
(Br)Bromide	0-500 (ppm)	0.00 ppm
Purity(Titration by AgNO <sub>3</sub> )	99-101 (%)	100.28 %

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Parameter	Limit Values	Result
Appearance (T139946)	Colorless or White Powder or Crystals	Colorless or White Powder or Crystals
DNase, RNase, Protease, Phosphatase	None Detected	none detected
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless Clear (<3.5 NTU), 6.57g in pass 10ml water		Pass
Residue (filter test)	no residue	no residue

A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager