

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

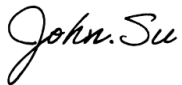
Date of Testing: 2024-03-15 15:32:37  
 Date of Next Testing: 2026-03-05 15:32:37  
 Product Name: **Isopropyl Alcohol**  
 CAS Number: 67-63-0  
 Specifications & Purity: for molecular biology, ≥99.5%(GC)  
 Lot #: F2224495  
 SKU #: **I112018**  
**Analysis: 331517**

Parameter	Limit Values	Result
Manganese(Mn)	0-0.02 (ppm)	0.00 ppm
Lithium(Li)	0-0.1 (ppm)	0.04 ppm
Zinc(Zn)	0-0.1 (ppm)	0.02 ppm
Cadmium(Cd)	0-0.05 (ppm)	0.03 ppm
Calcium(Ca)	0-0.5 (ppm)	0.28 ppm
Purity(GC)	99.5-100 (%)	99.84 %
Aluminum(Al)	0-0.5 (ppm)	0.28 ppm
Barium(Ba)	0-0.1 (ppm)	0.04 ppm
Chromium(Cr)	0-0.02 (ppm)	0.00 ppm
Bismuth(Bi)	0-0.1 (ppm)	0.04 ppm
Sodium(Na)	0-0.5 (ppm)	0.03 ppm
Nickel(Ni)	0-0.02 (ppm)	0.00 ppm
Cobalt(Co)	0-0.02 (ppm)	0.01 ppm
Evaporation Residue	0-0.001 (mg/L)	0.00 mg/L
Potassium(K)	0-0.5 (ppm)	0.23 ppm
Iron(Fe)	0-0.1 (ppm)	0.00 ppm
Copper(Cu)	0-0.02 (ppm)	0.00 ppm
Magnesium(Mg)	0-0.1 (ppm)	0.04 ppm
(Pb)Lead	0-0.1 (ppm)	0.03 ppm
Strontium(Sr)	0-0.1 (ppm)	0.06 ppm
Molybdenum(Mo)	0-0.1 (ppm)	0.03 ppm
Acetone	0-0.002 (%)	0.00 %
Carbonyl Compounds(as Propional dehyde)	0-0.002 (%)	0.00000 %
Water by Karl Fischer	0-0.2 (%)	0.13 %
Residue on Evaporation	0-0.001 (%)	0.00 %
Titrateable Acid or Base	0-0.0001 (meq)	0.00000 meq
DNases	none detected	none detected

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<b>Parameter</b>	<b>Limit Values</b>	<b>Result</b>
Insoluble matter	pass	Pass
phosphatases	none detected	none detected
proteases	none detected	none detected
RNases	none detected	none detected
Appearance(I112018)	Colorless low Melting Solid or liquid	Colorless low Melting Solid or liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure

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

John Su  
QA & QC Manager