

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing:	2022-07-12 15:13:42
Date of Next Testing:	2024-07-01 15:13:42
Product Name:	<b>Ammonium ceric nitrate</b>
CAS Number:	16774-21-3
Specifications & Purity:	Analytical Reagent,99.0%
Lot #:	H2031100
SKU #	<b>A105050</b>
<b>Analysis:</b>	<b>111949</b>
Storage Temperature:	Argon charged

Parameter	Limit Values	Result
Cobalt(Co)	0-5 (ppm)	2.50 ppm
Calcium(Ca)	0-10 (ppm)	4.60 ppm
Chromium(Cr)	0-5 (ppm)	2.10 ppm
Manganese(Mn)	0-5 (ppm)	2.20 ppm
Potassium(K)	0-10 (ppm)	5.30 ppm
Insoluble in dilute sulfuric acid	0-0.05 (%)	0.03 %
Zinc(Zn)	0-5 (ppm)	3.20 ppm
Chloride (Cl-)	0-10 (ppm)	4.66 ppm
Copper(Cu)	0-5 (ppm)	3.30 ppm
Magnesium(Mg)	0-20 (ppb)	11.20 ppb
Lead(Pb)	0-5 (ppm)	2.90 ppm
Ce By Titration with Dichromate	25-26.1 (%)	25.50 %
Cadmium(Cd)	0-5 (ppm)	2.80 ppm
Nickel(Ni)	0-5 (ppm)	3.11 ppm
Iron(Fe)	0-50 (ppm)	23.80 ppm
Phosphate(PO4)	0-200 (ppm)	113.00 ppm
Purity(redox titration)	98.5-101 (%)	98.60 %
Sodium(Na)	0-10 (ppm)	4.60 ppm
Appearance (A105050)	Light Orange to Very Dark Orange Powder or Crystal	Light Orange to Very Dark Orange Powder or Crystal
Solubility in H2O , Yellow clear solution(50 mg/mL)	pass	Pass
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



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A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su  
QA & QC Manager