

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-04-19 16:28:14
 Date of Next Testing: 2027-04-18 16:28:14
 Product Name: **CHES**
 CAS Number: 103-47-9
 Specifications & Purity: $\geq 99.5\%$ (T)
 Lot #: D23141248
 SKU #: **C110897**
Analysis: **205518**
 Storage Temperature: Protected from light, Argon charged

Parameter	Limit Values	Result
Manganese(Mn)	0-5 (ppm)	0.36 ppm
PH(25 °C, 0.5 M in Water)	3-5	4.75
(As)Arsenic	0-0.1 (ppm)	0.03 ppm
Barium(Ba)	0-5 (ppm)	1.05 ppm
Magnesium(Mg)	0-5 (ppm)	1.86 ppm
Lithium(Li)	0-5 (ppm)	1.65 ppm
UV Absorbance 280nm	0-0.05	0.02
Cobalt(Co)	0-5 (ppm)	0.42 ppm
Aluminum(Al)	0-5 (ppm)	1.08 ppm
UV Absorbance 260nm	0-0.08	0.03
Strontium(Sr)	0-5 (ppm)	1.15 ppm
useful PH range	8.6-10	8.75
Molybdenum(Mo)	0-5 (ppm)	0.58 ppm
Ignition Residue	0-0.05 (%)	0.03 %
loss on drying, 110 °C	0-0.5 (%)	0.11 %
Bismuth(Bi)	0-5 (ppm)	1.81 ppm
Calcium(Ca)	0-10 (ppm)	3.47 ppm
Nickel(Ni)	0-5 (ppm)	2.06 ppm
Heavy metal (as Pb)	0-5 (ppm)	0.00 ppm
Potassium(K)	0-50 (ppm)	3.35 ppm
Iron(Fe)	0-5 (ppm)	1.85 ppm
Zinc(Zn)	0-5 (ppm)	0.78 ppm
Cadmium(Cd)	0-5 (ppm)	1.14 ppm
Sodium(Na)	0-50 (ppm)	5.20 ppm
Sulfate(SO ₄ ²⁻)	0-500 (ppm)	12.80 ppm
Chloride (Cl ⁻)	0-50 (ppm)	3.58 ppm

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Parameter	Limit Values	Result
Chromium(Cr)	0-5 (ppm)	1.48 ppm
Copper(Cu)	0-5 (ppm)	3.35 ppm
Purity (Titration by NaOH)(anhydrous)	99.5-100.5 (%)	100.48 %
Appearance (C110897)	white crystalline powder	white crystalline powder
Insoluble matter	pass	Pass
pKa	6.8	6.8
Solubility in H ₂ O , soluble , 1M , 20°C, clear, colorless λ,0.5 M in H ₂ O	pass	Pass
Infrared spectrum	Pass	Pass
	Conforms to Structure	Conforms to Structure

John Su
QA & QC Manager