

## Certificate of Analysis

Date of Testing: 2022-02-09 17:24:08  
 Date of Next Testing: 2026-02-08 17:24:08  
 Product Name: **Imidazole**  
 CAS Number: 288-32-4  
 Specifications & Purity: 99.5%,for Fluorimetric Analysis  
 Lot #: B2207199  
 SKU #: **I108705**  
**Analysis:** **071640**  
 Storage Temperature: Desiccated

Parameter	Limit Values	Result
Nickel(Ni)	0-5 (ppm)	2.60 ppm
Potassium(K)	0-50 (ppm)	16.52 ppm
Iron(Fe)	0-5 (ppm)	2.16 ppm
Zinc(Zn)	0-5 (ppm)	2.18 ppm
Purity(GC)	99.5-100 (%)	99.70 %
Calcium(Ca)	0-10 (ppm)	5.17 ppm
Chloride (Cl-)	0-50 (ppm)	20.15 ppm
Sodium(Na)	0-50 (ppm)	20.16 ppm
Cadmium(Cd)	0-5 (ppm)	2.38 ppm
PH	9.5-11	10.79
Ignition Residue (as sulfate)	0-0.05 (%)	0.05 %
Chromium(Cr)	0-5 (ppm)	2.42 ppm
Strontium(Sr)	0-5 (ppm)	1.90 ppm
UV Absorbance 280nm	0-0.1	0.01
Copper(Cu)	0-5 (ppm)	2.12 ppm
UV Absorbance 260nm	0-0.1	0.01
Molybdenum(Mo)	0-5 (ppm)	2.20 ppm
Melting point	86-92 (°C)	91.91000 °C
Magnesium(Mg)	0-5 (ppm)	2.10 ppm
Lithium(Li)	0-5 (ppm)	2.20 ppm
Manganese(Mn)	0-5	3.10
(Pb)Lead	0-5 (ppm)	2.60 ppm
Cobalt(Co)	0-5 (ppm)	2.25 ppm
Water by Karl Fischer	0-0.2 (%)	0.12 %
Sulfate(SO42-)	0-50 (ppm)	20.13 ppm
Appearance (I108705)	White to Off-White Powder White to Off-White Powder	

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Parameter	Limit Values	Result
Fluorescence, $\lambda_{ex}$ 200-600 nm; $\lambda_{em}$ 300-800 nm (corresponds)	Conforms	Conforms
Infrared spectrum	Conforms to Structure	Conforms to Structure
Insoluble matter	pass	Pass
pKa	6.8	6.8
$\lambda$ , 0.1 M in H <sub>2</sub> O	Pass	Pass

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

John Su  
QA & QC Manager