

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-10-17 18:47:49

Date of Next Testing: 2026-10-16 18:47:49

Product Name: **4-Thiazolecarboxylic acid**

CAS Number: 3973-08-8

Specifications & Purity:  $\geq 97\%$

Lot #: J2212017

SKU #: **T119302**

Version: **1**

Analysis #: **107238**

| Parameter                  | Limit Values                       | Result                             |
|----------------------------|------------------------------------|------------------------------------|
| Purity (Titration by NaOH) | 96.5-103.5 (%)                     | 99.30 %                            |
| Melting point              | 195-199 (°C)                       | 196.22000 °C                       |
| Purity(HPLC)               | 97-100 (%)                         | 99.62900 %                         |
| Appearance (T119302)       | White to yellow powder or crystals | White to yellow powder or crystals |
| Infrared spectrum          | Conforms to Structure              | Conforms to Structure              |
| Proton NMR spectrum        | Conforms to Structure              | Conforms to Structure              |

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

John Su  
QA & QC Manager