

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-12-09 18:50:32
Date of Next Testing: 2026-12-08 18:50:32
Product Name: **2,3-Dichloropyrazine**
CAS Number: 4858-85-9
Specifications & Purity: $\geq 98\%$ (GC)
Lot #: K2230346
SKU #: **D123437**
Version: **2**
Analysis #: **134020**
Storage Temperature: Argon charged

| Parameter | Limit Values | Result |
|--------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|
| Purity(GC) | 98-100 (%) | 98.40% |
| Carbon by Elemental Analysis | 31.2-32.3 (%) | 31.87% |
| Purity(O ₂ AgNO ₃ titration with after combustion) | 97.5-102.5 (%) | 99.50% |
| Nitrogen by Elemental Analysis | 18.1-19 (%) | 18.98% |
| Appearance (D123437) | White or Colorless to Light yellow powder to lump to clear liquid | White or Colorless to Light yellow powder to lump to clear liquid |
| Solubility in MeOH | almost transparency | almost transparency |
| NMR Spectrum 1H | Conforms to Structure | Conforms to Structure |
| Infrared spectrum | Conforms to Structure | Conforms to Structure |



John Su
QA & QC Manager