

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-01-14 14:52:48  
 Date of Next Testing: 2027-01-13 14:52:48  
 Product Name: **2,3-Pyrazinedicarboxylic acid**  
 CAS Number: 89-01-0  
 Specifications & Purity:  $\geq 97\%$   
 Lot #: A2306822  
 SKU #: **P100816**  
 Version: **0**  
 Analysis #: **151480**  
 Storage Temperature: Room temperature

| Parameter                        | Limit Values                            | Result                                  |
|----------------------------------|-----------------------------------------|-----------------------------------------|
| Purity(Neutralization titration) | 96.5-103.5 (%)                          | 99.50000 %                              |
| Purity(HPLC)                     | 97-100 (%)                              | 97.01000 %                              |
| Appearance (P100816)             | white to light brown powder or crystals | white to light brown powder or crystals |
| Proton NMR spectrum              | Conforms to Structure                   | Conforms to Structure                   |
| Infrared spectrum                | Conforms to Structure                   | Conforms to Structure                   |



John Su  
QA & QC Manager