

## Certificate of Analysis

Date of Testing: 2022-12-22 12:27:37  
Date of Next Testing: 2026-12-21 12:27:37  
Product Name: **Citric acid monohydrate**  
CAS Number: 5949-29-1  
Specifications & Purity: ACS, 99.0-102.0%  
Lot #: L2220392  
SKU #: **C112635**  
Analysis: **171052**

| Parameter                            | Limit Values                          | Result                                |
|--------------------------------------|---------------------------------------|---------------------------------------|
| Phosphate(PO4)                       | 0-0.001 (%)                           | 0.00 %                                |
| Chloride (Cl-)                       | 0-0.001 (%)                           | 0.00 %                                |
| Assay                                | 99-102 (%)                            | 99.89 %                               |
| Iron(Fe)                             | 0-3 (ppm)                             | 1.50 ppm                              |
| Sulfate(SO42-)                       | 0-0.002 (%)                           | 0.00 %                                |
| Lead(Pb)                             | 0-2 (ppm)                             | 0.42 ppm                              |
| Ignition Residue (as sulfate)        | 0-0.02 (%)                            | 0.01 %                                |
| Insoluble matter                     | 0-0.005 (%)                           | 0.00 %                                |
| Appearance (C112635)                 | Colorless or White Powder or Crystals | Colorless or White Powder or Crystals |
| oxalate (C2O42- , limit about 0.05%) | To pass test                          | to pass test                          |
| Proton NMR spectrum                  | Conforms to Structure                 | Conforms to Structure                 |
| Readily carbonizable substance       | pass                                  | Pass                                  |



John Su  
QA & QC Manager