

## Certificate of Analysis

Date of Testing: 2023-02-15 22:06:38  
Date of Next Testing: 2027-02-14 22:06:38  
Product Name: **L-Rhamnose monohydrate**  
CAS Number: 10030-85-0  
Specifications & Purity: 99%  
Lot #: B23081058  
SKU #: **R108982**  
Analysis: **151665**

| Parameter                                                       | Limit Values                             | Result                                   |
|-----------------------------------------------------------------|------------------------------------------|------------------------------------------|
| Heavy metal (as Pb)                                             | 0-5 (ppm)                                | 2.20 ppm                                 |
| Water by Karl Fischer                                           | 9-11 (%)                                 | 10.29 %                                  |
| Calcium(Ca)                                                     | 0-10 (ppm)                               | 5.00 ppm                                 |
| Ignition Residue (as sulfate)                                   | 0-0.15 (%)                               | 0.07 %                                   |
| Purity(HPLC)                                                    | 99-100 (%)                               | 99.41000 %                               |
| Melting point                                                   | 91-96 (°C)                               | 95.97000 °C                              |
| Specific Rotation [α] <sub>20</sub> /D(c=4 in H <sub>2</sub> O) | 7.5-8.5 (°)                              | 7.51°                                    |
| Appearance (R108982)                                            | White or light yellow crystalline powder | White or light yellow crystalline powder |
| Proton NMR spectrum                                             | Conforms to structure                    | Conforms to Structure                    |



John Su  
QA & QC Manager