

## Certificate of Analysis

Date of Testing: 2024-02-19 10:11:01

Date of Next Testing: 2027-02-18 10:11:01

Product Name: (2R,3R)-(-)-2,3-Butanediol

CAS Number: 24347-58-8

Specifications & Purity: 97%

Lot #: A2426089

SKU #: R470710

Analysis: 320895

| Parameter                                      | Limit Values               | Result                     |
|------------------------------------------------|----------------------------|----------------------------|
| Purity(GC)                                     | 97-100 (%)                 | 99.02 %                    |
| Specific Rotation [α] <sub>20</sub> /D(c=Neat) | -14~-12 (°)                | -13.22 °                   |
| Proton NMR spectrum                            | Conforms to Structure      | Conforms to Structure      |
| Appearance(R470710)                            | Colorless to Yellow Liquid | Colorless to Yellow Liquid |
| GC-MS for identification                       | Conforms                   | Conforms                   |



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