

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-12-15 11:20:44

Date of Next Testing: 2027-12-14 11:20:44

Product Name: **(S)-1,2-Butanediol**

CAS Number: 73522-17-5

Specifications & Purity: >98.0%(GC)

Lot #: L2313208

SKU # **S161003****Analysis: 294222**

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D}(c=3 \text{ in EtOH})$	-18~-13 (°)	-15.66°
Refractive index $n_{20/D}$	1.436-1.44	1.44
Purity(GC)	98-100 (%)	98.06%
Appearance (S161003)	Colorless to light yellow liquid	Colorless to light yellow liquid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure

John Su
QA & QC Manager