

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-02-28 11:36:43  
Date of Next Testing: 2027-02-27 11:36:43  
Product Name: **(S)- $\alpha$ -Amino- $\gamma$ -butyrolactone hydrochloride**  
CAS Number: 2185-03-7  
Specifications & Purity: 97%  
Lot #: B2321030  
SKU #: **A101211**  
**Analysis: 192143**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Purity(Titration)	96.5-103.5 (%)	99.56 %
Specific Rotation [a] <sub>20</sub> /D(c=0.2 in EtOH)	-28--25 (°)	-26.80 °
Melting point	210-220 (°C)	217.60000 °C
Appearance (A101211)	white to brown powder	White to brown powder
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , very few cloudy	pass	Pass



John Su  
QA & QC Manager