

## Certificate of Analysis

Date of Testing: 2023-06-09 08:43:40  
Date of Next Testing: 2026-06-08 08:43:40  
Product Name: **L-Asparagine**  
CAS Number: 70-47-3  
Specifications & Purity: Moligand™, BioReagent, for cell culture, for insect cell culture  
Lot #: F2305339  
SKU #: **L478521**  
Version: **1**  
Analysis #: **227085**  
Storage Temperature: Argon charged

Parameter	Limit Values	Result
Water by Karl Fischer	0-2 (%)	0.17%
Purity(HPLC area)	98-100 (%)	98.75%
Specific rotation $[\alpha]_{20/D}(C=13.2 \text{ in } 1 \text{ N HCl})$	27-31 (°)	29.25900°
Solubility in 1 N HCl,Colorless Clear 100 mg/ml	Pass	Pass
Cell Culture Test	pass	Pass
Insect Cell Test	Pass	Pass
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Appearance(L478521)	White to Almost white powder to crystal	White to Almost white powder to crystal



John Su  
QA & QC Manager