

## Certificate of Analysis

Date of Testing: 2023-03-14 13:01:03  
Date of Next Testing: 2026-03-13 13:01:03  
Product Name: **(-)-Sparteine Sulfate pentahydrate**  
CAS Number: 6160-12-9  
Specifications & Purity: 97%  
Lot #: C2306092  
SKU #: **S413298**  
**Analysis: 154655**  
Storage Temperature: Store at -20°C

| Parameter   | Limit Values          | Result                |
|---|-----------------------|-----------------------|
| Purity(HPLC area)   | 97-100 (%)            | 99.04 %               |
| Specific Rotation $[\alpha]_{20/D(C=5 \text{ in H}_2\text{O})}$ | -24~-20 (°)           | -24.00000 °           |
| NMR Spectrum 1H   | Conforms to Structure | Conforms to Structure |



John Su  
QA & QC Manager