

Certificate of Analysis

Date of Testing: 2023-06-11 16:51:53
Date of Next Testing: 2027-06-10 16:51:53
Product Name: **Noradrenaline bitartrate monohydrate**
CAS Number: 108341-18-0
Specifications & Purity: $\geq 98\%$ (HPLC),USP
Lot #: F2305664
SKU #: **N107258**
Analysis: 216589
Storage Temperature: Store at 2-8°C

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D}(c=5 \text{ in H}_2\text{O})$	-12--10 (°)	-11.39°
Water by Karl Fischer	4.5-5.8 (%)	5.43%
Limit of Arterenone	0-0.2 (%)	0.05%
Assay (Anhydrous Basis)	98-102 (%)	99.67%
Ignition Residue(Ash)	0-0.1 (%)	0.00%
Appearance (N107258)	White to Off-White Powder	White to Off-White Powder
Identity	pass	Pass
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility,Colorless to faint yellow,clear(50 mg/mL, H ₂ O)	pass	Pass



John Su
QA & QC Manager