



The Power to Question

# CERTIFICATE OF ANALYSIS

Catalog Number: sc-294122

Lot Number: L0516

Product Name: Cyclo(-His-Pro)

CAS Number: 53109-32-3

Molecular Formula:  $C_{11}H_{14}N_4O_2$

Molecular Weight: 234.26

Test	Result
Appearance	Off-white powder
Assay	99.2% (Elemental analysis based on Nitrogen content) Nth: 23.92%, Nfd: 23.72%
Purity (TLC)	> 99%
Solubility	Clear, colorless solution (50mg/mL in 80% AcOH)
Optical Rotation ( $\alpha^{24}_D$ )	-110.9° (C=1 in Water)
Carbon Content	56.6%
Hydrogen Content	6.0%
Nitrogen Content	23.7%

## Test Conditions

TLC Conditions: n-Butanol/Acetic acid/Water (4:2:2) Chloroform/Methanol/Acetic acid 32% (5:3:1)  
Chloroform/Methanol/Ammonia conc. (80:20:4) Plate: silicagel 60 F254  
detected by: UV, ninhydrin, chlorine-tolidine

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