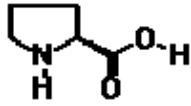




HANGZHOU DINGYAN CHEM CO., LTD
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CERTIFICATE OF ANALYSIS

NO: DYC071504222

Product name	L(-)-Proline(USP31)
CAS Number	147-85-3
Molecule Structure	
Molecule Formula	C5H9NO2
Batch number	20141225
Manf&Exp. Date	2014-12-22,2016-12-21
Testing date	2014-12-25

Items	Standard	Result
Appearance	White crystal or crystalline powder	Conforms
Identification(IR)	Concordant with the reference spectrum	Conforms
Assay	98.5-101.5%	99.8%
Specific optical rotation	-84.3° - -86.3°	-80.5°
Chloride(CL)	≤0.05%	<0.02%
Sulfate(as SO4)	≤0.03%	<0.02%
Iron(Fe)	≤30ppm	<10ppm
Heavy metal	≤15ppm	<10ppm
Loss on drying	≤0.40%	0.1%
Residue on ignition	≤0.40%	0.03%
Conclusion	Passed the test according to the Standard of USP31	

Hangzhou Dingyan Chem Co., Ltd.
Quality Control
QUALITY CONTROL:  CHECK: 姚仙娟 INSPECTOR: 刘清风