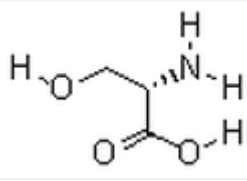


CERTIFICATE OF ANALYSIS

NO: DYC051501261

Product name	L-Serine
CAS Number	56-45-1
Molecule Structure	
Molecule Formula	C3H7NO3
Batch number	20140728
Manuf. Date	2014-07-28
Testing date	2014-07-28

Items	Standard	Result
Appearance	White crystals or crystalline powder	white crystalline powder
Assay	98.5%~101.0%	99.5%
State of solution	≥98.0	99.3%
Loss on drying	≤ 0.2%	0.09%
Heavy metals	≤10ppm	<10ppm
Residue on ignition	≤ 0.1%	0.09%
Chloride	≤ 0.02%	<0.02%
Sulfate	≤ 0.02%	<0.02%
Iron	≤10ppm	<10ppm
Specific rotation	+14.0° ~ +15.6°	+14.7°
Other amino acids	Chromatorgraphically not detectable	Conforms

Conclusion:The results above conforms with USP24 standard.

QUALITY CONTROL:   
 Hangzhou Dingyan Chem Co., Ltd.  
 Quality Control .....  
 Signature(s)

CHECK:姚仙娟

INSPECTOR: 刘清风