

HANGZHOU THINK CHEMICAL CO., LTD.

ADD: ROOM 0103/7F RUIQI MANSION,425#MOGANSHAN ROAD ,HANGZHOU,310011 CHINA

Certificate of Analysis

Chemical Name	(S)-(-)-1,2-Diaminopropane Dihydrochloride		
Batch No.	20130801	Batch Size	100 Kgs
Manufacturing Date	22/08/2013	Quantity	500 Grams
Date of Report	24/08/2013	CAS No.	19777-66-3

Item	Requirment	Result
Description	White to off-white crystalline solid	complies
Identification for Amine	Should respond to the test for amine	Complies
Loss on drying	NMT 1.0%	0.07%
Sulphated ash(%w/w)	NMT 1.0%	0.08%
Specific optical rotation	-3.5° - -5.0°	-3.8°
Enantiomer content by chiral HPLC	NMT 0.5%	0.39%
Purity by HPLC	NLT 98.0%	99.30%
Any individual impurity	NMT 1.0%	0.30%
Total impurities	NMT 2.0%	0.70%
Assay by titration(%w/w)	97.0% - 102.0%	99.80%
Remarks: The product conforms to above specifications.		

杭州思诺化学有限公司
HANGZHOU THINK CHEMICAL CO.,LTD.
夏沛国