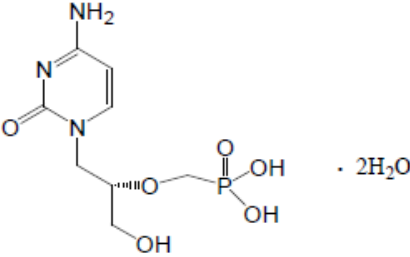


CHINA LANGCHEM INC.

514 Room,1# Building ,88# Cailun Road, Zhangjiang high tech park, Shanghai
Tel: 021-58956006, Fax: 021-58956100, http://www.langchem.com

Certificate of analysis

Product Name: Cidofovir		Date of report: 2011-12-16
CAS: 149394-66-1		Batch No: 2011-12-08
Molecular Formula: C ₈ H ₁₄ N ₃ O ₆ P·2H ₂ O		Molecular: 315.22
Structure:		
		
Test Items	Standard specifications	Result
Appearance	White or off-white crystalline powder	White powder
Solubility	Slightly Soluble in water,practically insoluble in methanol,practically insoluble in ethyl acetata.	Conforms
Identification	The infrared adsorption spectrum corresponds to that of reference standard.	Conforms
PH	3.0 to 3.8	3.3
Specific rotation	-78° ~-95°	-86°
Water	10.0% to 12.5%	11.72%
Chlorides	Not More Than 0.01%	Conforms
Heavy Metals	Not More Than 10ppm	Conforms
Related substance Individual Unknown Impurities	Not More Than 0.10%	0.011%
Total impurities	Not More Than 0.50%	0.018%
e.e.value	>99.8%	99.97%
Assay	98.0-102.0	100.33%
Residual solvents		

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Methanol	Not More Than 3000ppm	Not detected
Ethanol	Not More Than 5000ppm	Not detected
Acetone	Not More Than 5000ppm	Not detected
Ethyl acetate	Not More Than 5000ppm	Not detected
Tetrahydrofuran	Not More Than 720ppm	Not detected
N,N-dimethylformamide	Not More Than 880ppm	Not detected
Pyridine	Not More Than 200ppm	Not detected
Dichloromethane	Not More Than 600ppm	Not detected
Benzene	Not More Than 2ppm	Not detected