
Certificate of Analysis

Product name: Choline alfoscerate ;
L-alpha-Glycerylphosphoryl choline (powder)

Standard: USP29 Grade

CAS Number: 28319-77-9

Code Number: 142008

Mol. Formula: C₈H₂₀NO₆P

Mol. Weight: 257.26

Batch Number: 20120910

Packing: 1Kg/bag

Mfg. date: Sep. 10, 2012

Exp. Date: Sep. 09, 2014

Items	Specifications	Results
Assay(by Titration)	98.5%~101.5%	99.9%
Identification	NMR conforms to standard	Complies
Specific rotation[α] _D ²⁵	-2.4° ~ -2.95°	-2.50°
Solubility(H ₂ O,10% w/v)	Clear	Clear
Stability	Dry and light protected storage; stable under normal usage.	Complies
Solvents residue (Ethanol)	≤1.0%	<1.0
pH	4.5~6.5	6.40
Water content	≤2.0%	0.50%
Related substances(TLC)	Single spot	Complies
Appearance	White powder, neutral odor, very highly hygroscopic	Complies

Storage	Store in a well-closed place with constant low temperature and no direct sun light. Protect from moisture
Conclusion	The above items of the product conform to the standard USP29

Sign

This certificate of analysis is a computer printout and has therefore not been signed by hand.