



### CERTIFICATE OF ANALYSIS

Product Name	L-a-glycerophosphorylcholine powder (Alpha GPC)		
Batch No.	LYPH220729	Manu. Date	2022-07-29
Quantity	500kg	Expiry Date	2024-07-28
Molecular Formula	C <sub>8</sub> H <sub>20</sub> NO <sub>6</sub> P	CAS#	28319-77-9
Items	Specifications	Results	Analysis Method
Appearance	White powder, neutral odor, highly hygroscopic	Conforms	Visual
Identification	TLC: Standard solution and test solution same spot, RF	Conforms	TLC
Specific optical	-2.4°~-2.8°	-2.735°	
Heavy metals (as PB)	≤10ppm	Conforms	Colorimetry
Sulfate (SO <sub>4</sub> )	≤0.02%	Conforms	Colorimetry
Chloride (Cl)	≤0.02%	Conforms	Colorimetry
pH	4.5~7.0	4.87	
Related substance	Spot not bigger than standard solution spot	No spot	TLC
Residual solvent	<0.5%	Conforms	HS-GC
Water Content	<2%	0.16%	KF
Assay (dried basis)	98.0%--102.0%	100.62%	Potentiometric titration

Conclusion	Conform with specification
Storage	Store in cool & dry place not freeze, keep away from strong light and heat
Shelf life	2 years when properly stored

Quality Assurance Officer: 王炎

Corrector: 李丽

Analyst: 贺强

