

Certificate of Authenticity: Citicoline

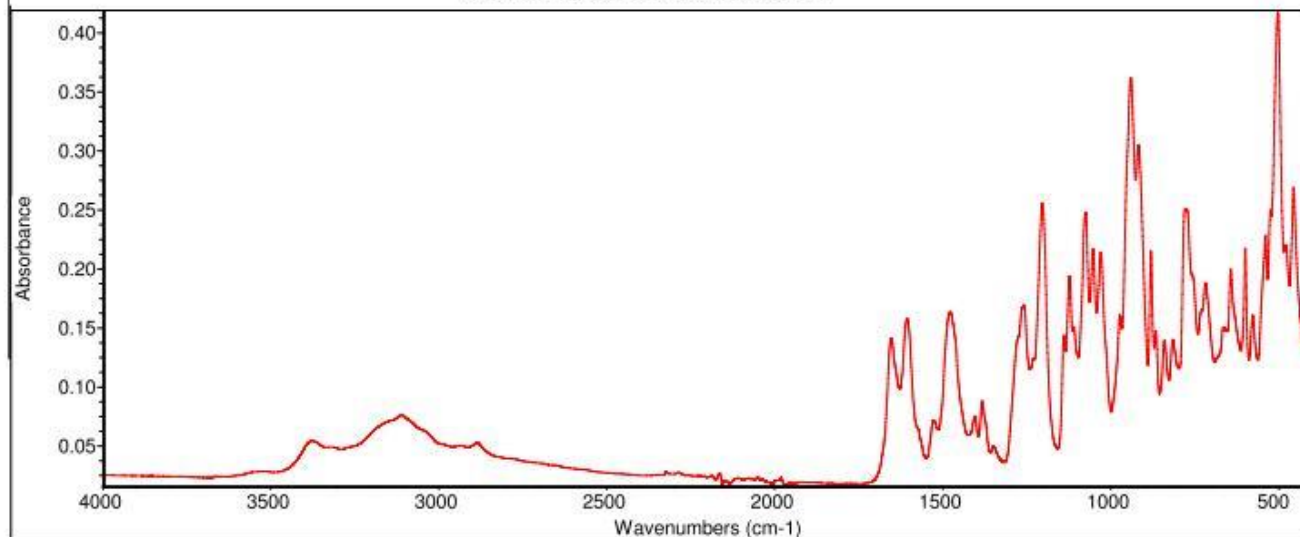
Product Name	Citicoline Sodium	
CAS	33818-15-4	
Batch Number	CNACNTF0516	
Production Date	4/1/2016	
Expiration Date	4/1/2018	
Validation Method	FTIR, HPLC	
Specification	LC/MS, FTIR	

Analysis	Specification	Result	Method
Appearance	White Powder	Complies	Visual
Odor	Odorless	Complies	Organoleptic
Taste	Slightly Salty	Complies	Organoleptic
Identification	(1)Spectrum	(1) Conforms	(1) FTIR
Specification	(1)Molecular Weight (2)Structure	(1) 510.306 g/mol (2) C ₁₄ H ₂₅ N ₄ NaO ₁₁ P ₂	(1) LC/MS (2) P-NMR
Assay	≥99.0%	100.0%	HPLC
Conclusion	Product complies to specifications		

ThermoFisher
SCIENTIFIC

Thu Jul 21 12:42:42 2016 (G)

Citicoline Sodium CNAGWI0416



Number of sample scans: 64
 Number of background scans: 64
 Resolution: 4.000
 Sample gain: 1.0
 Optical velocity: 0.4747
 Aperture: 100.00

Spectrum: Citicoline Sodium CNAGWI0416
 Region: 3999.71-401.13
 Search type: Correlation
 Hit List:

Index	Match	Compound name
15	100.00	Citicoline Sodium Standard
333	100.00	Citicoline Sodium CNAGWI0416
373	99.21	Citicoline Sodium CNAGWI0616
44	98.84	CDP Choline (Powder City) 150924
375	98.37	Citicoline Sodium CNAGWI0616

Library
 HR ATR Centera
 HR ATR
 HR ATR
 HR ATR
 HR ATR