

CERTIFICATE OF ANALYSIS

Product name:	Citicoline	Manu. Date:	May. 16, 2012
Batch Number:	NF20120516	Expiration Date:	May. 15, 2014
Batch Quantity:	200kgs	Report Date	May. 17, 2012
Storage Condition:	Preserve in tight containers at controlled room temperature.		

Item	Specification	Result
Appearance	White crystalloid powder	Conforms
Dry content (C ₁₄ H ₂₆ N ₄ O ₁₁ P ₂)	≥98.0%	99.5%
Identification	1) Chemical reaction 2) The retention time of a major peak meets the requirements. 3) IR: consistent with the spectrum obtained with reference Substance.	1) Positive reaction 2) Confirmed 3) Confirmed
Acid value	Between 2.5~3.5	2.7
Clarity and color of solution	Clarifying, colorless	Confirmed
Ammonium	≤0.05%	Confirmed
Heavy metals	≤10ppm	Confirmed
As	≤2ppm	Confirmed
Free phosphoric acids	≤0.1%	Confirmed
5'-CMP	≤1.0%	0.09%
Loss on drying	≤5.0%	3.0%
Total plate count	≤1000CFU/G	40CFU/G
Fungi count	≤100CFU/G	Confirmed
E.coli	Negative	Confirmed
Conclusion:	Conform to the requirement.	
Tested by:	Mr. Meng	Approved by: Mr. Wang

