



## CERTIFICATE OF ANALYSIS

### L-TYROSINE

ITEM	SPECIFICATION	RESULT
1. Appearance:	white crystal powder	Conform
2. Identification:	Positive	Conform
3. State of solution:	Clear & colorless	Conform
4. Specific rotation:	-9.8 to -11.2	-10.4
5. Loss on drying:	Not more than 0.3%	0.13%
6. Residue on ignition:	Not more than 0.4%	0.05%
7. Chloride:	Not more than 0.04%	Conform
8. Sulfate:	Not more than 0.04%	Not more than 0.02%
9. Iron (Fe):	Not more than 30ppm	Not more than 10ppm
10. Heavy metals	Not more than 15ppm	Not more than 10ppm
11. Organic volatile impurities:	Meet the requirements	Meet the requirements
12. Assay:	98.5 to 101.5%	99.50%
13. PH:	5.0 to 6.5	6.1
14. Particle size:	100% pass through 40mesh	Conform1
15. Bulk density:	0.4-0.45 g/ml	0.42 g/ml