

# CERTIFICATE OF ANALYSIS

Product Name:	L-Tyrosine	Report Date:	May 26, 2017
Formula:	C <sub>9</sub> H <sub>11</sub> NO <sub>3</sub>	Batch No.:	170523
CAS No.:	60-18-4	Manu. Date:	May 23, 2017
Inspection Standard:	USP38	Exp. Date:	May 22, 2019

## RESULTS OF ANALYSIS

Test Items	Specifications	Results	Test Methods
Appearance	White crystals or crystalline powder, odorless, tasteless	Conforms	Visual
Identification	Infrared absorption	Conforms	IR
Specific rotation $[\alpha]_D^{25}$	-9.8 to -11.2°	-10.0°	USP-781S
Assay	98.5 to 101.5 % (calculated on the dried basis)	99.5%	USP-ASSAY
Loss on drying	Not more than 0.3%	0.17%	USP-731
Residue on ignition(Sulfated)	Not more than 0.4%	<0.4%	USP-281
Chloride (Cl)	Not more than 0.04%	<0.04%	USP-221
Sulfate (SO <sub>4</sub> )	Not more than 0.03%	<0.04%	USP-221
Iron(Fe)	Not more than 30ppm	< 30ppm	USP-241
Heavy metals (Pb)	Not more than 15ppm	<15ppm	USP-231
Lead	Not more than 3ppm	<3ppm	AFS
Arsenic (AS <sub>2</sub> O <sub>3</sub> )	Not more than 1ppm	<1ppm	AFS
Chromatographic purity	Chromatographically not detectable	Conforms	USP
Residue solvents	Meets the requirements	Meets the requirements	USP
<b>Conclusion:</b>	Conforms to the specifications of USP38		

Analyst: **侯健之**Auditor: **辽薛兰**Chief of QC: **于铁梅**