

**杭州东瑞医药科技有限公司**  
**HANGZHOU DAWN RAY PHARMACEUTICAL CO.,LTD.**

**CERTIFICATE OF ANALYSIS**

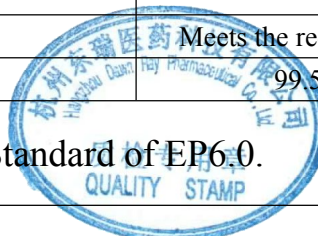
**L-Tryptophan**

<b>Batch No.:</b> DR20140508	<b>Piece:</b> 200kg
<b>Manufacture Date:</b> 2014.05.08	<b>Expiry Date:</b> 2016.05.07

**TESTS:**

Items	Specification	Results
Description	White crystal or crystalline powder	White crystalline powder
Identification	Infrared absorption spectrop hotometry	Meets the requirements
1,1'-ethylidenebistryptophan	≤10ppm	< 10ppm
Sum of impurities with a retention time less than that of tryptophan	≤100ppm	< 100ppm
Sum of impurities with a retention time greater than that of tryptophan and up to 1.8 times the retention time of N-acetyltryptophan	≤300ppm	< 300ppm
Appearance of solution	Not more than reference solution	Less than reference solution
Specific optical rotation	-30°~ -33.0°	-31.6°
Chloride	≤200ppm	< 200ppm
Ammonium	≤200ppm	< 200ppm
Iron	≤20ppm	< 20ppm
Sulfate	≤300ppm	< 300ppm
Heavy metals	≤10ppm	< 10ppm
Loss on drying	≤0.50%	0.07%
Residue on ignition	≤0.10%	0.06%
Ninhydrin positive substances	Meets the requirements	Meets the requirements
Assay	98.5-101.0%	99.5%

Conclusion: The results conform with the Standard of EP6.0.



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