



山东鲁维制药有限公司
Shandong Luwei Pharmaceutical Co., Ltd.
Shandong Industrial Park, Zibo City, Shandong Province, China

Certificate of Analysis

Product	<u>L-Ascorbic Acid</u>	Date of Certificate	<u>NOV. 1, 2017</u>
Batch No.	<u>170141053</u>	Date of Expiry	<u>OCT. 15, 2020</u>
Quantity	<u>25kg×720</u>	Date of Manufacture	<u>OCT. 16, 2017</u>

Analysis Contents	Analysis Standard	Analysis Results
Appearance	White or Almost White Crystalline Powder	Pass
Identification	Positive Reaction	Positive
Melting Point	About 190°C	190.5°C
PH(With 2% Water solution)	2.4-2.8	2.52
PH(With 5% Water solution)	2.1-2.6	2.38
Clarity of Solution	Clear	Clear
Colour of Solution	≤BY7	<BY7
Copper	≤5ppm	<5ppm
Heavy Metals	≤10ppm	<10ppm
Lead	≤2ppm	<2ppm
Iron	≤2ppm	<2ppm
Cadmium	≤1ppm	<1ppm
Arsenic	≤2ppm	<2ppm
Mercury	≤0.1ppm	<0.1ppm
Zinc	≤25ppm	<25ppm
Oxalic Acid	≤0.2%	<0.2%
Sulphate Ash(Residue on Ignition)	≤0.1%	<0.1%
Specific Optical Rotation)	+20.5° - +21.5°	+21.16°
Assay	99.0%-100.5%	99.79%
Loss on Drying	≤0.4%	<0.4%
Residual Solvents	Methanol:NMT 3000ppm	<200ppm
Related Substances	Impurity C ≤ 0.15%	Complies
	Impurity D ≤ 0.15%	Complies
	Any Other Unspecific Impurities ≤ 0.10%	Complies
	Total Impurities ≤ 0.2%	Complies

Conclusion: The Above Product Conforms to Food Grade

