



SHANDONG TIANLI PHARMACEUTICAL CO., LTD.

South of Weigao Road and East of West Second Ring Road (Chenming Industrial Park)

Shouguang City, Weifang City, Shandong Province, P.R.China

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CERTIFICATE OF ANALYSIS

Product Name: Ascorbic Acid

Quantity: 18MT

Batch No.: 012105145

Date of Certificate: May.31, 2021

Date of Manufacture: May.28, 2021

Date of Expiry: May.27, 2024

Items	Standard	Results
Appearance	White crystalline powder	White crystalline powder
Identification	Positive	Positive
Clarity of solution	Clear	Clear
Color of solution	$\leq BY_7$	$< BY_7$
Assay	99.0~100.5%	99.6%
Loss on Drying	$\leq 0.4\%$	0.05%
*Residue on ignition	$\leq 0.1\%$	0.03%
Specific rotation	$+20.5^{\circ} \sim +21.5^{\circ}$	$+20.91^{\circ}$
PH(with 2% water solution)	2.4-2.8	2.52
PH(with 5% water solution)	2.1-2.6	2.31
Melting range	About 190℃	191℃
Heavy metals	$\leq 3\text{ppm}$	$< 3\text{ppm}$
*Iron	$\leq 2\text{ppm}$	$< 2\text{ppm}$
*Copper	$\leq 2\text{ppm}$	$< 2\text{ppm}$
*Impurity E	$\leq 0.2\%$	$< 0.2\%$
*Arsenic	$\leq 1\text{ppm}$	$< 1\text{ppm}$
*Lead	$\leq 1\text{ppm}$	$< 1\text{ppm}$
*Cadmium	$\leq 1\text{ppm}$	$< 1\text{ppm}$
*Mercury	$\leq 0.1\text{ppm}$	$< 0.1\text{ppm}$
*Organic volatile impurities	Methanol $\leq 3000\text{ppm}$	$< 3000\text{ppm}$
*Related Substances	Impurity C $\leq 0.15\%$ Impurity D $\leq 0.15\%$ Any Other Unspecific Impurities Impurity $\leq 0.10\%$ Total Impurity $\leq 0.2\%$	SHANDONG TIANLI PHARMACEUTICAL CO., LTD. Complies QA PASS
*Total Plate Count	$\leq 1,000\text{cfu/g}$	$\leq 1,000\text{cfu/g}$
According to BP2021/USP43/FCC12/EP10/E300		

Tester Li Jianting

Checked by Mu Yonghua

Approved by Luan Shaohua

*These items are periodic analyses.