



东北制药集团股份有限公司
NORTHEAST PHARMACEUTICAL GROUP CO., LTD.

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CERTIFICATE OF ANALYSIS
L-CARNITINE L-TARTRATE

BATCH NUMBER	DY0662200055	MANUFACTURE DATE	Jan.11.2022
BATCH SIZE	1000 kg	TEST DATE OF APPLICATION	Mar.31.2022
QUANTITY	40Cartons	RETEST DATE	Jan.10.2025

Analysis Items		Specifications	Analysis Results
1.	Characteristics	White crystalline powder	White crystalline powder
2.	Identification	Positive IR: Complies	Positive Complies
3.	L-Carnitine	67.2%~69.2%	68.5%
4.	L-Tartaric Acid	30.8%~32.8%	32.1%
5.	Specific Rotation	-9.5°~-11.0°	-10.3°
6.	Acidity (pH)	3.0~4.5	3.7
7.	Loss on Drying	≤0.5%	0.08%
8.	Heavy Metals	≤0.0010%	<0.0010%
9.	Arsenic	≤0.0001%	<0.0001%
10.	Cyanide	<0.0005%	<0.0005%
11.	Residue on Ignition	≤0.5%	0.03%
12.	Melting Point	169°C~175°C	172.1°C~173.9°C
13.	Residual Solvents	Methanol ≤0.3%	Not detected
		Ethanol ≤0.5%	0.0128%
		Acetone ≤0.3%	Not detected
14.	Total aerobic microbial count	≤10 ³ cfu/g	<10 cfu/g
15.	Yeasts and Moulds	≤10 ² cfu/g	<10 cfu/g
16.	Escherichia coli	Not detected/g	Not detected
17.	Staphylococcus aureus	Not detected/g	Not detected
18.	Salmonella	Not detected/10g	Not detected

We, **Northeast Pharmaceutical Group Co., Ltd.**, certify that this batch of **L-CARNITINE L-TARTRATE** meets the requirements of **Export Standards**.

Supervisor

Final Batch Disposition

Approved

By:

