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

No.29 Shenxiliu Dong Road, Economic Technology Development District, Shenyang, .P.R China. Post code : 110869 FAX: 024-22724536 TEL: 024-22721818

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	$\leq 10^3$cfu/g	<10 cfu/g
15.	Yeasts and Moulds	$\leq 10^2$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:**

东北制药集团股份有限公司 质检专用章