### **CERTIFICATE OF ANALYSIS**

# ACETYL L-CARNITINE HCL

Batch No.: ALC150601 Quantity: 5000KG

Manufacture date: 2019-05-26

Test date: <u>2019-06-02</u> Retest Date: <u>2**019-06-25**</u>

Specifications	Standards	Wealth percentage
Appearance	White crystalline powder	White crystalline powder
PH	2.3-2.6	2.48
Specific rotation (°)	-27.0~-28.5	-27.96
Loss on drying (%)	≤0.5	0.32
Residue on ignition (%)	≤0.5	0.08
Water (%)	≤1.0	0.28
Heavy metals (ppm)	≤10	<10
Cd (ppm)	≤1	4
Pb (ppm)	≤3	<3
Hg (ppm)	≤0.1	<0.1
Arsenic (ppm)	≤1	<1
Total plate count	<1,000cfu/g	<10cfu/g
Yeast and moulds	<100cfu/g	<10cfu/g
Salmonella	Negative	Non detectable
E.Coli	Negative	Non detectable
Croton Betaine HCThink (%)	e≰niastry, Think c	จอ <sub>ั</sub> ยาwill
L-Carnitine Hydrochloride (%)	≤1	0.12
Assay (%)	98.0-102.0	99.13

We certify that this batch of Acetyl L-Carnitine Hcl conforms to in house standards.

## Chemwill Asia co.,Ltd is one of the leading manufacturer in CHINA.

Our main production base is located in Xuzhou industry park. We produce a wide range of organics including Basic chemicals, Fine chemicals, Active pharmaceutical ingredients(APIs), Veterinary, Indole derivatives, Aromatics, Fluorine, Boronic acids, organocatalysts, chiral building blocks, heterocyclic compounds. We are certified both to the ISO 9001 and ISO 14001 Standards, have a safety management system in place.

Our R&D team masters **core technology** for **process-design** of target building block as well as **Tailor-made fine chemicals**. Our manufactory specialised in extreme temperature conditions (-100°C to +300°C), hydrogenations reaction under high pressure, **suzuki coupling reaction**, photochemical reaction, Mitsunobu reactions, enantioselective reactions and asymmetric synthesis.

### Think Chemistry, Think CHemWill



#### **Factory Plant Address:**

High-Tech Industrial park, Chemical Economical Development Zone, Xuzhou, Jiangsu-Province, P.R.China

Shanghai office: (Export Department)

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SHANGHAI, CHINA

Ms Mary Chi - Sales manager

Website: http://www.chemwill.com

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