

## CERTIFICATE OF ANALYSIS

<b>Product Name/产品名称</b>	Alpha Lipoic Acid	<b>Quantity/数量</b>	1000Kg
<b>Batch No./产品批号</b>	202102181	<b>Shelf Life/保质期</b>	2 Years
<b>M.F Date/生产日期</b>	Feb. 18th, 2021	<b>Expiry Date/有效期</b>	Feb. 17th, 2023
<b>Analysis Basis/检测依据</b>	USP	<b>CAS No./CAS号码</b>	1077-28-7

Characters/性状	Reference/检测方法	Standard/标准	Result/结果
Appearance/外观	Visual	Slightly yellow crystal powder	Conforms
Taste/滋味	Organoleptic	Characteristic	Conforms

Assay/含量	Reference/检测方法	Standard/标准	Result/结果
Assay/含量	HPLC	98.0-101.0% (calculated with anhydrous substance)	99.10%

Tests/检测项目	Reference/检测方法	Standard/标准	Result/结果
Particle Size/细度	80 mesh screen	Min. 95% pass 40 mesh	Conforms
Loss of Drying/干燥失重	USP<921>	Max. 0.20%	0.05%
Residue on ignition/灼烧残渣	USP<281>	Max. 0.10%	0.02%
Melting point/熔点	USP<741>	60°C to 62°C	61.8°C
Specific rotation/旋光度	USP<781>	-1.0° to +1.0°	0
Heavy Metals/重金属	USP<231>	Max. 10 ppm	< 10 ppm
Lead/铅	USP<2232>	Max. 3 ppm	< 1 ppm
Cadmium/镉	USP<2232>	Max. 1 ppm	< 1 ppm
Mercury/汞	USP<2232>	Max. 0.1 ppm	< 0.1 ppm
Total Aerobic/总菌落	USP<2021>	Max. 1000 cfu/g	< 10 cfu/g
Mold and Yeast/霉菌酵母菌	USP<2021>	Max. 100 cfu/g	< 10 cfu/g
E. Coli/大肠杆菌	USP<2022>	Negative/1g	Conforms
*Salmonella/25g/沙门氏菌	USP<2022>	Negative/25g	Conforms

Tests/检测项目	Reference/检测方法	Standard/标准	Result/结果
Limit of residual solvents/残留溶剂的限量	GC	Cyclohexane ≤3880 ppm	700 ppm
	GC	Ethyl Acetate ≤5000 ppm	40 ppm

Tests/检测项目	Reference/检测方法	Standard/标准	Result/结果
Single Impurity/单一杂质	HPLC	Max. 0.10%	0.01%
Total Impurities/总杂质	HPLC	Max. 2.0%	0.02%
Limit of polymer content/聚合物的限度	TLC	Conforms	Conforms

<b>Conclusion/结论</b>	Conform with specification.
<b>Storage/存储</b>	Store in cool, dry, enclosed, clean storage areas. Away from strong direct light.
<b>Packing/包装</b>	Packed in paper-drums with two food grade plastic-bags inside, N.W.25Kg/Drum.

<b>Statements/声明</b>
Non-Irradiated, Non-ETO, Non-GMO, Non-Allergen
As a natural product, there may be color variations from lot to lot due to crop fluctuations and harvest.
The item marked with * is tested at a set frequency based on risk assessment.

