

CERTIFICATE OF PRODUCT ANALYSIS

No. : REC-ZL-G6102 (05)

Product: <u>Caffeine (Anhydrous)</u>	Batch No. : <u>1031512098</u>	Quantity: <u>1000 kg</u>
Analysis Standard: <u>BP2015, EP8.0, USP38</u>	Analysis Date: <u>2015.12.24</u>	Report Date: <u>2015.12.29</u>
Mfg. Date: <u>2015.12</u>	Retest Date: <u>2019.11</u>	
Analysis Contents	Analysis Standards	Analysis Results
【Characters】		
Appearance	White or almost white, crystalline powder (BP/EP) or silky, white or almost white, crystals	White crystalline powder
【Identification】		
A. Melting point	234~239°C (BP/EP)	236.1~236.9°C
B. Infrared Absorption	Conforms to the caffeine Reference Spectrum (BP/EP)	Pass
C. Loss on drying	See Tests (BP/EP)	Pass
【Tests】		
Appearance of solution	Clear, colourless (BP/EP)	Pass
Heavy metals	≤20ppm (BP/EP)	<10ppm
Sulphates	≤500ppm (BP/EP)	<500ppm
Related substances		
-Each impurity A, B, C, D, E, F	≤0.10% (BP/EP)	<0.10%
-Unspecified impurities	≤0.10% (BP/EP)	<0.10%
-Total impurities	≤0.1% (BP/EP)	<0.1%
Acidity	Not more than 0.2ml of 0.01M sodium hydroxide (BP/EP)	<0.2ml
Organic impurities		
-Individual impurities	≤0.1% (USP)	<0.1%
-Total impurities	≤0.1% (USP)	<0.1%
Loss on drying	≤0.5% (BP/EP)	0.11%
Residue on ignition	≤0.1% (USP)	0.04%
【Assay】	98.5%~101.0% (USP)	99.9%
Conclusion: The above product conforms to BP2015, EP8.0, USP38 requirement on Caffeine		



Chief of Quality Analysis Dept:

Rechecker: 王红梅

Reporter: 张新

Approved by quality department

As received from our supplier - Certifié conforme à l'original.

Product and Batch Informations

Product Name	L-theanine		
Batch	20160301	Quantity	100kg
N° CAS	3081-61-6	Country of origin	China
MF Date	01/03/2016	Expiration date	28/02/2018

ANALYSIS ITEM	SPECIFICATION	RESULT	TEST METHOD
Active Ingredients			
Assay	98-102%	99,27%	HPLC
Physical Control			
Appearance	white crystalline powder	Conforms	Visual
Solubility (1.0g/20ml H2O)	Clear colorless	Conforms	Visual
Chemical Control			
Loss on drying	NMT 0,5%	0,15%	CP2010
Specific rotation	+7,7°~+8,5°	+8,01°	CP2010
Residue on ignition	NMT 0.20%	0,04%	CP2010
Chloride	NMT 0.02%	<0,02%	CP2010
Melting point	202-215°C	206-207°C	CP2010
pH	5,0-6,0	5,35	CP2010
Heavy Metals	NMT 10ppm	Conforms	CP2010
Lead (Pb)	NMT 3ppm	Conforms	CP2010
Arsenic (As)	NMT 2ppm	Conforms	CP2010
Cadmium(Cd)	NMT 1ppm	Conforms	CP2010
Mercury (Hg)	NMT 0,1ppm	Conforms	CP2010
Microbiological Control			
Total aerobic microbial	20 000cfu/g Max	Conforms	AOAC
Total yeast and mould	200cfu/g Max	Conforms	AOAC
Salmonella	Absent in 10g	Conforms	AOAC
E.Coli	Absent in 1g	Conforms	AOAC
Allergens/GMO/Irradiation			
Allergens	Allergen free/specify if any	Conforms	
GMO	Non OGM	Conforms	
Irradiation	Non Irradiation	Conforms	
Packing and Storage			
Packing	Pack in paper-bag and two plastic-bags inside. 25kg/bag.		
Storage	Store in a well-closed container away from moisture.		

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Certificate of Analysis
L-Theanine

Batch	Manufactured	Expiration	Quantity
2K160112	12/01/16	11/01/18	500 Kg

Appearance	White crystalline powder	White crystalline powder
Identity[IR]	Authentic	Conforms
Assay [HPLC]	98.0% ~ 102.0%	99.55%
Melting Point	210.0 ~ 215.0°C	210.0 °C
Specific Rotation [α] _{20D}	+7.5° ~ +8.5°	+8.16°
PH (1% H ₂ O)	5.0 ~ 6.0	5.49
Heavy Metals	≤10 ppm	<10 ppm
Arsenic	<1ug/g	<1ug/g
Chloride	<0.02%	<0.02%
Sulfate	≤0.05%	<0.05%
Moisture	≤2.0%	<1.0%
Residue on ignition	≤0.2%	<0.2%
Solubility(1.0g/20ml water)	Colourless, basic transparent	Confirmed
Microbial:		
Total plate count:	≤1000g	<1000/g
Mould&yeast	≤100g	<100/g
E.Coli:	Negative	Negative
Salmonella:	Negative	Negative

Conclusion: The product conforms to JP2000standar.

Remarks :Requirements on storage: dry and sealed.

CAS No.: 3081-61-6

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CERTIFICATE OF ANALYSIS

Magnesium stearate EP7, USP 34/NF 29, E 470b

Batch	Manufactured	Expiration
16000706/0	29/03/16	29/03/18

Content Mg (EP)%	4.0-5.0	4.50
Content MgO %	6.5-11.0	7.47
Identification A (EP) °C	53.0-90.0	56.0
Identification B (EP) mg KOH/g	195.0-210.0	201.00
Identification C (EP)	Complies	Complies
Identification D (EP)	Complies	Complies
Acidity or alkalinity(EP)	Complies	Complies
Cl (EP)%	max. 0.1	max. 0.1
SO4 (EP)%	max. 1.0	max. 1.0
Pb (E 470b)ppm	max. 2	max. 2
Hg (EP)ppm	max. 1	max. 1
Cd (EP)ppm	max. 1	max. 1
Ni (EP)ppm	max. 5	max. 5
As (E 470b)ppm	max. 3	max. 3
Heavy metals (as Pb) (EP) ppm	max. 10	max. 10
Loss on drying(EP) %	max. 6.0	2.10
Specific surface area (BET) m2/g	1.0 -4.0	2.29
Microbial impurities (ex works)	Complies	Complies
Total aerobic count (ex works) cfu/g	max. 10(3)	100
Salmonella (ex works)	absent	Complies
E.coli (ex works)	absent	Complies
Yeast & Moulds count (ex works) cfu/g	max. 10(2)	50
Fatty acid composition(EP)	Complies	Complies
Fatty acid content(C16+C18)(EP)%	90.0 -100.0	97.17
Fatty acid content(C18)(EP)%	40.0 - 100.0	69.11
Unsaponifiables (E 470b) %	max. 2.0	0.4
Free alkali (as MgO) (E 470b) %	max. 0.1	0.0
Free fatty acid (as oleic acid) (E 470b) %	max. 3.0	1.0
Residual solvent impurities(CPMP/ICH/283/95)		None

The buyer is responsible to test each batch to ensure the product is suitable for their specific purpose.
Meets with Ph.Eur. 7, USP 34/NF 29, E470b

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