



PO #: 16-5694
 Customer Part #: 100177 Rev 6 4-8-2014
 Ship Date: 12/8/15
 Shipment #: 0000007037

Description: Turmeric Extract 85%Curcuminoids Ethanol	Lot #: 918150911
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	<u>Standard</u>	<u>Result</u> *
<u>Physical Properties</u>		
Appearance	Yellow-Orange Powder	Complies
Identification	Positive	Positive
Extraction Solvent	Ethanol	Ethanol
Carrier Used / Plant Part	None/Root	None/Root
Latin Name	Curcuma longa L.	Curcuma longa L.
Bulk Density Loose (Target, gm/cc)	>= 0.4 <= 0.7	0.7
Bulk Density Tap (Target, gm/cc)	>= 0.5 <= 0.9	0.7
Particle size thru # 20 (%)	>= 90	Complies
<u>Analytical</u>		
Assay (Total Curcuminoids, %)	>= 85.0 <= 95.0	88.0
Assay (Curcumin, %)		78.0
Assay (Demethoxycurcumin, %)		8.80
Assay (Bisdemethoxycurcumin, %)		1.25
Loss on drying (%)	<= 5.0	0.9
ROI (%)	<= 1.0	0.06
Heavy Metals (ppm)	<= 10	Complies
Lead (ppm)	<= 0.5	0.055
Arsenic (ppm)	<= 1	0.003
Cadmium (ppm)	<= 0.3	0.002
Mercury (ppm)	<= 0.1	0.013
Pesticides Residue	Conforms	Conforms
Residual Solvent Class 1	None detected	Complies
Residual Solvent Class 2	None detected	Complies
Residual Solvent Class 3 (ppm)	<= 5000	Complies
<u>Microbiological</u>		
APC (CFU/gm)	<= 10000	<10
Yeast/mold (CFU/gm)	<= 1000	<10
E. coli (CFU/gm)	Negative	Negative
Salmonella (25 gm)	Negative	Negative
Coliforms (CFU/gm)	<= 100	Complies
S. aureus (CFU/gm)	Negative	Negative

Storage Conditions

Manufacture date: Sept. 11, 2015
 Expiration date: Sept. 11, 2017
 Storage: Cool dry place sealed in light resistant container



Certificate Of Analysis

Manufactured by
Country of origin
Revision #

Plant # 918
China
Rev 4 05/28/2015

A handwritten signature in black ink, appearing to read 'Warren K. Majerus', is written over a horizontal line.

Approved By:

Warren K. Majerus
VP Quality Assurance

Date: 12/4/2015

* Test results based on information supplied by the manufacturer, unless otherwise noted.

** Based on third party testing lab results.

*** Based on results from Pharmore's sampling protocol.

The information contained in this certificate of analysis is believed to be accurate and is offered in good faith. Pharmore Ingredients, however, cannot assume any guarantee against natural product variations, patent infringement, liabilities or risk involved from the use of this product. Customers' assume all risk and liability with the use of this product.

CERTIFICATE OF ANALYSIS
Curcumin 85% Curcumin (HPLC) (granulation)

Batch No.: Cjh20150911 Manufacture Date: 20150911 Expiry Date:20170910

General Information			
Part Used	Root	Solvents Used	Water&Ethanol
Botanical Source	<i>Curcuma longa L.</i>	Country Of Origin	China
ITEMS	SPECIFICATION	METHOD	TEST RESULTS
Physical&Chemical Data			
Color	Yellow-orange	Organoleptic	Conform
Odour	Characteristic	Organoleptic	Conform
Appearance	Powder	Organoleptic	Conform
Analytical Quality			
Identification	Identical to R.S. sample	HPTLC	Identical
Total Curcuminoids	≥85.0%	HPLC(on anhydrous basis)	88.02%
Curcumin			77.96%
Demethoxy curcumin			8.81%
Bis-demethoxy curmin			1.25%
Sieve analysis	100 % through 20 mesh	USP34<786>	Conform
Water(KF)	≤5.0 %	Eur.Ph.7.0 [2.5.12]	0.89%
Total Ash	≤1.0 %	Eur.Ph.7.0 [2.4.16]	0.06%
Bulk density	40~70 g/100mL	Eur.Ph.7.0 [2.9.15]	66g/100mL
Tap density	60~90g/100mL	Eur.Ph.7.0 [2.9.15]	72g/100mL
Contaminants			
Lead (Pb)	≤0.5 mg/kg	Eur.Ph.7.0<2.2.58>ICP-MS	0.0551 mg/kg
Arsenic (As)	≤1.0 mg/kg	Eur.Ph.7.0<2.2.58>ICP-MS	0.0025 mg/kg
Cadmium (Cd)	≤0.3 mg/kg	Eur.Ph.7.0<2.2.58>ICP-MS	0.0018mg/kg
Mercury (Hg)	≤0.1 mg/kg	Eur.Ph.7.0<2.2.58>ICP-MS	0.0126 mg/kg
Solvents Residue	Meet Eur.Ph.7.0 <5.4>	Eur.Ph 7.0<2.4.24>	Conform
Pesticides Residue	Meet USP Requirements	USP34 <561>	Conform
Microbiological			
Total Plate Count	≤10000 cfu/g	USP34 <61>	10 cfu/g
Yeast &Mold	≤1000 cfu/g	USP34 <61>	10cfu/g
E.Coli.	Negative	USP34 <62>	Conform
Salmonella	Negative	USP34 <62>	Conform
General Status			
Non-Irradiation	≤700	EN13751:2002<PSL>	425
Packing&Storage	Packed in paper-drums and two plastic-bags inside. N.W:25kgs .I.D.35×H51cm; Store in a well-closed container Away from moisture,light, oxygen.		
Shelf life	24 months under the conditions above and in its original packaging.		
Manufacturer	Shaanxi Jiahe Phytochem Co., Ltd. Xi'an, P.R. China.		

Quality Assurance Officer

