

CERTIFICATE OF ANALYSIS

1. Name of the Product : Curcuma Longa, Turmeric oleoresin water soluble.
 2. Strength : 8.5%
 3. Batch Number : KH/CL/001/06
 4. Mfg. Date : September.-2006
 5. Date of Analysis : September.-2006
 6. Part of the Plant Used : Rhizome

Sr. No.	Test	Results	Standards
A	Physio chemical Tests		
1.	Description	Reddish brown thick paste with Characterisites odour & Characteristics taste.	Reddish brown thick paste with Characteristics odour & Characteristics taste.
2.	Identification Test – by TLC Method	Complies	Positive
3.	Water Content	4.04%	-----
4.	Water Solubility	Complies	Soluble
5.	Alcohol Solubility	-----	-----
6.	pH (1% w/v aqueous solution)	6.72	5-7
B	Active Component		
7.	Assay by Spectrophotomerter Method	% of total Cucurminoids – 8.98%	NLT 8.5%
	Total Curcuminoids composition :		
	Bis Demethoxy Curcumin	0.449 %	5 % of total Curcuminoids
	Demethoxy Curcumin	1.7062 %	19 % of total Curcuminoids
	Curcumin	6.8248 %	76 % of total curcuminoids
	Others:		
	(a) % of Sodium salt – A.A.S.	0.0223%	-----
	(b) Oil Content	8.4%	-----
	(c) Other extractives of raw material and Emulsifyer	78.5577 %	-----
C	Limit Test		
8.	Heavy Metals		
	(a) Arsenic	Complies	NMT 1 ppm
	(b) Lead	Complies	NMT 10 ppm
D	Microbiological Tests		
9.	Total Plate Count	50 cfu/gm	NMT-1000cfu/gm
10.	Yeast/Molds	3 cfu/gm	NMT-100cfu/gm
11.	E. Coli	Absent	Absent
12.	Salmonella	Absent	Absent
13.	Total Coliforms	Absent	Absent

OPINION OF ANALYST: The above material complies with the prescribed standards.

Analysed By*

Approved By*

- Computer copy. No signature.

STANDARD SPECIFICATIONS

CURCUMIN 95 % POWDER

Source: Curcuma longa

Part of the Plant Used: Rhizomes

Origin: India

Sr. No.	Characteristic	Specification	Test Method
Physical Properties			
1.	Identification	Positive	TLC
2.	Appearance	Fine Powder	Visual
3.	Colour	Yellowish orange	Visual
4.	Odour	Characteristic	Organoleptic
5.	Taste	Characteristic	Organoleptic
6.	Particle Size	NLT 90% (through 80 mesh)	80 mesh screen
7.	Bulk Density	0.3 to 0.6	USP XXIII
Chemical Properties			
1.	Total Curcuminoids	NLT- 95%	HPLC Method
2.	Loss on Drying	NMT- 6%	USP XXII (Vacuum oven)
3.	pH	5-8	USP XXIII
4.	Ash content	NMT-6%	USP XXIII
Solubility			
1.	In Water @ 90°C	Insoluble	IP
2.	In Alcohol	Slightly Soluble	IP
Heavy Metals			
1.	Total Heavy Metals	NMT 10 ppm	USP XXIII
2.	Lead	NMT 2 ppm	USP XXIII
3.	Mercury	NMT 1 ppm	USP XXIII
4.	Arsenic	NMT 1 ppm	USP XXIII
5.	Cadmium	NMT 0.3 ppm	USP XXIII
Microbiology Analysis			
1.	Total Plate Count	NMT 1000 cfu/gm	AOAC BAM
2.	Yeast & Mould	NMT 100 cfu/gm	AOAC BAM
3.	E.Coli	Absent	AOAC BAM
4.	Coliforms	NMT 10/gm	AOAC BAM
5.	Salmonella	Absent	AOAC BAM

- ✓ **OPINION OF ANALYST** : The above material complies with the prescribed standards
- ✓ **GMO STATUS** : Non GMO
- ✓ **IRRADIATION STATUS** : Non Irradiated.
- ✓ **SHELF LIFE** : 24 months from date of Manufacturing under given storage condition.
- ✓ **KOSHER CERTIFICATE** : Yes
- ✓ **HALAL CERTIFICATE** : Yes
- ✓ **STORAGE** : At room temperature. Away from Sunlight and Moisture in tightly closed container.

STANDARD SPECIFICATIONS

CURCUMIN 95 % GRANULAR

Source: Curcuma longa Part of the Plant Used: Rhizomes Origin: India

Sr. No.	Characteristic	Specification	Test Method
Physical Properties :			
1.	Identification	Positive	TLC
2.	Appearance	Orange yellow granules	Visual
3.	Loss on Drying	NMT-2%	USP XXII (Vacuum oven)
4.	Bulk Density	Tapped (Between 0.50 – 0.90 gm/ml)	IP
		Loose (Between 0.30 – 0.80 gm/ml)	IP
5.	Sieve Test	(a) 20 mesh: NLT 100%	IP
		(b) 40 mesh: NLT 95%	IP
		© 60 mesh: NLT 80%	IP
Chemical Properties:			
1.	Total Curcuminoids	NLT-95%	HPLC
2.	Ash content	NMT-1%	USP XXIII
3.	Melting Range	Between - 172°C to 178°C	IP
Solubility			
1.	In Water @ 90°C	Insoluble	IP
2.	In Alcohol	Soluble	IP
Heavy Metals			
1.	Total Heavy Metals	NMT 10 ppm	USP XXIII
2.	Lead	NMT 2 ppm	USP XXIII
3.	Mercury	NMT 1 ppm	USP XXIII
4.	Arsenic	NMT 1 ppm	USP XXIII
5.	Cadmium	NMT 0.3 ppm	USP XXIII
Microbiology Analysis			
1	Total Plate Count	NMT 1000 cfu/gm	AOAC BAM
2	Yeast & Mould	NMT 100 cfu/gm	AOAC BAM
3.	E.Coli	Absent	AOAC BAM
4.	Coliforms	NMT 10/gm	AOAC BAM
5.	Salmonella	Absent	AOAC BAM

- ✓ **OPINION OF ANALYST** : The above material complies with the prescribed standards
- ✓ **GMO STATUS** : Non GMO
- ✓ **IRRADIATION STATUS** : Non Irradiated.
- ✓ **SHELF LIFE** : 24 months from date of Manufacturing under given storage condition.
- ✓ **KOSHER & HALAL CERTIFICATE** : Yes
- ✓ **STORAGE** : At room temperature. Away from Sunlight and Moisture in tightly closed container.

STANDARD SPECIFICATIONS

TURMERIC OLEORESINS 30 %

1. Name of the Product : Curcuma Longa, Turmeric oleoresin 30%.
2. Strength/Extract Ratio : 8:1
3. Part of the Plant Used : Rhizomes

Sr. No.	Test	Standards	Test Methods
A. Physical Properties			
1.	Description	Dark Brown colour thick paste with Characteristic odour & taste.	Visual
2.	Identification	Positive	TLC
3.	Water Solubility	-----	IP
4.	Alcohol Solubility	Soluble	IP
5.	pH (1% w/v aqueous solution)	5-7	USP XXIII
B. Active Component			
1.	Total Curcuminoids	NLT 30%	HPLC
C. Heavy Metals Analysis			
	(i) Total Heavy Metals	NMT 10 ppm	USP XXIII
	(ii) Lead	NMT 2 ppm	USP XXIII
	(iii) Mercury	NMT 1 ppm	USP XXIII
	(iv) Arsenic	NMT 1 ppm	USP XXIII
	(v) Cadmium	NMT 0.3 ppm	USP XXIII
D. Microbial Analysis			
1.	Total Plate Count	NMT-1000cfu/gm	AOAC BAM
2.	Yeast/Molds	NMT-100cfu/gm	AOAC BAM
3.	E. Coli	Absent	AOAC BAM
4.	Salmonella	Absent	AOAC BAM
5.	Total Coliforms	Absent	AOAC BAM

- ✓ **OPINION OF ANALYST** : The above material complies with the prescribed standards
- ✓ **GMO STATUS** : Non GMO
- ✓ **IRRADIATION STATUS** : Non Irradiated.
- ✓ **SHELF LIFE** : 24 months from date of Manufacturing under given storage condition.
- ✓ **KOSHER & HALAL CERTIFICATE** : Yes
- ✓ **STORAGE** : At room temperature. Away from Sunlight and Moisture in tightly closed container.