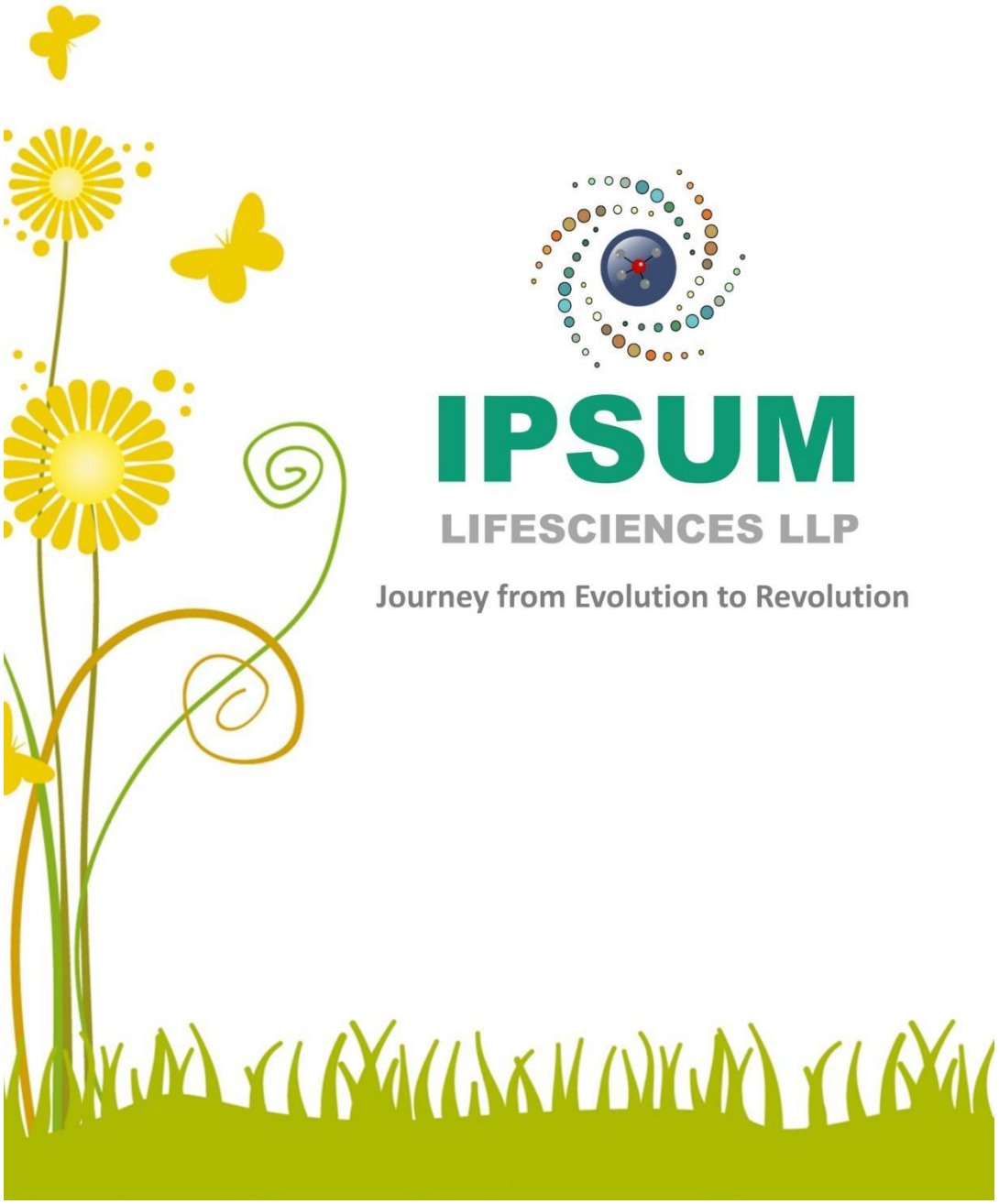


IPSUM

LIFESCIENCES LLP

Journey from Evolution to Revolution

"We're building a culture rooted in transparency, innovation and teamwork."

About IPSUM

Ipsum Lifesciences LLP is the organization in India to integrate basic and translational science capabilities, where basic science meet technology and amalgamates with each other to add a new dimension to Bioprocess Technology and Bioengineering. We are involved in the development and commercialization of innovative products and processes for bio/chemical molecules.

Ipsum Lifesciences has its humble beginnings in 2018 and established itself as India's trusted innovative manufacturing process solutions provider. Over the year, we have solidified our position as a reliable brand providing innovative high-quality products and process solutions. Today, we are proud to be serving leading clients across the pharmaceuticals, bio-pharmaceuticals, chemical and biotech industries.

Our commitment towards innovative research, quality, scalability, and re-producibility coupled with vast experience has enabled us to carve out a niche for ourselves. The great number of happy clients are a testimony to our success story.

Our unwavering focus lies in providing utmost satisfaction to our clients by offering highly differentiated, yet customized solutions. Courtesy our skilled workforce and partnerships with renowned global companies like Mitsubishi Chemical Corporation, Japan.

VISION

Disruptive Technology

Unexpectedly Displaces established technology

Creates a new market and Value Network

Targets customers who have needs that were previously unserved by existing incumbents.

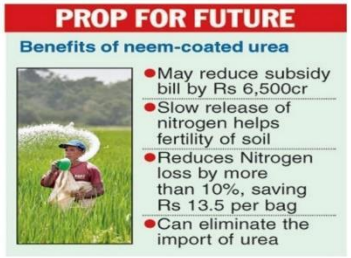
Quantum Change Technology

Sudden highly significant breakthrough

Quick Universal Acceptance

Game Changing

Social Impact



Improvement in Quality of Human Life

Environmental
Economic
Health

MISSION

Assist

Connect & Assist different organizations to grab market opportunities fro their IP and Open Knowledge

Capitalize

Capitalize on wealth of emerging technologies developed in US, Japan, Germany and India (Own Technology)

Leverage

Identify & Leverage High growth economic opportunities in India

Create

Create Expanded Wealth for IP Owners & Our Stackholders

Our Business

Process Chromatography

Chromatography based process development.

Purification of Organic / In-organic Bio/Chemical molecules of Natural, Recombinant and Synthetic origin used in Food, Pharmaceutical and Neutraceutical Industries :

1. Adsorption Chromatography
2. Displacement Chromatography
3. Kinetic Chromatography

CRAMS

Contract Research, Development and Manufacturing Services.

Manufacturing Process Translation, Demonstration, Scale-up, Execution and Validation services for therapeutic products like :

1. Antibiotics and Peptides
2. Herbal Extracts
3. Small Molecules

Product Engineering

Competitive advantages for Target specific and Multifunctional products.

Segmented in

1. Anti–Diabetic
2. Anti–Cancer
3. Anti–Hangover and Liver Tonic
4. Anti–Oxident
5. Laxative

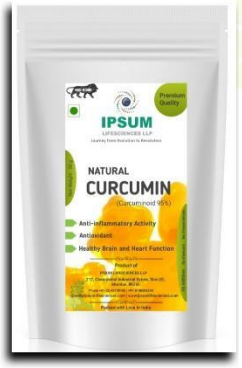
"Inspire to care about the individual, organization, and community."

Products

Supplements for Health and Nutrition

Natural Mix Tocopherols

Natural Curcumin



Water Soluble Curcumin

"Empowerment to shape innovation and create Value."

VIT-E

Natural Mix Tocopherol

INS No. - 307b & E No. - E306

Benefits

Natural mixed tocopherols (a mixture of alpha, beta, gamma and delta "d" forms) are excellent natural antioxidants.

It prevents rancidity issues in food to retain original taste, flavor & overall quality for food and neutraceutical products.

Bears strong antioxidant and nourishing properties which enable its use in Topical / cosmetic applications like creams, lotions, moisturizers, shampoos, etc.

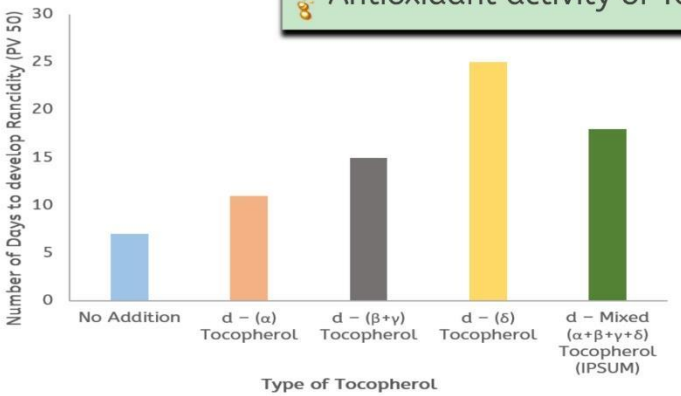
Effectively prevents skin & hair from Free Radical damage. Also provides protection from harmful UV

Key Features

- Indian raw material source and production
- No regulatory usage limits, unlike synthetic antioxidants such as BHA, BHT and THBQ
- Allowed as an ingredient in or on processed products labeled as “organic” or “made with organic” under §205.605 of the USDA National Organic Program
- Diaoxin and PAH within limit as defined by WHO-PCDD/F-TEQ
- GRAS – Natural mixed tocopherols have long been a part of the human diet

Application

Antioxidant activity of Tocopherols



Biological and Antioxidant activity with respect to various Tocopherols

Tocopherol Type	Biological Activity (IU/mg)	Anti-oxidant activity (with d-Alpha Tocopherol as 100)
d,l – (α) Tocopherol Acetate	1.00	0
d – (α) Tocopherol Acetate	1.36	0
d,l – (α) Tocopherol	1.10	100
d – (α) Tocopherol	1.49	100
d – (β) Tocopherol	0.75	130
d – (γ) Tocopherol	0.15	200
d – (δ) Tocopherol	0.05	300 – 500
d – Mixed (α+β+γ+δ) Tocopherol (IPSUM)	**0.64**	**190-250**

Standard Pack Available

Packed in food grade HPDE drum

Pack size available for the delivery are 5Kg,25kg and 190kg

Available Concentrations

30% Natural Mixed Tocopherol	Powder
30% Natual Mixed Tocopherol	Oil
50% Natural Mixed Tocopherol	Powder
50% Natural Mixed Tocopherol	Oil
70% Natural Mixed Tocopherol	Oil
90% Natural Mixed Tocopherol	Oil

Certificate of Analysis

IPSUM
Lifesciences LLP
Journey from evolution to revolution

217, Champaklal Industrial Estate,
Near Sion Telephone Exchange.
Sion (E). Mumbai- 400 022.
Contact: 022-43159100
Email: info@ipsumlifesciences.com

COA No : IPS/COA/NMT90/19/04/01

Product Name :	Natural Mixed Tocopherol 90% Non-GMO Soy	
Manufacturing Date : Apr - 2019	**Expiery Date :** March - 2022	**Analysis Date :** 15th Apr - 2019
Batch No : IPS/NMT90/SO/19/04/01	**Batch Size :** 500 Kg	**Product Origin :** India

Certificate of Analysis

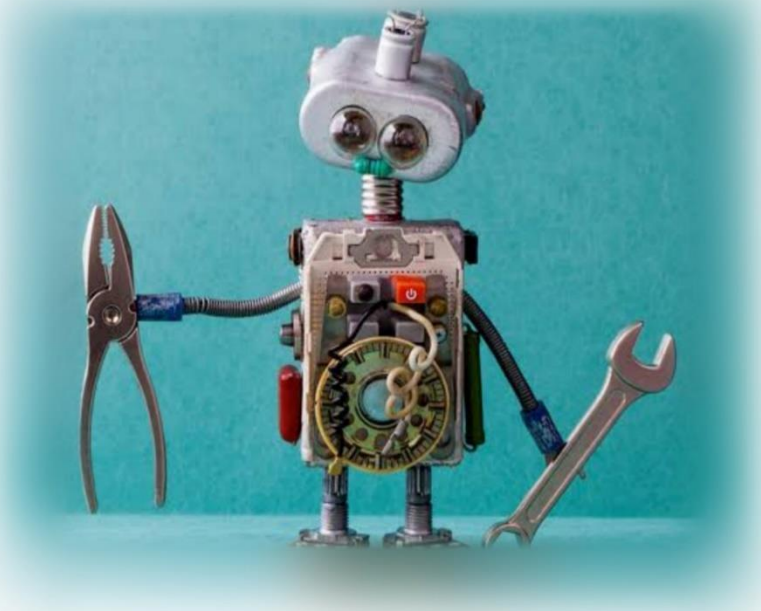
Sr. No.	Parameter	Specification	Method	Result
	A. Physical			
1	Appearance	Yellow to Brownish Red	In house	Conforms
2	Odour	Mild Vegetable Oil Odour	In house	Conforms
	B. Quality Control Data			
3	Identification A	Bright Red to Orange color develops	FCC	Conforms
4	Identification B	Retention time of the third major peak	By GC	Conforms
5	Assay Method	By GC	By GC	Conforms
6	Total Tocopherols	≥ 90 %	By GC	91.20%
7	Non-Alpha Tocopherols	≥ 72 %	By GC	78.30%
8	Inorganic Impurities - Lead	≤ 1.0 ppm	FCC	Conforms
9	Acidity (ml 0.1 N NaOH /g)	Max 1.0 mL	FCC	0.5 mL
10	Specific Rotation [α]D 25	NLT + 20°	FCC	Conforms
	C. Additional Technical Data			
11	Delta	10-35%	By GC	32%
12	Beta + Gamma	50-75%	By GC	58%
13	Alpha	5-20%	By GC	13%
14	Relative Density (20/20 C)	0.90 - 0.96	In house	0.9324
	D. Contaminants			
15	Heavy Metals	≤ 5.0 ppm	by ICP-MS	Conforms
16	Arsenic	≤ 0.2 ppm	by ICP-MS	Conforms
17	Mercury	≤ 0.1 ppm	by ICP-MS	Conforms
18	Cadmium	≤ 0.2 ppm	by ICP-MS	Conforms
19	Pesticide Residues	≤ 0.01 ppm	by ICP-MS	Conforms
20	Sulphated Ash	≤ 0.1 %	by Gravimetry	Conforms

Remarks : The product meets current FCC monograph when tested accordingly.
Packing and Storage : Preserve in tight containers, protected from light

Prepared by (Officer - QC)
Checked By (Executive - QC)
Approved By (HOD - QC)

IPSUM LIFESCIENCES LLP MUMBAI

"Fulfilling all our customer requirements, getting the job done."



Natural Curcumin

Benefits

Natural Curcumin is versatile bioactive compound of turmeric possessing.

Curcumin Boosts Brain-Derived Neurotrophic Factor, Linked to Improved Brain Function and a Lower Risk of Brain Diseases.

Curcumin is strongly anti-inflammatory. In fact, it's so powerful that it matches the effectiveness of some anti-inflammatory drugs, without the side effects.

Curcuminoid have a potential to prevent heart disease, Alzheimer's and cancer.Interestingly, curcumin can increase brain levels of BDNF.

Supports healthy functioning of

Joints

Kidney

Brain

Skin

Heart

Uniqueness

Good Business Practices

High quality Natural Curcuminoids >95% with superior standards and specifications of JETRO.

Controlled farming and sourcing of raw material.

- ¬ Use of high quality raw material (free of pesticides and Aflatoxin).
- ¬ Single residual solvent concentration i.e. <100 ppm.
- ¬ Petroleum solvent free
- ¬ Heavy metal concentrations with in controlled limits for final product.

Raw material source

To achieve the consistency in final product quality, the trusted and high quality materials were screened and stored for processing.

Final Product stock

Final product i.e. Curcuminoid 95% are stored in high standard warehouse to maintain the quality for long term storage.

Standard Pack sizes

Packed in double layered food grade polyethylene bag followed by HPDE drum.
Pack size available for the delivery are 5Kg,10kg and 25kg

Water Soluble Curcumin

Certificate of Analysis

Bioavailable Curcumin

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Email: info@ipsumlifesciences.com

COA No : IPS/COA/NCU95/19/04/01

Product Name :	Natural Curcumin > 95% Non-GMO	
Manufacturing Date : May - 2019	**Expiery Date :** March - 2023	**Analysis Date :** 15th May - 2019
Batch No : IPS/NCU95/TR/19/05/01	**Batch Size :** 500 Kg	**Product Origin :** India

Certificate of Analysis

Sr. No.	Parameter	Specification	Method	Result
		A. Physical		
1	Appearance	Orange Yellow to Yellow colored, Free-flowing Powder	In house	Conforms
		B. Quality Control Data		
2	Identification	To Pass the test (three distinct peak)	By HPLC	Conforms
3	Assay on Dry basis	Total Curcuminoids ≥ 95.0 % (w/w)	By HPLC	Conforms
4	Moisture	< 1.0 % (w/w)	USP <921> - II	Conforms
5	Total Ash Content	< 0.5 % (w/w)	USP <561>	0.30%
6	Volatile Oil	< 2.0 % (w/w)	USP <561>	1.50%
7	Loss on Drying	< 0.5 % (w/w)	USP <467>	0.20%
8	Bulk density (Loose) g/cc	0.20 - 0.60	USP <616> - I	0.43
9	Bulk density (Tapped) g/cc	0.25 - 0.90	USP <616> - I	0.44
		C. Additional Technical Data		
10	Bis-Demethoxy-curcumin	2.0 - 5.0 (% HPLC Area)	By HPLC	3%
11	Demethoxy Curcumin	5.0 - 17.0 (% HPLC Area)	By HPLC	13%
12	Curcumin	70.0 - 85.0 (% HPLC Area)	By HPLC	84%
		D. Contaminants		
13	Lead	< 3.0 ppm	by ICP-MS	Absent
14	Arsenic	≤ 1.0 ppm	by ICP-MS	Absent
15	Cadmium	≤ 1.0 ppm	by ICP-MS	Absent
16	Mercury	≤ 1.0 ppm	by ICP-MS	Absent
17	Organochlorine Pesticides	To comply USP	AOAC / USP	Complies
18	Organophosphorous Pesticides	To comply USP	AOAC / USP	Complies
19	Synthetic Pyrethroids	To comply USP	AOAC / USP	Complies
20	Aflatoxins (B1 + B2 + G1 + G2)	< 5 ppb	Aflatoxins Test	Complies
		E. Residual Solvent		
21	Ethyl Acetate	< 100 ppm	by GC	78 ppm
22	Isopropyl Alcohol	Not Used	by GC	Absent
23	1,2 - Dichloroethane	Not Used	by GC	Absent
		F. Microbiological analysis		
24	Total aerobic microbial count	< 3000 cfu / g	USP <61> & USP<62> AS PER WHO/Pharma/92 .559/Rev.1 Pg. 49 52	Complies
25	Total Yeast and mould count	< 100 cfu / g		Complies
26	Bile tolerant gram negative bacteria	< 100 cfu / g		Complies
27	*E. Coli* (1 g)	Absent		Complies
28	*Salmonella Sp.* (10 g)	Absent		Complies
29	*S. aureus* (1 g)	Absent		Complies

Remarks : The product meets current FCC monograph when tested accordingly.
Packing and Storage : Preserve in tight containers, protected from light

Prepared by (Officer - QC) | Checked By (Executive - QC) | Approved By (HOD - QC)

IPSUM LIFESCIENCES LLP MUMBAI

Natural Curcumin is known for its versatile bioactivity.

Curcumin is insoluble in water, which makes it difficult to absorb (low bioavailability), thus less effective and limitations of use in liquid formulations.

Large amounts must be taken because only 2% is absorbed in the intestine.

Many turmeric or Curcumin products in the market contain absorption-enhancing chemicals such as Piperine, that can cause irritation of the intestine and promote absorption of other toxic molecules.

What's New

Ipsum's basic & translation research capabilities made it water soluble.

This extends great benefit of curcumin through liquid forumations / IV applications.

Key Features

- Very high solubility; saturation concentration in water is 130 gm / Litre.
- Fastest Solubilization Kinetics i.e. 45 gm / Litre / min.
- Stable water soluble formulations for > 6 months.
- No Nano-merization of active Curcumin.
- 20x more bio-available, and serum concentrations.
- GRAS – Natural curcumin have long been a part of the human diet
- Applications into Beverages, Pharmaceuticals, Nutraceuticals, Food Suplements, Cosmetics.
- Allowed as an ingredient in or on processed products labeled as “organic” or “made with organic” under §205.605 of the USDA National Organic Program

Zero Sugar

Certificates of Analysis

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Contact: 022-43159100
Email: info@ipsumlifesciences.com

COA No : IPS/COA/WSC/19/05/01

Product Name :	Water Soluble Curcumin	
Manufacturing Date : May - 2019	**Expiry Date :** March - 2023	**Analysis Date :** 15th May - 2019
Batch No : IPS/WSC/TR/19/05/01	**Batch Size :** 100 Kg	**Product Origin :** India

Certificate of Analysis

Sr. No.	Parameter	Specification	Method	Result
	A. Physical			
1	Appearance	Orange Yellow to Yellow colored, Free-flowing Powder	In house	Conforms
	B. Quality Control Data			
2	Identification	To Pass the test (three distinct peak)	By HPLC	Conforms
3	Assay on Dry basis	Total Curcuminoids ≥ 3.0 % (w/w)	By HPLC	Conforms
4	Moisture	< 1.0 % (w/w)	USP <921> - II	Conforms
5	Total Ash Content	< 0.5 % (w/w)	USP <561>	0.30%
6	Loss on Drying	< 5.0 % (w/w)	USP <467>	0.20%
	C. Contaminants			
7	Lead	< 3.0 ppm	by ICP-MS	Absent
8	Arsenic	≤ 1.0 ppm	by ICP-MS	Absent
9	Cadmium	≤ 1.0 ppm	by ICP-MS	Absent
10	Mercury	≤ 1.0 ppm	by ICP-MS	Absent
11	Organochlorine Pesticides	To comply USP	AOAC / USP	Complies
12	Organophosphorous Pesticides	To comply USP	AOAC / USP	Complies
13	Synthetic Pyrethroids	To comply USP	AOAC / USP	Complies
14	Aflatoxins (B1 + B2 + G1 + G2)	< 5 ppb	Aflatoxins Test	Complies
	D. Microbiological analysis			
15	Total aerobic microbial count	< 3000 cfu /g	USP <61> & USP<62> AS PER WHO/Pharma/92 .559/Rev.1 Pg. 49-52	Complies
16	Total Yeast and mould count	< 100 cfu / g		Complies
17	Bile tolerant gram negative bacteria	< 100 cfu / g		Complies
18	*E. Coli* (1 g)	Absent		Complies
19	*Salmonella Sp.* (10 g)	Absent		Complies
20	*S. aureus* (1 g)	Absent		Complies

Remarks : The product meets current FCC monograph when tested accordingly.
Packing and Storage : Preserve in tight containers, protected from light

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