



CurcuVail™
More Bio-Available Curcumin

it's different...



Authentic Botanical Extracts

K. PATEL PHYTO EXTRACTIONS PVT. LTD.
Manufacturer of Botanical Extracts & Phytochemicals

Email : info@phytoextractskp.com | Web : www.phytoextractskp.com
Tel. : 0091 22 48822900



Introducing inventive **Curcumin** formula
for advanced **Bioavailability!!**



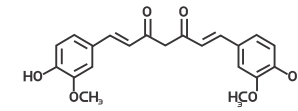
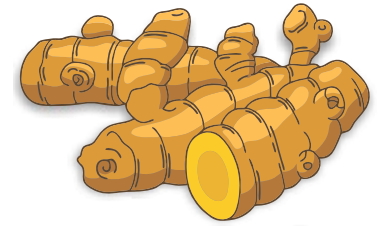
What is Turmeric?

Turmeric (*Curcuma longa*, an Indian spice), a herbaceous plant of ginger family, *Zingiberaceae*, the roots of which has traditionally been used in cooking. Turmeric is a plant that has a very long history of medicinal use, dating back nearly 5000 years where Indian Ayurvedic science recognised it. In Southeast Asia, turmeric is used not only as a principal spice but also as a component in religious ceremonies. Because of its brilliant yellow color, turmeric is also known as "Indian saffron." Of late, modern nutritional and medicine science has begun to recognise its value and importance. This is indicated by the presence of over 6000+ papers and publications in just last three decades. India grows world's 85% Turmeric roots of high quality.

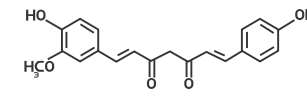
The bioactive constituents of Turmeric are curcumin, demethoxycurcumin, bisdemethoxycurcumin and more than 30 essential oils.

What is Curcumin?

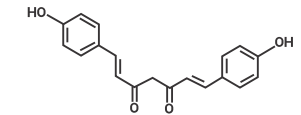
Commercially Curcuminoids are known as Curcumin which contains three polyphenols namely, curcumin, demethoxycurcumin and bis-demethoxycurcumin. Curcumin has diverse therapeutic / pharmacological actions with well documented pharmacokinetics, efficacy & safety.



Curcumin



Demethoxy Curcumin



Bis-demethoxy Curcumin

Mechanism, how it works?

It has interactions with numerous targets, inhibiting activation of transcription factors, down regulation of the activity of multiple kinases, inhibits expression of growth and metastasis promoting genes, cell invasion and adhesion, regulate activities of several enzymes that mediate tumor growth and so on. Curcumin regulates the expression of inflammatory enzymes, cytokines, adhesion molecules, and cell survival proteins.

Benefits

Various studies have shown that Curcumin helps in
 Joint & muscles health,
 Boosts cognitive function,
 Fights inflammation,
 Boosts detoxification,
 Support cardiovascular function,
 and Promotes healthy mood balance.



What is CurcuVail™?

CurcuVail™ is a unique innovative Curcumin that is specially designed using dispersion technology. It has evolved and extended traditional goodness of Curcumin by enhancing its bioavailability.

Why CurcuVail™?

Conventional Curcumin owing to its poor bioavailability leads to lower efficacy in any application made from it.

A highly bio-available and better water dispersible substance helps quicker absorption in human body. The enhanced bioavailable CurcuVail helps design and configures applications that increase its absorption into human body leading to faster end effect.

Value Proposition

Formulations – Use of CurcuVail™ helps to reduce dosage as the higher bioavailability increases efficacy of formulation. This makes the formulation smarter and effective.

Beverages – Higher dispersion attribute will help beverage absorb CurcuVail™ more homogeneously into water. This will give beverage a better color and taste that does not interfere with original product flavor.



Food – CurcuVail™ acts as a natural colorant with its nutritional values intact. It does not interfere with the original taste of the food product.

Confectionery and Bakery – Confectionery and baked products are exposed to higher temperature in their cooking process. CurcuVail™ remains stable with higher heat exposure and retains the product's taste properties.



Premix – CurcuVail™ as an ingredient perfectly blends with any medium as nutrient and absorbs into the water seamlessly. This gives a premix an ideal palatable blend and taste.

Branding – Use of CurcuVail™ will help your end product for appropriate end effective brand communication supported by the above values. There are clinical studies to support the same for authenticity and accuracy.



In a nutshell, the above benefits enable you to make your product smarter and better value for money in the end user's perception.

Salient features

- No Residual solvent.
- No Pesticides residue
- No Odor and Taste of turmeric
- Completely water dispersible
- Non GMO
- Self affirmed GRAS



Bioavailability – Study

Clinical Trial

Objective: To compare bioavailability of CurcuVail with Curcumin 95%.

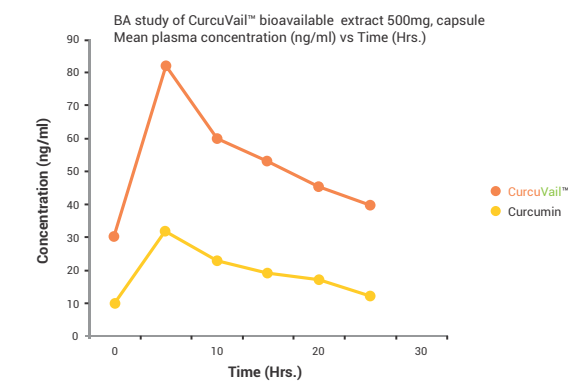
Dose: 500mg

Number of subjects: 24 (two groups of 12 each)

Procedure: An open label, balanced, randomized, two-treatment, two-period, two-sequence, single dose, crossover, relative, bioavailability study of Turmeric Extract (Curcumin) 500mg capsule with Turmeric bio-available extract 500mg capsule of CurcuVail™, in healthy 24 adults human subjects under fasting conditions.

Results:

Mean Plasma concentration (ng/ml) Vs Time (h) of Curcumin.



Cmax: CurcuVail™ showed a significantly higher concentration of Curcumin in blood plasma compared to Curcumin 95%.

The mean concentration of Curcumin was found to be 82ng/ml for CurcuVail™ compared to 36ng/ml for Curcumin 95% at Tmax of around 5 hours.

AUC: CurcuVail™ has substantially significant absorption of Curcumin in the blood as compared to Curcumin 95%.

This study shows that CurcuVail™ is more than 3X times absorbed in the blood or 9X more bioavailable when compared with Curcumin at same concentration.

*"Bioavailability of a bioavailable Curcumin in Healthy Human Volunteers", Published in European Journal of Pharmaceutical and Medical Research, (ejpm,2019, 6,(4), 570-573).

Salient features;

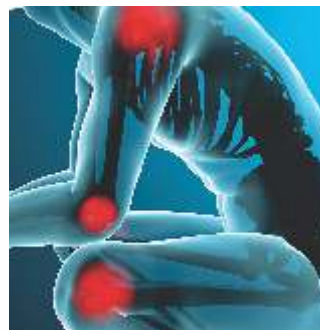
Direct comparison of Curcumin 95% with **CurcuVail™**

The study was designed and conducted as per ICH harmonized guidelines for Good Clinical Practices.

Conducted on two groups of 12 human subjects each.

Studies under progress:

A Prospective, Interventional, Randomized, Parallel, Double blind, Placebo Controlled Clinical Study to evaluate the Efficacy & Safety of Curcumin capsule (**CurcuVail™**) in Patients with Chronic joint pain (Rheumatoid Arthritis).



Objective: To show the efficacy of **CurcuVail™** in Patients with Chronic joint pain (Rheumatoid Arthritis).

Dose : 500mg twice a day

Duration : 12 weeks

Number of subjects : 30

Above study on CurcuVail is at middle stage and expected to be over by June 2019.

A Prospective, Interventional, Randomized, Parallel, Double blind, Placebo Controlled Clinical Study to evaluate the Efficacy & Safety of Curcumin capsule (**CurcuVail™**) in Patients with Cough Due to Chronic Bronchitis.



Objective: To assess the efficacy of **CurcuVail™** capsule in Patients with Cough Due to Chronic Bronchitis.

Dose : 500mg twice a day

Duration : 10 weeks

Number of subjects : 40

Above study on CurcuVail is at middle stage and expected to be over by June 2019.



About Us

K. Patel Phyto Extractions Pvt Ltd., is a member of K. Patel Group of companies. It is NSF-GMP certified manufacturer of Botanical Extracts and Phytochemicals from India. KPPE exports to more than 30 countries and also has a strong presence in the Indian market. KPPE presently offers a portfolio over 40 products.



Plant

Spread across 32 acres of land K. Patel Phyto Extractions facility has been audited by US FDA and NSF-GMP. The ultra modern top of the line machineries installed are capable of charging 5000MT of raw material annually. Well equipped Lab with modern instruments, testing devices and qualified personnel for careful identification of analytical methods. Additionally KPPE offers pesticides testing as per USP and Heavy Metals as per ICP-MS in third party lab. Improvement is a continuous activity so KPPE has an independent R&D and Pilot plant for developmental activities. At K Patel we assure you of Quality, Consistency, Assured delivery and Fair price products.



Sourcing

K. Patel works on 360°SCM to ensure that it offers traceability till farms for our botanical extracts. It has carefully identified the regions for its focused herbs. It educates the farmers to follow GAP (Good Agricultural Practices) and offers guidance to maximize the yields. KPPE also promotes contractual farming for organic herbs.

Sustainability

Sustainability has often been defined as to how biological resources endure and remain diverse and productive. But the recent definition of sustainability goes beyond these narrow parameters. Today, it refers to developing a well-grounded, wholesome model for business through managing economical, social and environmental needs. Sustainability is an integral part of natural product industry & starts with Supplement companies on backward integration till it reaches a point where it benefits the farmers. Sustainability of these farmers is not merely economical now; it is also social and environmental. We at K. Patel work with sustainability at the core of our business. Through our CSR initiatives we ensure education and uplift life of our farmers and villagers near our facility and farming regions.

We have current accreditations from :

