

## Curcumin

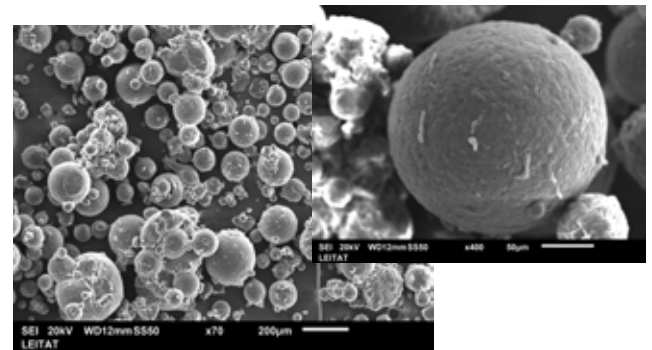
Curcuminoids (curcumin, desmethoxycurcumin, 5'-methoxycurcumin and dihydrocurcumin) are potent antioxidant and anti-inflammatory agents, indicated for the treatment and prevention of numerous conditions such as:

- Rheumatoid arthritis
- Colon cancer
- Appetite loss
- Urinary tract infections

Because of their low aqueous solubility and rapid metabolism, curcuminoids have very low bioavailability even when administered orally at high doses.

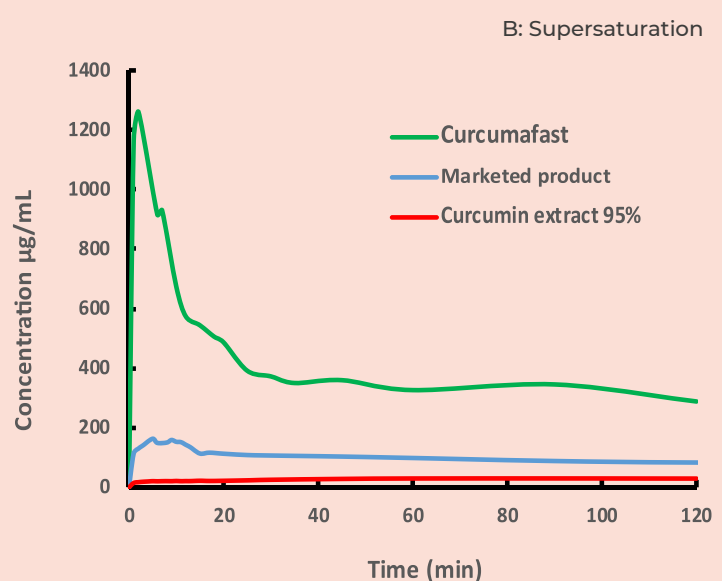
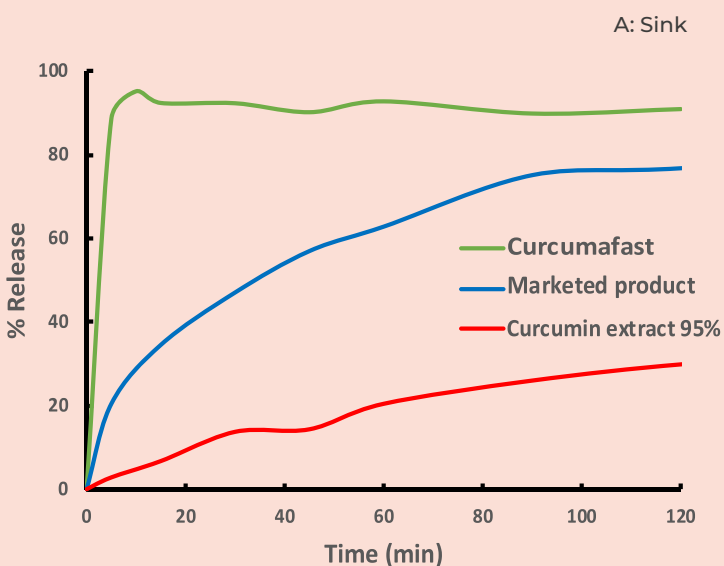
**Curcuma fast** is a micronized powder designed to release the active immediately after oral administration. The powder has an intense orange color, and is formed of regularly shaped microspheres containing 5% curcumin.

Our **in-vitro dissolution** studies in “sink conditions” (A) in pH 6.8 intestinal simulated medium, show that more than 90% curcumin is released from **Curcumafast** microspheres after 10 minutes, compared to only 25% from the reference marketed product.



Electron microscopy images of Curcumafast microspheres.

“Supersaturation kinetic” (B) is an indicator of the capability of formulations to maintain the active molecule in solution, thereby keeping it accessible for absorption. **Curcumafast** exhibits rapid dissolution kinetics: after 2 minutes, solubilized curcumin is 10 and 70 times higher than the marketed product and the extract, respectively. Furthermore, **Curcumafast** can maintain higher concentrations of the active for at least two hours.



CRYO  PAND

Technology

SITEC applies its cryospraying technology to formulate natural extracts by encapsulation into lipid/amphiphilic microparticles with high bioactive load and favorable dissolution profiles.

INFORMATION FOR PROFESSIONAL USE ONLY

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