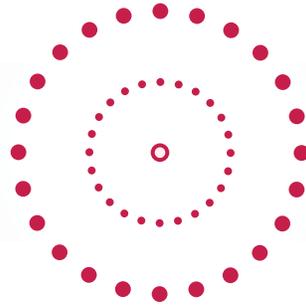


MicroActive® Technology

IMPROVED BIOAVAILABILITY
SUSTAINED RELEASE



UNIFORM ABSORPTION
ENCAPSULATION BY DESIGN

MicroActive® ingredients demonstrate superior uniform absorption, supported by over ten clinical studies. Ingredients are micronized and encapsulated by design using natural starches or polymers to fit the individual characteristic of each ingredient. The micronization phase produces a period of rapid efficient exposure followed by the encapsulation phase that produces a lengthy extended release. Absorption is further enhanced with carriers that assist the active to move through the intestinal wall. The final result is a free flowing powder with the following benefits:

- High cost-effective payload normally 25% to 50%
- Applicable to hydrophobic, hydrophilic and partially hydrophilic ingredients
- Can be formulated with other actives
- Applicable for hard caps and soft gels
- Water dispersible for foods, juices or effervescent applications
- Clinically proven in oral-care products
- By comparison:
 - Does not contain absorption enhancers that might over time increase the absorption of unwanted compounds such as carcinogens
 - Superior sustained release as compared to the most popular advanced formulations on the market

MicroActive Products		Highlights
	2.5% Active	MicroActive® Astaxanthin has 3.6x higher absorption than regular astaxanthin (10% astaxanthin in oil), 24-hour sustained release, uniform absorption, and convenient one day dosing while achieving maximum benefits.
	26% Active	Microactive® CoQ10 is 3.7x times more bioavailable than crystalline CoQ10 and shows 24 hour sustained release. In a clinical study, CoQ10 serum levels doubled in 3 weeks among 100 percent of subjects showing uniform enhanced absorption in all users.
	25% Active	Ten time more bioavailable than 95% curcumin powder. Single dose resulted in detectable amounts of Bisdemethoxycurcumin and Demethoxycurcumin. Well tolerated at high dosage.
	3% Active	Developed to address the issue of poor absorption and quick release, MicroActive® Melatonin shows a 7 hour sustained release in two-stages, an initial rapid release to help fall asleep faster and then a slower sustained release that helps maintains sleep overnight.
	30% Active	Resveratrol may have cardioprotective, antioxidant, anti-inflammatory, neuroprotective and anti-aging activities but it also has low bioavailability – and is rapidly eliminated. MicroActive® formulation with sustained release increased the residence time and absorption.
	62% Active	Human studies showed that Oligonol promotes circulation by relaxing blood vessels, acts as a potent antioxidant, and supports a healthy response to inflammation. MicroActive® Oligonol (50% polyphenol) demonstrated sustained release in dissolution studies, with increased residence time and absorption.
	50% Active	Protects against mitochondrial damage and in so doing protect brain function and retard aging. Pilot human study MicroPQQ® shows an extended release and increase absorption of this water soluble ingredient. Improved absorption is due to increased residence time.