Curcum_X

Turmeric is derived from Curcuma longa rhizomes. Most of the interest in turmeric has been focused on its curcuminoids, primarily curcumin, as it is the principal curcuminoid (exists in the highest concentration) and to a lesser degree bisdemethoxycurcumin and demethoxycurcumin. While curcumin is thought to be the most bioactive compound found in turmeric, turmeric actually contains/provides more that 200 compounds of nutritional interest. They include additional curcuminoids such as atlantone, diarylheptanoids and turmerone, and numerous other bioactive compounds such as monoterpenes, sesquiterpenes, diterpenes, triterpenoids, alkaloids, sterols, fatty acids, and so on.¹

Under standard circumstance, absorption of orally ingested curcuminoid extracts is poor. Therefore, companies have been working hard to develop methods to enhance their bioavailability, with some success. Even so, they limit their offerings to a limited group of curcuminoids.

CurcumP[™] offers a truly transformational product supplying an all-natural turmeric complex, providing an unprecedented range of beneficial turmeric root nutrients, with 5 – 6 times greater bioavailability versus other professional brands.



Curcum[™] supplies a nutrient dense turmeric complex delivering 50% total curcuminoid content, plus turmeric's other naturally occurring compounds, including phenolic compounds, sesquiterpenes, sterols, fatty acids, and more!



Curcumg[™] utilizes a specialized processing technology resulting in a dual phase polar/non-polar emulsion, concentrating turmeric's many nutrients, and enhancing the bioavailability without the use of nanotechnology, including the use of "tweens" and other surfactants that may damage lipid membranes and result in leaky gut.







(800) 231-5777

6801 Biotics Research Drive • Rosenberg, TX 77471 biotics@bioticsresearch.com • www.bioticsresearch.com

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Numerous studies, including human and animal *in-vivo* studies, have reported on the antioxidant effects of turmeric compounds. Turmeric preparations have been found to scavenge peroxides and phenolic oxidants, and inhibit lipid peroxidation induced by chemical agents. Curcumin antioxidant properties are noted by its action as a scavenger of both reactive oxygen species and reactive nitrogen species. *In-vitro* research demonstrates the prevention of oxidative damage to DNA.² Its use has been correlated to the protection of endothelial cells against oxidative stress.³ Other research suggests turmeric compounds other than curcumin contribute antioxidant activity.⁴

Turmeric and its curcuminoid constituents have been found to inhibit lipoxygenase and cyclooxygenase *in-vitro*.^{5,6,7} Results of an animal study indicates that oral administration of curcumin may reduce expression of several cytokines, chemokines, and proteinases known to mediate aneurysmal degeneration, and it has been shown to be an effective inhibitor to the activation and release of NF-kB.^{8,9} *In-vitro* results suggest that curcumin most likely inhibits cell proliferation, cell mediated cytotoxicity, and cytokine production by inhibiting NF-kB target gene involved in induction of these immune responses.¹⁰ It was concluded that curcumin has antioxidant activity and inhibits inflammatory mediators, including NF-kB, cyclooxygenase-2 (COX-2), lipoxygenase (LOX), and inducible nitric oxide synthase (iNOS).^{10,11}

References

- 1. Medicinal Plants-Recent Advances in Research and Development. Editors: Tsay, Shyur, Agrawal, Wu, Wang. Springer Science-Business Media Singapore ©2016
- 2. Shalini, V K and Srinivas L. Lipid peroxide induced DNA damage protection by turmeric (Curcuma longa), Mol Cell Biochem 1987; 77(1):3-10.
- 3. Motterlini R, et al. Curcumin, an antioxidant and anti-inflammatory agent, induces heme oxygenase-1 and protects endothelial cells against oxidative stress. Free Radical Biology and Medicine. 2000 28: 1303-1312.
- 4. Srinivas, I and Shalini, VK. DNA damage by smoke: protection by turmeric and other inhibitors of ROS. Free Radical Biol Med 1991; 11(3): 277-283.
- Flynn DL, Rafferty MF and Boctor AM. Inhibition of 5-hydroxy-eicosatetraenoic acid (5-HETE) formation in intact human neutrophils by naturally occurring diarylheptanoids: inhibitory activities of curcuminoids and yakuchinones. Prostaglandins Leukot Med 1986; 22(3): 357-360.
- 6. Rac C, et al. Inhibition by dietary curcumin of azoxymethane-induced ornithine decarboxylase, tyrosine protein kinase, arachidonic acid metabolism and aberrant crypt foci formation in the rat colon. Carcinogenesis 1993; 14 (11): 2219-2225.





- Ammon HP, et al. Mechanism of anti-inflammatory actions of curcumine and boswellic acids. J Ethnopharmocal 1993; 38 (2-3): 113-119.
- 8. Parodi FE, et al. Oral administration of diferuloylmethane (curcumin) suppresses proinflammatory cytokines and destructive connective tissue remodeling in experimental abdominal aortic aneurysms. Ann Vasc Surg 2006; 20(3): 360-368.
- 9. Sing s, Aggarwal BB. Activation of transcription factor NF-kB is suppressed by curcumin (diferuloylmethane). J Biological Chem. 1995 270 (42): 24995-25000.
- Gao X, et al. Immunomodulatory activity of curcumin suppression of lymphocyte proliferation, development of cell-mediated cytotoxicity, and cytokine production in vitro. Biochemical Pharmacology. 1 July 2004. 68(1): 51-61.
- Benhmark S. Curcumin, An Atoxic Antioxidant and Natural NFkB, Cyclooxygenase-2, Lipooxygenase, and Inducible Nitric Oxide Synthase Inhibitor: A Shield Against Acute and Chronic Diseases. 2006 Jan-Feb;30(1):45-51. DOI: https://doi.org/10.1177/014860710603000145.

CurcumR[™] is available in 60-count bottles (#8012).



Supplement Facts

Serving Size: 2 Capsules Servings Per Container: 30

500 mg	*
20 mcg	*
20 mcg	*
	20 mcg

Other ingredients: Vegetarian capsule shell (modified cellulose) and silica

† Emulsified Curcuma longa root extract is prepared using a non-chemical process which creates an excellent dual-phase, polar/non-polar emulsion for transport through the lipid membrane

+++ Specially grown, biologically active vegetable culture containing naturally associated phytochemicals including polyphenolic compounds with SOD and catalase, dehydrated at low temperature to preserve associated enzyme factors.

This product is gluten, dairy and GMO free.

RECOMMENDATION: Two (2) capsules each day as a dietary supplement or as otherwise directed by a healthcare professional.

> KEEP OUT OF REACH OF CHILDREN Store in a cool, dry area. Sealed with an imprinted safety seal for your protection.

> > Product # 8012 Rev. 06/17

To place your order for **Curcum**[™] or for additional information please contact us below.

(800) 231-5777

6801 Biotics Research Drive • Rosenberg, TX 77471 biotics@bioticsresearch.com • www.bioticsresearch.com

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.