Food Additive: CURCUMIN

Curcumin (diferuloylmethane) is a polyphenol found in the rhizomes of the plant *Curcuma longa* and other Curcuma species. It is derived from turmeric (in Turkish "zerdeçal") and commonly used as a spice, flavoring agent, food preservative, food colorant (supplement E 100) in beverages and in foods such as curry, mustard, etc. Commercial curcumin contains three major components: curcumin (77%), demethoxycurcumin (17%), and bisdemethoxycurcumin (3%), together referred to as curcuminoids. Extensive investigation over the last five decades reveals that curcumin and its derivatives have various pharmacological activities such as antiviral, anti-inflammatory, antimicrobial, antioxidant, anti-HIV, cancer preventive properties (prevent prostate, lung, gastrointestinal, bone, breast, and head & neck cancer), anti-parkinson, anti- Alzheimer's, anti-angiogenesis. Although its potential health benefits, curcumin has found limited use as a pharmacological or nutraceutical agent, which can be partly attributed to its low water solubility (it is insoluble in water and ether but is soluble in ethanol, dimethylsulfoxide and other organic solvents), chemical instability and poor oral bioavailability. Some methods such as encapsulation and nano particles (nano curcumin) are used for increase its water dispersibility, chemical stability and bioavailability.