

Definitions:

Annatto extract -- A source of material known as a byproduct solution of *Bixa orellana* seed components, which is obtained as an oily oleoresinous material after the bulk of annatto color, is largely removed from either the aqueous extract or solvent extract of annatto seeds. Further, this byproduct contains a tocotrienol component and a geranyl geraniol component and can be used as a source for the recovery of a tocotrienol component and a geranyl geraniol component.

Tocols -- A general term for tocotrienols, tocopherols, mixed tocopherols and tocotrienols, TRFs including any additionally separated/fractionated forms, admixtures of annatto tocotrienols and other plant-derived TRFs, appropriate spectrum tocols, admixture of annatto tocotrienols with other tocols in order to standardize the amount and type of tocotrienols and/or tocopherols and the amount or ratio of alpha-tocopherol or other tocopherols present in the admixture.

Tocopherol -- A chromanol with any degree of substitution with a saturated phytyl tail. Substitution in the chromanol is taken to mean any adduct of the alcohol and/or the ring moiety.

Tocotrienol -- A chromanol with any degree of substitution with an unsaturated tail of 1 to 3 double bonds. Substitution in the chromanol is taken to mean any adduct of the alcohol and/or the ring moiety.

Appropriate Spectrum of Tocols -- Mixtures of annatto tocotrienols with other plant extracts to achieve efficacy of the newly constituted tocols composition. Annatto tocotrienols satisfy this definition by having the highest amount of C5 unsubstituted tocotrienols and the lowest amount of tocopherols, especially alpha-T1.

Chemotactic Bioactive Materials -- Biochemical molecules involved in any oxidative/inflammatory process that leads to loss of arterial vasculature.

Tocopherol-Free -- A preparation having having >98% tocotrienols and the tocotrienols are predominantly delta-T3 and/or gamma-T3.

Summary-Of-The-Invention

In one aspect, there is provided a composition comprising an annatto extract with tocotrienol and a natural extract selected from the group consisting of soy, corn, rice bran, palm, olive, wheat germ, oat bran, sunflower seed, cottonseed, cranberry seed, and litchi seed.

In another aspect, there is provided the use of a composition as defined herein for preparing a medicament for topical application for the treatment of skin diseases.

In another aspect, there is provided the use of a composition as defined herein containing tocotrienol for preparing a medicament for reversing insulin resistance and potentiating insulin.

In another aspect, there is provided the use of a composition as defined herein containing tocotrienol and geranyl geraniol for preparing a medicament for reducing cancer.

In another aspect, there is provided a composition for use in reducing cardio vascular diseases and diabetes, the composition comprising annatto extract with tocotrienol and a nutrient selected from the group consisting of phytosterols, oryzanols, policosanols, pentathine, red yeast rice (Monascus), oat bran, garlic, gugul lipids, chitosan, soy protein, oligo- and poly-peptides or hydrolysates of soy protein, CoQ10, carnitine, magnesium, calcium, D-tyroxine, fibers of the insoluble and soluble type, including beta-glucan, omega-3s, including DHAs and EPAs and alpha linoleic acid, and lecithin.

The invention relates to a composition comprising annatto extract containing tocotrienol. Additionally, the invention relates to a composition where the tocotrienol includes all the