CLAIMS

What is claimed is:

1. A formulation comprising a composition comprising a particle comprising:

~~a turmeric oleoresin or~~ (a) a curcumin removed turmeric oleoresin (CRTO) in an amount 5 w/w% to 70 w/w%;

(b) a non-ionic oil in water emulsifier in an amount 30 w/w% to 45 w/w%;

(c) a curcuminoid in an amount 1 w/w% to 10 w/w%;

wherein the composition is water soluble and therapeutically safe,

wherein the composition does not contain a pH buffer,

wherein the particle has an average particle size in a range of 40 nm to 500 nm measured according to Polydispersity Index (PDI), and

~~1.~~ wherein the weight% of the curcuminoid is in an amount less than the weight% of the CRTO in the composition~~and wherein the composition further comprises a curcuminoid~~.

~~2. The formulation of claim 1, wherein the composition comprises about 1 weight % to about 10 weight % of the curcuminoid.~~

~~3. The formulation of claim 1, wherein the composition comprises about 40 to 70 weight % of the turmeric oleoresin, wherein the turmeric oleoresin comprises of about 50 to 97 weight % of the curcuminoid and 50 – 99 weight % of a turmerone.~~

~~4. The formulation of claim 1, wherein the composition comprises about 5 to 70 weight % of the curcumin removed turmeric oleoresin.~~

~~5.~~2. The formulation of claim 1, ~~further comprising a non-ionic oil-in-water emulsifier,~~ wherein the non-ionic oil-in-water emulsifier is selected from polyoxyethylene products of a hydrogenated vegetable oil, a polyethoxylated castor oil, a polyethoxylated hydrogenated castor oil, a polyoxyethylene-sorbitan-fatty acid ester, a polyoxyethylene castor oil ~~derivative and/~~or a combination thereof.

~~6.~~3. The formulation of claim 1, further comprising a solvent, wherein the solvent comprises ethyl alcohol, isopropyl alcohol, glycofurol, a polyethylene glycol, glycerol, a polypropylene glycol, a propylene glycol, N-methyl-2-pyrolidone or a mixture thereof.

~~7. The formulation of claim 1, wherein the particle has an average particle size between 40 to 1000 nm.~~

~~8.~~4. ~~A~~ The formulation of claim 1, further comprises ~~comprising a particle comprising a curcuminoid, a non-curcuminoid and~~ a lipophilic solvent.

~~9.~~5. The formulation of claim ~~8~~4, wherein the lipophilic solvent comprises a triglyceride.

~~10.~~6. The formulation of claim ~~9~~5, wherein the triglyceride comprises a caprylic triglyceride, a chain fatty acid triglyceride ~~containing~~ oil, isopropyl myristate, isopropyl palmitate, ethyl linoleate, an ethyl oleate ester of fatty acid, propylene glycol dicaprylate, propylene glycol dilaurate or a propylene glycol fatty acid ester ~~containing oil~~.

~~11. The formulation of claim 8, wherein the particle has an average particle size of less than 500 nm.~~

~~12.~~7. The formulation of claim ~~8~~4, further comprising a pharmaceutical acceptable excipient.

~~13.~~8. The formulation of claim ~~8~~4, further comprising an adsorbent, wherein the adsorbent comprises a polyethylene glycol, a maltodextrin, a soluble starch, a hydrolysed starch, a fiber, a water soluble oligo saccharide, a chicory, a dextran, a cellulose, a copolymer of polyvinylpyrrolidone, a sugar alcohol, a sorbitol, a xylitol, a mannitol, a cellulose derivative or combinations thereof, wherein the cellulose derivative is selected from the group consisting of ~~comprises~~ a hydroxypropylmethyl cellulose, a hydroxypropyl cellulose, a cyclodextrine or combinations thereof.

~~14.~~9. The formulation of claim ~~8~~4, further comprising a diluent, a filler or a binder, wherein the diluent, the filler or the binder comprises a mannitol, a sorbitol, a lactose, a candy, a sugar or combinations thereof.

~~15.~~10. The formulation of claim ~~8~~4, further comprising a water-soluble polymer, wherein the water-soluble polymer comprises a polyglutamic acid, a polyethylene glycol, a propylene glycol, glycerol, a propylene glycol ester, a polyglycerol oleate polyvinyl alcohol, a non-ethoxylated polymer or combination thereof.

~~16. A water-soluble formulation comprising a curcuminoid and a non-curcuminoid, or pharmaceutically acceptable salts or derivatives thereof, wherein the water-soluble formulation is both therapeutically safe and stable in a form of the water-soluble formulation.~~

~~17. A water-soluble formulation comprising a first particle comprising a curcuminoid and a second particle comprising curcumin-removed turmeric oleoresin or turmeric oil comprising a non-curcuminoid, or pharmaceutically acceptable salts or derivatives thereof, wherein the water-~~

~~soluble formulation is both therapeutically safe and stable in a form of the water-soluble formulation.~~

~~18.~~11. ~~A~~ The formulation of claim 1, ~~comprising a composition comprising a curcuminoid and a non-curcuminoid,~~ wherein the composition has properties as follows:

a) solubilization of the curcuminoid in ~~a turmeric oleoresin or a~~ the curcumin removed turmeric oleoresin ~~or a turmeric oil or combination thereof resulting~~ results in a clear solution having a percent sediment load of less than 30%;

~~b) solubilization in the turmeric oleoresin or the curcumin removed turmeric oleoresin or the turmeric oil or combination of the curcuminoid and the non-curcuminoid having particles having an average number particle size in a range of 40 to 1000 nm;~~

~~c~~b) the formulation exhibits no precipitation or separation of the particles for a minimum period of 24 hours;

~~d~~c) the formulation exhibits no precipitation or separation of the particles for a minimum period of 15 minutes when added to water in a ratio of one part of the formulation in 200 parts of water.

~~19. The formulation of claim 18, wherein the formulation comprises a plurality of curcuminoids and a plurality of non-curcuminoids.~~

~~20.~~12. A method comprising:

a) mixing a curcuminoid, a curcumin removed turmeric oleoresin and a non-ionic emulsifier to form a blend comprising a particle;

b) sonicating and resting the blend alternatingly to obtain a clear solution;

c) preparing a water-soluble curcuma formulation; wherein the water-soluble curcuma formulation is therapeutically safe,

wherein the water-soluble curcuma formulation does not contain a pH buffer,

wherein the particle has an average particle size in a range of 40 nm to 500 nm; and

~~c~~) wherein the weight% of the curcuminoid is in an amount less than the weight% of the CRTO in the composition.

~~21~~13. The formulation of claim 1, further comprising a turmeric oil.

14. The formulation of claim 1, wherein pH of the composition varies from 6.73 to 7.48.

15. The formulation of claim 1, wherein the composition is stable at a room temperature for about one year.

16. The formulation of claim 1, wherein the composition is stable at about 40 ℃ for about six months.

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