

*Story of Sustentials™ Curcumin: A more bioavailable synergistic nutraceutical combination*

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Nutraceuticals- once isolated from parent food or herb matrix are often not stable and bioavailable as it is in food and natural source. Curcumin is the active ingredient of golden spice turmeric and has many therapeutic activities like- anti-oxidant, anti-inflammation, anti-diabetic and many other beneficial biological actions. In this present work, curcumin molecular complexes were prepared based on crystal engineering strategies and their functional attribute studies. Curcumin molecular complexes with synergistic nutraceuticals has shown enhancement of dispersibility and solubility by range of 200-700 times. In-vitro functional properties like dissolution, permeability, antioxidant activities have improved markedly in molecular complexes. Clinical evaluation of molecular complexes has been done on Spargue Dawley rat and Human subjects, which shows relative bioavailability improvement of 9.9 times and 4 times in one of the Curcumin-nutraceutical combination, which is branded as "Sustentials™ Curcumin".

Solid form modification like cocrystallization and molecular complex of pharmaceuticals, nutraceuticals and agrochemicals has been studied extensively for last two decade, yet only few were able to reach to market due several challenges involved in commercialization. In the second part of the presentation, common challenges faced by industry during developing a product from lab research like- prototype development, scale up, process engineering challenges, pilot and production at plant level, quality compliance, regulatory hurdles, marketing and sales positioning will be discussed based on our commercialized "Sustentials™ Curcumin".

[1] A nutraceutical formulation and a process for production thereof,

Saikat Roy, Anil Kumar, Bhargav Meshiya, Ravindra Barhalikar (2017), WO2017/002134 A1

[2] <http://www.sustentials.com/curcumin.php>

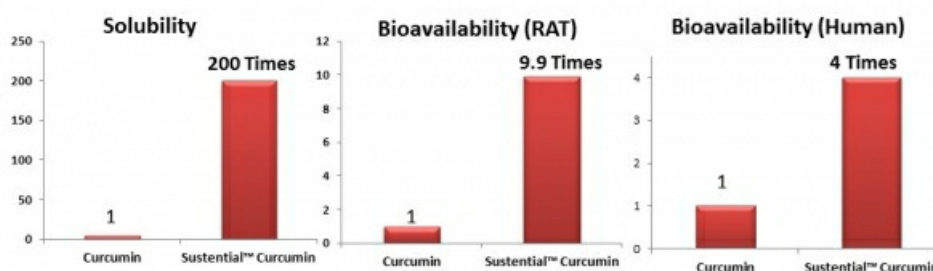


Figure 1: Solubility and relative bioavailability improvement in Sustential Curcumin over native Curcumin

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