Nanoencapsulation of Curcumin

Salient features	➢ Nanoencapsulated curcumin by using high speed/pressure homogenization ➢ Two oil in water nanoemulsions: (i) Whey protein concentrates-70, Tween 80 as emulsifiers – 240 mg curcumin dissolved in medium chain triglyceride with a mean particle size 189.7± nm and 91.9% encapsulation efficiency (ii) Sodium caseinate as emulsifiers, milk fat – 240 mg curcumin dissolved in medium chain triglyceride with a mean particle size 395± nm and 90.7% encapsulation efficiency ➢ Nanoemulsions are stable under simulated gastric conditions and freeze drying conditions. ➢ The first emulsifier had 85.75% release of curcumin under simulated intestinal conditions. ➢ The second emulsifier had 15.71% release of curcumin under simulated intestinal conditions. ➢ Encapsulation of the second emulsifier in ice-cream with encapsulation efficiency of 93.7% .
Advantages	✓ Use of encapsulation in the preparation of functional food
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More information	**Status of commercialization / Patent / Publication** 2 Research publications **Patent** Oil in water curcumin nanoemulsion and method of prepartion thereof. Patent Application Number: 201611018434, Date: 30.5.2016