

IV. CONCLUSION

To increase the aqueous solubility and enhance the functionality of curcumin, a nanoformulation was prepared. The process parameters for the preparation of curcumin nanoemulsion were successfully optimized by RSM using the central composite design. Besides, optimization by RSM also revealed that viscosity of the continuous phase has a great influence on the droplet disruption mechanism and hence the particle size of the nanodroplet. A stable curcumin nanoemulsion was formulated with droplet size of 194.8nm using olive oil as a lipid carrier and non-ionic surfactant Tween20 by ultrasound assisted emulsification. From the stability study and morphological analysis it is ascertained that the formulation is a suitable candidate for value addition of food thereby increasing its functionality.

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