EFFECT OF CARRAGEENAN ADDITION IN ENCAPSULATION OF GAC OIL USING GELATIN GELATION METHOD

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ABSTRACT

Gac oil contents a precious sources of carotenoids which are benefit to health but sensitive to oxidation. Encapsulation is an efficient technology that help to trap and protect fragile material in a polymer shell in micro-size. In this study, encapsulation of gac oil using gelation method based on gelatin system was investigated with or without addition of a well-known marine polymer – carrageenan. Several points were studied: viscosity of polymer system, life time of emulsion, distribution of emulsion droplets' size, encapsulation efficacy … The results showed that addition of carrageenan increased clearly viscosity of polymer emulsion. This addition also enhanced the encapsulation efficacy but not in all the cases. Formation of microcapsule was obtained with emulsion which had a viscosity higher than about 30 cP and it is as easier as viscosity increased. Otherwise, gelatin seemed to express a more positive effect in encapsulation efficacy than carrageenan.

Keywords*: gac oil, encapsulation, carrageenan, gelatin, gelation*

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