

ABSTRACT

The Effect of Rosemary Oil on Characteristics and Physical Stability (Centrifugation Method) of Nanostructured Lipid Carrier Coenzyme Q10 System

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This study aims to determine the effect of adding *rosemary oil* at concentrations of 1.0% and 2.0% on characteristics including organoleptic (consistency, color, odor), pH, particle size, Polydispersity Index (PDI), zeta potential and centrifugation test physical stability of NLC Coenzyme Q10. The study showed that the addition of 1% and 2% rosemary oil to NLC Coenzyme Q10 did not change the color but changed the odor, increasing the pH and change the zeta potential value closer to 0. The addition of 2% rosemary oil caused a decrease consistency, increased particle size and increased the polydispersity index (PDI). The results of the centrifugation method stability test showed that the Coenzymee Q10 NLC system with the addition of 2% Rosemary oil was unstable.

Keywords: NLC, Coenzyme Q10, Rosemary Oil, Centrifugation test, Characterization.