ABSTRACT

CHARACTERIZATION OF MICROEMULSION SYSTEM TYPE W/O WITH ACTIVE INGREDIENTS OVALBUMIN (Comparison surfactants (Span 80-Tween 80): cosurfactant (Propanol) = 4:1, 5:1, and 6:1)

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In this research focused to observe the phisicial characteristic of protein (ovalbumin) with microemulsion W/O system. Microemulsion was maked with surfactant (Span80-Tween80) : cosurfactant (propanol) = 4:1, 5:1 and 6:1. The evaluation included organoleptic, particel size, and conductivitas and solubility test. Solubility test is only done on the formula chosen by comparison. Data from droplet size and conductivity will be analyzed using ANOVA statistical test to compare there any significant differences in each different formula. Results of droplet size on the formula 4:1, 5:1, and 6:1 respectively give values of 679,3±35,09 nm, 788,5±79,32 nm, and 1278,2±323,11 nm. Value of conductivity is 2.99 ± 1.70 µS, 3.32 ± 0.62 µS, and 2.28 ± 0.38 µS. After it was chosen the best formula of ANOVA statistical test shows that the formula 4:1 is the best. On a 4:1 formula performed and followed by the addition of ovalbumin solubility test. solubility tests were performed using the spectrophotometric method with UV-Vis spectrophotometer. Solubility test result is equal to 0.72%. While also examined droplet size was 839.5 ± 17.21 nm and 5.36 ± 2.62 µS. The next stage of the analysis carried out is to compare the test results before and after the addition of ovalbumin statistical test methods independent t-test. From the test results of independent t-test statistical significant difference in the results of droplet size and conductivity.

Keyword(s) : ovalbumin, microemulsion,Span80, Tween80, propanol, W/O