



Improving The Penetration of Sodium Ascorbyl Phosphate Using Niosome Span 80 System in Form of Gel in In Vitro

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Abstract: To determine the stability and the penetration of sodium ascorbyl phosphate using the niosome span 80 system in the form of gel in in vitro.

Methods: The concentration of span 80 was varied into three formulas: Formula 1 (100 μ mol), Formula 2 (200 μ mol) and Formula 3 (300 μ mol). The production of niosome with thin layer hydration method and the test which was conducted including entrapment efficiency, gel stability test and diffusion test in in vitro. Testing the efficiency of entrapment used dialysis method. The niosome suspension was formulated in the form of gel using basic gel of viscolam MAC 10 8%. The stability test was done for 28 days including organoleptic, pH, and determination of the gel concentrate as well as diffusion test using snake skin shed membrane for 8 hours.

Results: The entrapment efficiency showed that the optimal concentration of span 80 in formula 1 (100 μ mol) of 98.7665% was \pm 0.0587. The NAF niosome gel has the most excellent stability compared to NAF gel without niosome in organoleptic, pH and the determination of concentrate. The diffusion test results for 8 hours showed NAF niosome gel can diffuse at 82.6565% was \pm 0.0378.

Conclusion: It can be concluded from this study that the NAF by using niosome span 80 system in form of gel can improve the stability and penetration in in vitro using the snake skin shed.

Keywords: niosome, sodium ascorbyl phosphate, span 80, penetration.