

Preparation, characterization and evaluation of moisturizing effect of liposomes containing N-acetylglucosamine

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Background and Aims: The objective of this study was to prepare, characterize and evaluate the liposomes containing N-acetylglucosamine as a moisturizer factor.

Methods: The experimental liposomal formulations included liposomes containing 3, 5 and 7 mM N-acetylglucosamine and empty liposomes. The liposomes were prepared using fusion and DVR methods. The amount of the moisture contents of the skin before application and 0.5, 1, 3 and 5 hr post-application of the formulations were measured in human volunteers using Corneometer. Also, the occlusive factor was estimated by in vitro method.

Results: The results of moisturizing effect indicated that there was a significant difference ($P < 0.05$) between the skin moisture contents after application of liposomal formulation containing N-acetylglucosamine 7mM and empty liposomes during the 5 hr post-application period.

Conclusions: These findings indicated that liposomal formulation containing N-acetylglucosamine have a moisturizing effect and so it could be suggested as a new topical moisturizing formulation in skin care.

Keywords: Liposome; Moisture; N-acetylglucosamine; Skin