

II INTERNATIONAL SYMPOSIUM ON SCIENCE AND BIOTECHNOLOGY ENTREPRENEURSHIP AND INNOVATION

ANALYSIS OF ASCORBIC ACID STABILITY TO 20% BY USING SILICONE EMULSIONS DIFFERENT VEHICLES AND PRESERVATIVES

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Abstract

Vitamin C has physiological effects on the skin such as: inhibition of melanogenesis, promotion of collagen synthesis and antioxidant action. The development of cosmetics containing vitamin C in the acid form presents difficulties inherent in their physico-chemical characteristics that prevent the stability of the final product. The objective of this study was to analyze the stability of 20% ascorbic acid in emulsions developed with different preservatives using water, propylene glycol or glycerin as vehicles. Five formulations containing 20% ascorbic acid were prepared in silicone emulsions. The samples were analyzed at 0, 15, 30 and 45 days for organoleptic characteristics (aspect, color and odor) and ascorbic acid content by titration with iodine, according to methodology described in the Brazilian Farmcopéia - 5th edition. Samples, which used water as vehicle, had a greater reduction in the vitamin C content. Samples, which had 10% of water and glycerin or propylene glycol as vehicle, had lower decrease in vitamin C content. Regarding preservatives, metabisulphite is ineffective against vitamin C oxidation in the presence of large amounts of water, sample that use it as preservative had high decrease in vitamin C content. A sample that had less decrease, indicated 12.84% in vitamin C content at the end of the study.

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