Incorporation of carbopol to palm olein based analgesic creams: Effect on formulation characteristics

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Abstract

The purpose of this investigation was to incorporate carbopol gel with palm olein based emulsion and to investigate the effect of such incorporation on formulation characteristics. A palm olein based emulsion was formulated followed by addition of carbopol. The critical parameters of incorporating carbopol in both emulsion were checked. The developed palm olein-carbopol based analgesic cream was analyzed for pH, Viscosity, rheological property and forced sedimentation. Incorporation of 0.36% of carbopol gel (1% w/v) helps to maintain the viscosity and stability. The pH of palm olein-carbopol combined cream was within the range of 8.80 to 9.20 and 7.90 to 8.40, respectively. Combination of palm olein based emulsion and carbopol would be a suitable option for topical cream formulation. The pH of carbopol gel and method of mixing with the palm olein based emulsion had crucial effect on phase separation of the product. © 2017, Colegio de Farmacéuticos de la Provincia de Querétaro, All rights reserved.