The physical stability study of preparation and process optimization of semi solid dosage forms

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Objectives: Topical semi-solid dosage forms contain one or more active ingredients dissolved or uniformly dispersed in a suitable base and any suitable excipients. The main stability problems observed in base are bleeding and change in consistency due to aging. The study was to investigate the physical stability in preparation and process optimization of the base of semi solid dosage forms. **Methods:** Accelerated physical stability testing is determined a noticeable change in consistency, such as excessive "bleeding" (separation of excessive amounts of liquid) or formation of agglomerates and grittiness by centrifugation. The viscosity of base is investigated by Cone and Plate Viscometer. **Results:** The amount of liquid added into base reaches a critical amount then the resulted preparation will begin to bleed out and will lose its viscosity. The process optimization in high shear homogenization for uniform particle size and viscosity reduction will promote the physical stability study of preparations.

Key words: Semi solid dosage form, Physical stability, Optimization