Physical Stability and Sun Protection Factors Measurement of Sunscreen Preparations in Stress Storage Conditions Using Spectrophotometry

Title	Physical Stability and Sun Protection Factors Measurement of Sunscreen Preparations in Stress Storage Conditions Using Spectrophotometry
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Abstract	Background : Sunscreen preparations can be used effectively to absorb sunlight especially in the UV wave emission region. The stress condition during storage of a preparation may affect physical and chemical properties. This study aims to determine the effect of stress storage conditions on physical stability and nilai Sun Protection Factor (SPF) values as the effectiveness of sunscreen preparations that stored in three different temperatures. Method : This experimental study was conducted with the selection of sunscreen samples and performing physical stability tests in termed of color observation, physical observation, pH value, spreading test, adhesive test, and SPF value measurement of sunscreen using spectrophotometry in lotion and gel dosage forms stored at room temperature $(25\tilde{A}¢\hat{A}-\hat{A} C)$, low temperature $(4\tilde{A}¢\hat{A}-\hat{A} C)$, and high temperature $(40\tilde{A}¢\hat{A}-\hat{A} C)$. Result : The results showed that the stress storage condition influenced the physical properties of the preparation in the form of adhesive property, spreading capacity, and significantly affect the SPF value of the sunscreen (p <0.05) after 14 days of storage.
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