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Assessment of the general quality of sunscreen products available in Palestine and method verification of the sun protection factor using Food and Drug Administration guidelines

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Abstract

Background: Sunlight exposure affects all skin types causing skin tanning, burns or even skin cancer. Sunscreens were invented to prevent these outcomes by scattering or absorbing the UV light. Aims: This study aimed to verify the effectiveness of Mansur method in SPF measurement and to find out how much reliable the labeled sun protection factor (SPF) value for the products that are imported to Palestine knowing that they are considered as cosmetics and they don't undergo tests by the Ministry Of Health (MOH). Materials: In this research, sun protection factor (SPF) was determined for 16 commercially available sunscreen products using Mansur equation which was also validated; moreover sunscreen classification, product phase determination and pH measurement were also done. Results: Sun protection factor values were mostly 50, 43.75% of the analyzed samples were close to the labeled SPF, 31.25% were under the labeled value, and 25% SPF value above the labeled value. All samples exhibited a pH close to skin pH. 62% of them were found to be O/W. Cosmetic companies and importers should focus on pediatric sunscreens, since only 12.5% are pediatric sunscreens. Conclusions: Ministry Of Health should ask prove about the quality of an SPF value of sunscreens for final registration of these products. More instructions should be available on the label regarding the proper use especially, if they are not water proof. © 2018 Wiley Periodicals, Inc.

Author Keywords

pediatric; sun protection factor; sunscreen; verification; waterproof

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