DETERMINATION OF HYDROQUINONE IN SOME PHARMACEUTICAL and COSMETIC PREPARATIONS BY SPECTROPHOTOMETRIC METHOD

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ABSTRACT

The use of hydroquinone is forbidden as it is potentially carcinogenic and skin and respiratory irritant, nevertheless, it is still the most conventional and widely used in skin-lightening creams. A rapid and simple UV spectrophotometric procedures were applied for the determination of the hydroquinone levels in different cosmetic and medical cream samples commercially available in Benghazi local markets. The labels on the packages noticeably did not indicate the presence of hydroquinone. Analysis showed the concentration of hydroquinone ranged from 0.002% to 0.092% in the cosmetic samples. The creams were subjected to chemical analysis by a UV spectrophotometer. Beer’s law was obeyed in the range of 10-40 µg/ml at 290nm using 0.05M H₂SO₄ as solvent with linear regression coefficient of 0.9994. The method has been successfully applied to diluted samples of various skin lightening creams for hydroquinone determination. The effect of time has been studied upon the absorption of hydroquinone.