

Development and validation of an HPLC method for determination of ketoconazole and caffeine in cosmetic products

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A simple, accurate, rapid and precise HPLC method has been developed and validated for determination of ketoconazole and caffeine together in cosmetic products. Mobile phase composition, pH, flow rate, wavelength were evaluated. The separation was achieved on ACE 5 C-18 (250 mm, 4.6 mm) column using mobile phase water:acetonitrile (37:63) and pH adjusted with phosphoric acid at flow rate of 1.0 ml/min at room temperature. The retention times were determined as 3.2 min and 5.8 min for caffeine and ketoconazole, respectively. Calibration plots were linear over concentration range 0.5-20 µg/ml at 272 nm wavelength. The method was validated statistically and applied successfully for the determination of ketoconazole and caffeine. The validation studies revealed that the analyses method of both

substances is specific, rapid, reliable, and reproducible. The high recovery and low relative standard deviation confirm the suitability of the method for the determination of ketoconazole and caffeine in cosmetic products.

Biography

Hatice Ezgi Gülpinar graduated from Gazi University, Faculty of Pharmacy in Turkey, Ankara at 2012. She is a PhD candidate at Pharmaceutical Technology Department. She studies on formulation and analyses of cosmeceuticals and pharmaceuticals. Her dissertation is about hair loss. She also works as a Pharmacist at her pharmacy in Ankara.

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