عنوان مقاله:

Use of Dispersive Liquid-Liquid Microextraction and UV-Vis Spectrophotometry for the Determination of Zolpidem in Tablets and Urine Samples

محل انتشار:

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خلاصه مقاله:

A simple and inexpensive method for Zolpidem determination in in tablets and urine samples using dispersive liquid-liquid microextraction and ultraviolet-visible spectrophotometry was developed. Experimental parameters affecting the DLLME method such as pH, type and volume of extraction and dispersive solvent were investigated and optimized. Under the optimized conditions, the absorbance was in proportion to Zolpidem concentration in the range of 0.1 - 30 mg/L with a correlation coefficient (R) of 0.9972. The limit of detection (LOD) was 0.08 mg/L. The relative standard deviation (RSD) for real samples were 2.61 %- 3.81 % (n=3). Good recoveries of Zolpidem were obtained in the range of 90–95.25% in tablet samples 76–82.6% in urine samples. Finally, the results shown that the proposed method was successfully applied for the preconcentration and determination of the Zolpidem in real samples.

کلمات کلیدی:

Zolpidem, Dispersive liquid-liquid microextraction, UV-Vis spectrophotometry