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Spectrofluorimetric Determination of Labetalol Hydrochloride in Pharmaceutical Preparations and Urine Samples

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Two simple and sensitive spectrofluorimetric methods have been developed for the determination of labetalol (LBT). In method A, the native fluorescence was measured at 432 nm after excitation at 312 nm. The second method (method B) is based on the formation of a ternary complex between zinc (II), eosin and LBT. The fluorescence intensity of the ternary complex was measured at 452 nm after excitation at 317 nm. Optimum conditions for the determination were also investigated. The linear range and detection limit for method A and B were found to be 1.25 – 30 μg/ml; 0.24 μg/ml and 0.5 – 4 μg/ml; 0.08 μg/ml, respectively. The proposed methods are simple, practical and relatively free of interference from coexisting substances. The methods have been applied to assess LBT in commercial tablets and human urine samples with good precision and accuracy.