



B110 Quantitative Analysis of Morphine in Urine by GC/MS with Deuterium Internal Standards

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Traditional extracting procedures have too many steps to get the metabolites of opiate that makes unpredictable variation; therefore, the authors tried to simplify the procedure by using appropriated amount of Ammonium hydroxide to make the heated acidic urine becoming a suitable buffer for extraction, directly. The easier procedure makes the examiner accomplishing the more routine works, and decreases the unnecessary variation from the manual operating. Meanwhile, deuterated internal standards replace nalorphine as the internal standard to identify the retention time and selected ion. The deuterated morphine and codeine can correct the response for with the abundance of the morphine and codeine; therefore, the analysis of quantitation got good reproducibility for each run on the GC/MS.

Morphine, Urine, GC/MS