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A Rapid and Sensitive Uhplc-Ms/Ms Assay for the Determination of Clobazam in Human Plasma Using Electro Spray Ionization Technology

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ABSTRACT:

A simple, highly sensitive, precise and accurate high-performance liquid chromatographic (LC-MS/MS) method with mass detection was developed and validated for the rapid quantification of Clobazam in human plasma samples. The chromatographic separation was achieved with a reverse phase column Reprosil Gold XBD C18 (100 × 3 mm,3µm) and the mobile phase consisted of 10 mM Ammonium Acetate Buffer and 0.1 % Acetic acid in Methanol (15:85v/v) as eluent by running a linear gradient method. The effluence was ionized by positive electro spray ionization and measured by mass spectrometry. The calibration curve was linear with range of 0.501-499.995 ng/mL and the lower limit of quantification was 0.501ng/mL with good accuracy and precision. The mean extraction recovery of the method was higher than 96.4% and 103.3% for clobazam and IS, respectively The method was successfully demonstrated for evaluation of pharmacokinetic profile of clobazam in human plasma and validated for excellent selectivity, accuracy, precision, recovery and stability.