

OR-38**Determination of Bacopaside I Using Liquid Chromatography Tandem Mass Spectrometry and its Application**

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Bacopaside I, a major chemical constituent of *Bacopa monnieri* (L.), is reported to be responsible for neuropharmacological effects. The study on its pharmacokinetics has not been reported until today. To study the metabolism of bacopaside I, in the present study we aimed at finding a rapid and sensitive method for determination of this compound in rat plasma, urine and feces. In this experiment, the LCMS-IT-TOF method was developed and validated for the determination of bacopaside I in rat urine. The method was proved to be accurate, precise, specific and has been successfully applied to the metabolism study in a rat model. Both LOD and LOQ were lower than 4.8 ng/ml. The calibration curves showed good linearity. The curve coefficient was 0.999. The precision values, expressed as CV, were less than 15% at all concentrations within the standard curve. Percentage accuracies were in the range of 85-115%. The extraction recoveries of bacopaside I from the samples were all in the acceptable range. All the results suggested that LCMS-IT-TOF method was suitable for quantitative analysis of bacopaside I in urine samples. However, the methods for determination of bacopaside I in plasma and feces still have to be validated. The results from the preliminary study revealed that most of bacopaside I was excreted in rat feces at the period of 12 to 18 h after oral administration. More than 2.3% of the administered dose was excreted in feces within 42 h after the administration. There was no bacopaside I represented in urine and feces samples. The transformation and/or metabolism of the compound are expected.

Keywords: Bacopaside I, liquid chromatography, mass spectrometry, metabolism.
