EuroSciCon

7th Edition of International Conference and Exhibition on

Separation Techniques

July 05-07, 2018
Berlin, Germany

Chae Bin Lee et al., Arch Chem Res 2018, Volume 2
DOI: 10.21767/2572-4657-C3-009

QUANTITATION OF SPINOSIN IN MOUSE PLASMA BY LIQUID CHROMATOGRAPHY–TANDEM MASS SPECTROMETRY AND ITS APPLICATION TO A PHARMACOKINETIC STUDY

Chae Bin Lee, Yu Fen Zheng, Soo Hyun Jang, Doyun Kim,

Soon Uk Chae, Jee Sun Min and **Soo Kyung Bae**

The Catholic University of Korea, South Korea

A highly sensitive and rapid LC MS/MS method was developed and validated to determine the levels of spinosin, a flavone-C-glycoside, is a bioactive ingredient isolated from Zizyphi Spinosi Semen, in mice plasma by using theobromine as an internal standard. Spinosin and theobromine were extracted from 8 µL of plasma after protein precipitation with methanol. Chromatographic separation was performed on Phenomenex Luna C18 column (50 × 2.0 mm id, 3 µm). The mobile phase consisted of 0.1% formic acid in acetonitrile -0.1% formic acid in water (20:80 v/v) and the flow rate was 0.4 mL/min. The total chromatographic run time was 3.0 min. Detection was performed on a triple quadrupole mass spectrometer equipped with positive-ion electrospray ionization by selected reaction monitoring of the transitions at m/z 609.25 > 327.10 (for spinosin) and m/z 180.90 > 108.30 (for the internal standard). The lower limit of quantification was 1 ng/mL and the linear range was 1 200 ng/mL (r ≥ 0.9991). All validation data, including selectivity, precision, accuracy, matrix effect, recovery, dilution integrity, stability, and incurred sample reanalysis, were well within acceptance limits. This newly developed bioanalytical method was simple, highly sensitive, required only a small volume of plasma (8 µL), and was suitable for application in pharmacokinetic studies after oral administration of a standardized Zizyphi Spinosi Semen extracts in mice that used serial blood sampling.

Biography

Chae Bin Lee is a graduate student with major in pharmacology/pharmacokinetics of The Catholic University of Korea. Her research interests are bioanalysis, mouse plasma, small volume; LC MS/MS, pharmacokinetics

aribri727@catholic.ac.kr