



## Simultaneous Quantification of 6,7-Di-Hydroxyiligustilide and Gastrodin in Rat Plasma by LC-MS: Application to Pharmacokinetic Study of Tianshu Capsule

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**SUMMARY.** A LC-MS method was developed and validated for simultaneous determination of 6, 7-di-hydroxyiligustilide and gastrodin in rat plasma, and which was subsequently applied in the pharmacokinetic analysis of an administration of a Chinese herbal extract containing Chuanxiong Rhizoma and Gastrodia Elata Rhizome, i.e. TianShu capsule against migraine. The analytes were separated on a Kromasil C<sub>18</sub> column with a gradient elution program and detected without interference in the selected ion monitoring mode with positive electrospray ionization. The linear range was 0.010-10.0 µg/mL for 6,7-di-hydroxyiligustilide and 0.025-25.0 µg/mL for gastrodin with the limit of quantitation of 0.01 and 0.025 µg/mL, respectively. The intra-day and inter-day precisions for the entire validation were less than 14.7 % of RSD. The pharmacokinetic parameters indicated that 6, 7-di-hydroxyiligustilide and gastrodin are absorbed rapidly and reached a maximum concentration within one hour, which was consistent with the clinical requirements for the rapid relieving the symptoms of migraine.

**KEY WORDS:** 6, 7-di-hydroxyiligustilide, *Gastrodia elata* Bl., gastrodin, LC-MS; *Ligusticum chuanxiong* Hort., pharmacokinetics, TianShu capsule.

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