

# 芍薬甘草湯を添加したラット糞便培養液中のグリチルリチン、グリチルレチン酸、グリチルレチン酸モノグルクロナイドのセミマイクロHPLC同時定量

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## Simultaneous Determination of Glycyrrhizin, Glycyrrhetic Acid and Glycyrrhetic Acid Mono-Glucuronide in Shakuyaku-kanzo-to Incubated with Rat Feces by Semi-micro High-Performance Liquid Chromatography

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**ABSTRACT:** A method for semi-micro high-performance liquid chromatography (HPLC) has been established for the simultaneous determination of glycyrrhizin (GL), glycyrrhetic acid (GA) and glycyrrhetic acid mono-glucuronide (GAMG) in incubation mixtures of rat feces with Shakuyaku-kanzo-to decoction (combination of licorice root and peony root). The analysis could be accomplished within 20 min with a TSKgel ODS-80TsQA (150 x 2.0 mm i.d.) column by linear gradient elution using a mobile phase containing aqueous phosphoric acid and acetonitrile at a flow rate of 0.2 ml · min<sup>-1</sup>, a thermostatic oven at 25°C, and detection at 254 nm.

The detection limits of these compounds were 0.1 – 0.85 pmol per injection (5 μl).

The concentrations of GL and its metabolites in the incubation mixture after continuous consumption of Shakuyaku-kanzo-to were significantly different compared with those of untreated control. GL-hydrolysis of rat feces was enhanced by pre-consumption of Shakuyaku-kanzo-to.

抄録 芍薬甘草湯を添加したラット糞便培養混液中のグリチルリチン、グリチルレチン酸、グリチルレチン酸モノグルクロナイドのセミマイクロHPLC同時定量法を確立した。この分析法は TSKgel ODS - 80 TsQA カラムにリン酸水溶液とアセトニトリルの直線的な濃度勾配を用い、流速0.2 ml、カラム温度25°C、検出波長254 nmで20分以内に分析が可能である。これらの化合物の検出限界は注入量当たり0.1 - 0.85 pmolであった。芍薬甘草湯を連続的摂取した後の培養混液中のグリチルリチンならびにその代謝物の濃度は、摂取していないものに比べ有意な差があり、ラット糞便におけるグリチルリチン代謝は芍薬甘草湯を摂取することで促進した。