

# HPLCを用いた漢方薬主要成分の同時定量

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*Natural Medicines*, 56 (1), 1-6 (2002)

## Simultaneous Determination of Principal Ingredients in Kampo Medicines by High-Performance Liquid Chromatography

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**ABSTRACT** : A simultaneous high-performance liquid chromatographic method for the determination of sennoside A, aloe-emodin, rhein, emodin, chrysophanol, glycyrrhizin, paeoniflorin, naringin, neohesperidin, baicalin, wogonoside, cinnamaldehyde, magnolol and honokiol in Kampo medicines containing rhubarb as the main constituent crude drug was established. The analyses were performed with a Wakosil-II 5C18HG column by linear gradient elution using a mobile phase containing aqueous phosphoric acid and acetonitrile at a flow rate of  $1.0 \text{ ml} \cdot \text{min}^{-1}$ , a thermostatic oven at  $35^\circ\text{C}$ , and detection at 265 nm. The detection limits of these compounds were 0.3-8.0 pmol per injection ( $5 \mu\text{l}$ ). This method was applied to determine the quantities in Kampo decoctions; Daio-kanzo-to, Choi-joki-to, Sho-joki-to, Mashinin-gan, Dai-saiko-to, Keisi-ka-shakuyaku-daio-to and Tokaku-joki-to. The within-day relative standard deviations were less than 2.52% ( $n = 10$ ). The recoveries of these compounds were from 81.5 to 107%. The fourteen marker components in seven kinds of Kampo medicines were easily determined within 40 min without interference from co-existing components.

**抄録** 大黄を主構成生薬として含む漢方薬中のセンノシドA, アロエ・エモジン, レイン, エモジン, クリソファノール, グリチルリチン, ペオニフロリン, ナリンギン, ネオヘスペリジン, バイカリン, オウゴノシド, ケイヒアルデヒド, マグノロール, ホオノキオールの定量に関する同時HPLC分析法を確立した。この分析法はWakosil-II 5C18HG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1.0 ml、カラム温度 $35^\circ\text{C}$ 、検出波長265 nmで行われた。これらの化合物の検出限界は注入量当たり0.3 - 8.0 pmolであった。この方法は大黄甘草湯、調胃承気湯、小承気湯、麻子仁丸、大柴胡湯、桂枝加芍薬大黄湯や桃核承気湯の定量に応用した。日内変動は2.52%以下、添加回収は81.5~107%であった。7種類の漢方薬中の14種の成分は夾雑成分による妨害もなく40分以内に簡便に定量できた。