

Radix Puerariae

Ge Gen, 葛根, Gan Ge, 干葛

Pueraria is a genus of 15–20 species of plants native to Asia. Pueraria flower is used in traditional Chinese medicine to reduce reactions to alcohol consumption. Pueraria lobata (wild.) Ohwi. is mainly produced in Hunan, Henan, Guangdong provinces of China, while Pueraria thomsonii Benth. is cultivated artificially, mainly produced in Guangxi and Guangdong provinces of China. Pueraria mirifica, also known as กวาวเครือ Kwao Krua (but not exclusively), is a plant found in northern and north eastern Thailand and Myanmar.

We have analysed the same alcohol extracted sample for Puerarin with both a traditional particle packed column (page 13) and a monolithic Chromolith® HighResolution column (page 14). Both columns were re-equilibrated after each analysis with five column volumes each to provide good reproducibility.

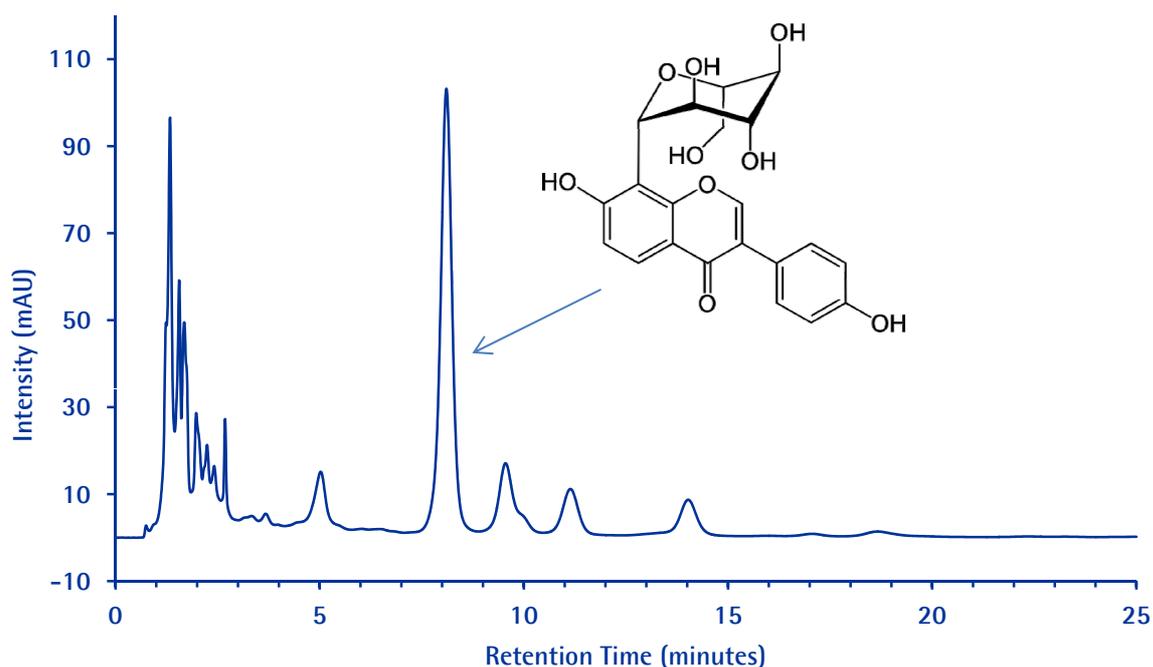
Much higher separation efficiency was attained with the Chromolith® column, and maintaining sufficient resolution between puerarin and the other matrix components. The sensitivity was also higher when using the monolithic column because of faster elution and better peak compression. The total analysis time is 15 min shorter with the Chromolith® column and the column backpressure is much lower.

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Particle packed column RP-18 endcapped

Chromatographic Conditions

Column:	Particle packed column, RP-18 endcapped (5µm), 250x4.6mm
Injection:	10 µl
Detection:	UV 250 nm
Flow Rate:	1.0 mL/min
Mobile Phase :	Methanol and Water 25:75 (v/v)
Temperature:	40°C
Diluent	Mobile phase
Sample:	The extract of radix pueraria sample dissolved in methanol.
Pressure Drop:	100 Bar (1440 psi)



Chromatographic Data

No.	Compound	Retention Time (min)	Theoretical Plates*	Asymmetry
1	Puerarin	8.1	4120	1.0

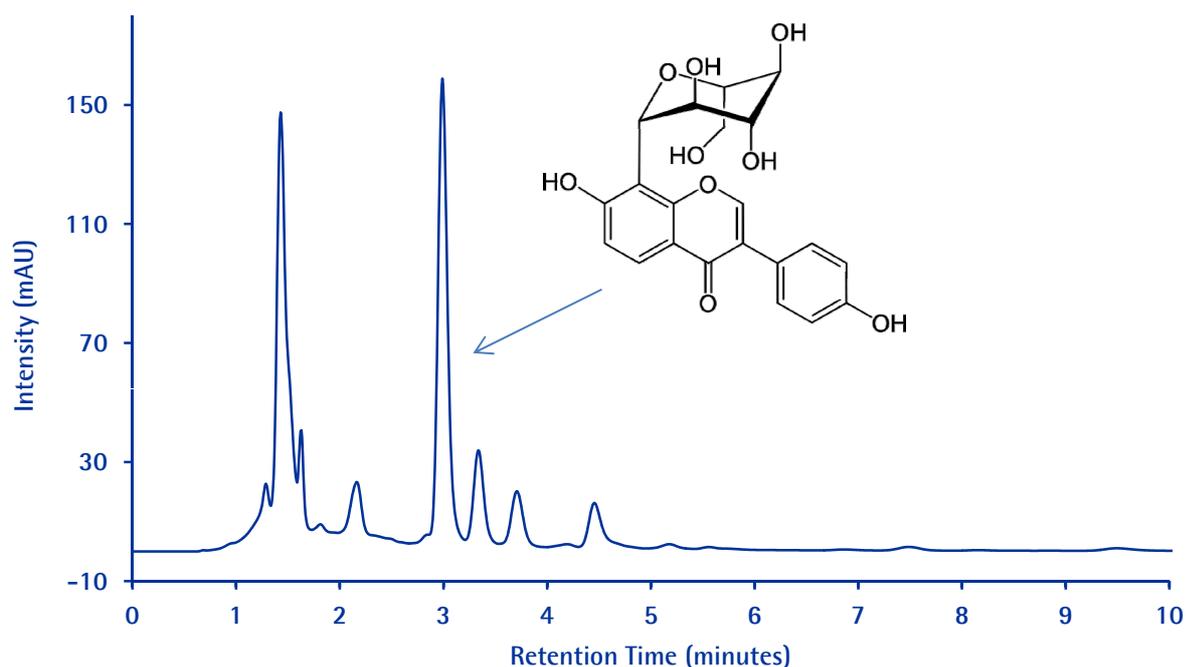
Radix Puerariae

Chromolith® HighResolution RP-18 endcapped

Chromatographic Conditions

Column: Chromolith® HighResolution RP-18 endcapped, 100x4.6mm
 Injection: 5 µl
 Detection: UV 250 nm
 Flow Rate: 1.0 mL/min
 Mobile Phase : Methanol and Water 25:75 (v/v)
 Temperature: 25°C
 Diluent Mobile phase
 Sample: The extract of panax notoginseng dissolved in methanol.
 Pressure Drop: 43 Bar (619 psi)

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Chromatographic Data

No.	Compound	Retention Time (min)	Theoretical Plates*	Asymmetry
1	Puerarin	3.0	5086	1.2