Milkvetch Root *(Radix Astragali)* – 黄芪

Sample source

Commercially available Milkvetch Root

Chemical reference substances

Astragaloside IV (National Institute for the Control of Pharmaceutical and Biological Products, Batch number 0781-9807)

Preparation of test solution

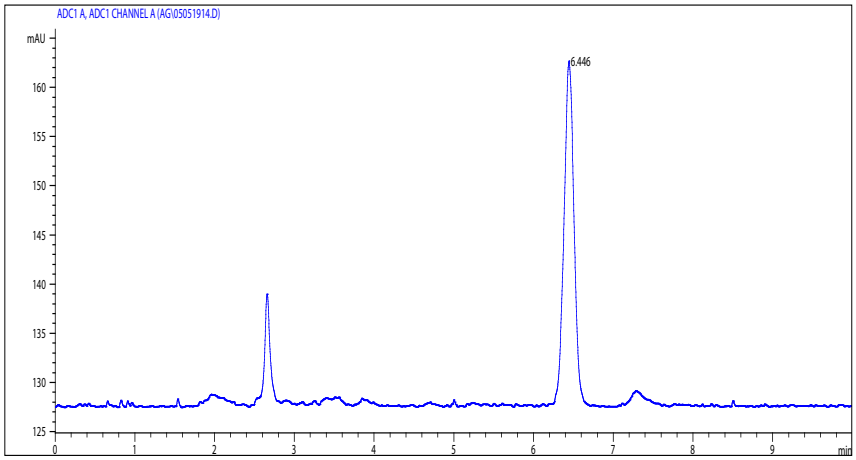
Accurately weigh 4 g of the powder in a Soxhlet extractor, add 40 mL of methanol, allow to soak overnight, add again an appropriate quantity of methanol, heat under reflux on a water bath for 4 hours and concentrate the extracts to dryness. Add 10 mL of water and slightly heat to dissolve the residue, extract by shaking with four 40-ml quantities of n-butanol saturated with water, combine the extracts and wash with two 40 ml quantities of ammonia TS. Discard the ammonia solutions and evaporate the n-butanol extracts to dryness, dissolve the residue in 5 mL of water and cool. Apply it to a column packed with D101 macroporous resin, elute with 50 mL of water, 30 mL of 40 % ethanol, and 80 mL of 70 % ethanol successively, discard the water and 40 % ethanol eluents, collect the 70 % ethanol eluents and evaporate to dryness. Dissolve the residue in methanol, transfer to a 5 mL volumetric flask, dilute with methanol to volume and mix well.

Chromatographic conditions

- Column: ZORBAX Extend C18 4.6×250 mm, 5 µm (770450-902)
- Column temperature: 25 °C
- Mobile phase: acetonitrile-water (35:65)
- Evaporator tube temperature: 80° C, Nebulizing temperature: 50° C, Air flow rate: 1.5 SLM
- Flow rate: 1.0 mL/min

Chromatographic system

- Agilent 1200 Series quaternary pump with vacuum degasser
- Agilent 1200 Series high-performance autosampler
- Agilent 1200 Series thermostatted column compartment
- Agilent 35900 A/D converter
- ELSD PL-ELS 1000
- System control through Agilent ChemStation revision B.01.01



Components	k'	Ret Time (min)	Height (mAU)	Area (mAU*s)	n	USP T_f
Astragaloside IV	1.578	6.446	34.93	302.6	13113	1.00