Nippon Yam Rhizome *(Rhizoma Dioscoreae Nipponicae)* – 穿山龙

Sample source

Commercially available Nippon Yam Rhizome

Chemical reference substances

Diosgenin (National Institute for the Control of Pharmaceutical and Biological Products, Batch number 111539-200201)

Preparation of test solution

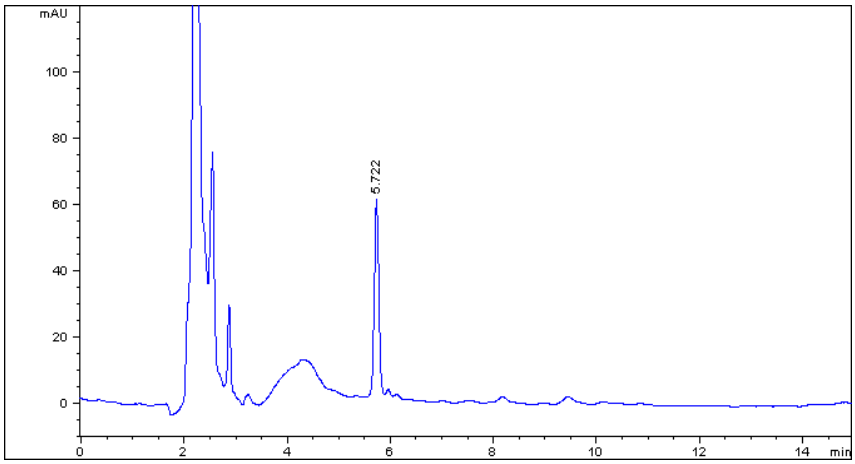
Accurately weigh 1 g of the powder in a conical flask, add 50 mL of methanol, treat ultrasonically for 30 minutes, filter, and rinse the residue with 20 mL of methanol. Combine the methanol solutions and evaporate to dryness. Dissolve the residue in successive quantities of 10 mL, 5 mL and 5 mL of 3 mol/L hydrochloric acid solution, successively transfer to a conical flask, heat to hydrolyze on a water bath for 30 minutes, allow to cool, add 30 mL of chloroform, heat under reflux for 15 minutes, repeat the extraction with chloroform in the same manner. Filter, wash the container and residue with 30 mL of chloroform, evaporate the combined extracts to dryness, dissolve the residue in methanol, and transfer to a 25 mL volumetric flask, dilute to volume with methanol, and mix well.

Chromatographic conditions

- Column: ZORBAX XDB C18 4.6×250 mm, 5 µm (990967-902)
- Column temperature: 30 °C
- Mobile phase: methanol-water (84:16)
- Detector wavelength: 203 nm
- 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 1200 Series diode-array detector
- System control through Agilent ChemStation revision B.01.01



Components	k'	Ret Time (min)	Height (mAU)	Area (mAU*s)	n	USP T_f
Diosgenin	1.289	5.722	59.25	357.9	20821	1.05