

Determination of Puerarin in Ganmao Qingre Granules by Chromatography

Ganmao Qingre Granules are composed of 11 traditional Chinese medicinal materials, including *Spica Schizonepetae*, *Mentha Haplocalyx*, *Saposhnikovia Divaricata*, *Bupleurum Chinense*, *Perilla Frutescens*, *Pueraria Lobata*, *Platycodon Grandiflorus*, *Armeniaca Vulgaris*, *Angelica Dahurica*, *Corydalis Bungeana* and *Phragmites Australis*. It is a variety included in the *Chinese Pharmacopoeia*, with the effects of dispelling wind and dispersing cold, relieving exterior syndrome and clearing heat. It is used for wind-cold cold, headache and fever, aversion to cold and body pain, clear nasal discharge, cough and dry throat.

In this paper, the content of puerarin (the active ingredient in Ganmao Qingre Granules) was determined and verified methodologically according to the puerarin assay method for Ganmao Qingre Granules specified in the *Pharmacopoeia of the People's Republic of China (2020 Edition)*.



The experimental results show that the determination of puerarin in Ganmao Qingre Granules using the Chromai Leaps UHPLC system fully meets the requirements of the Chinese Pharmacopoeia, and the method is accurate and sensitive.

Experimental Instruments

Chromai Leaps Ultra High Performance Liquid Chromatography System

Chromatographic Conditions

- Instrument: Chromai Leaps Ultra High Performance Liquid Chromatography System
- Chromatographic Column: Lotus C18, 5 μ m, 4.6 mm $\times$ 250 mm
- Column Temperature: 40 $^{\circ}$ C
- Mobile Phase: Acetonitrile - water (11:89)
- Flow Rate: 1.0 mL/min
- Detection Wavelength: 250 nm
- Injection Volume: 10 μ L

Chromatograms



Figure 1. Chromatogram of puerarin reference substanceFigure 2. Chromatogram of Ganmao Qingre Granules sample

►► Chromatograms

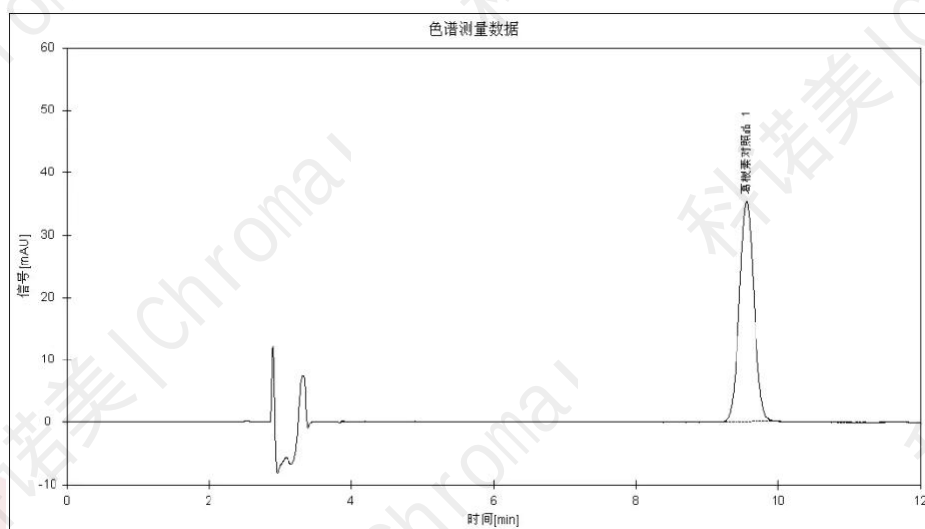


Figure 1. Chromatogram of Puerarin Reference Substance

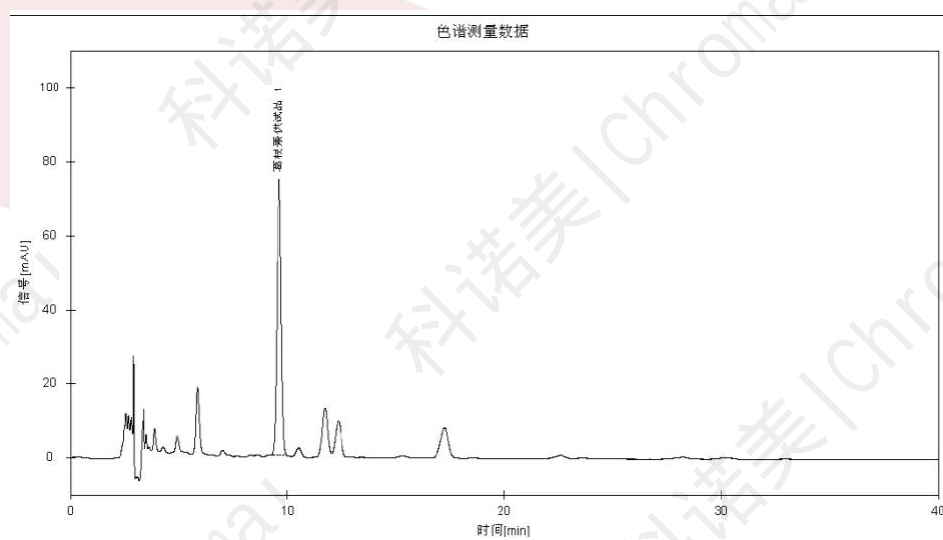


Figure 2. Chromatogram of Ganmao Qingre Granules Sample

►► Experimental Conclusions

In this test, the theoretical plate number calculated on the puerarin peak was **10293** (the pharmacopoeia requires ≥ 4500). The content of puerarin (calculated as pueraria) in each bag of Ganmao Qingre Granules was **11.27 mg** (the pharmacopoeia requires ≥ 10 mg per bag). The linear range of puerarin was $43 \mu\text{g} - 215 \mu\text{g}$ ($r = 0.9999$).

