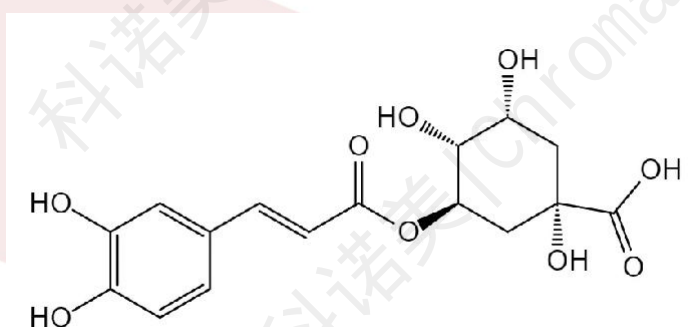


Determination of Chlorogenic Acid in Yinqiaojiedu Granules by Chromatography

Yinqiaojiedu Granules are composed of 9 traditional Chinese medicines including *Lonicerae Japonicae Flos*, *Forsythiae Fructus*, *Menthae Haplocalycis Herba*, *Schizonepetae Herba*, etc. It is a collection included in the Chinese Pharmacopoeia, with the effects of relieving exterior syndrome with pungent and cool-natured drugs and clearing away heat and toxic materials. It is used for wind-cold type of cold, headache and fever, aversion to cold and body pain, cough and dry throat.



Based on the method for determination of chlorogenic acid in Yinqiaojiedu Granules in the Pharmacopoeia of the People's Republic of China (2020 Edition), this paper determined and validated the active ingredient chlorogenic acid in Yinqiaojiedu Granules.



The experimental results show that the determination of chlorogenic acid in Yinqiaojiedu Granules using the Chromai Leaps UHPLC system can fully meet the requirements of the Pharmacopoeia of the People's Republic of China, 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**
- **Column: Lotus C18, 5 μ m, 4.6 mm $\times$ 250 mm**
- **Column Temperature: 40 $^{\circ}$ C**
- **Mobile Phase: Acetonitrile - 0.3% Phosphoric Acid Solution (9:91)**
- **Flow Rate: 1.0 mL/min**



- **Detection Wavelength: 327 nm**

- **Injection Volume: 10 μ L**

►► **Chromatograms**

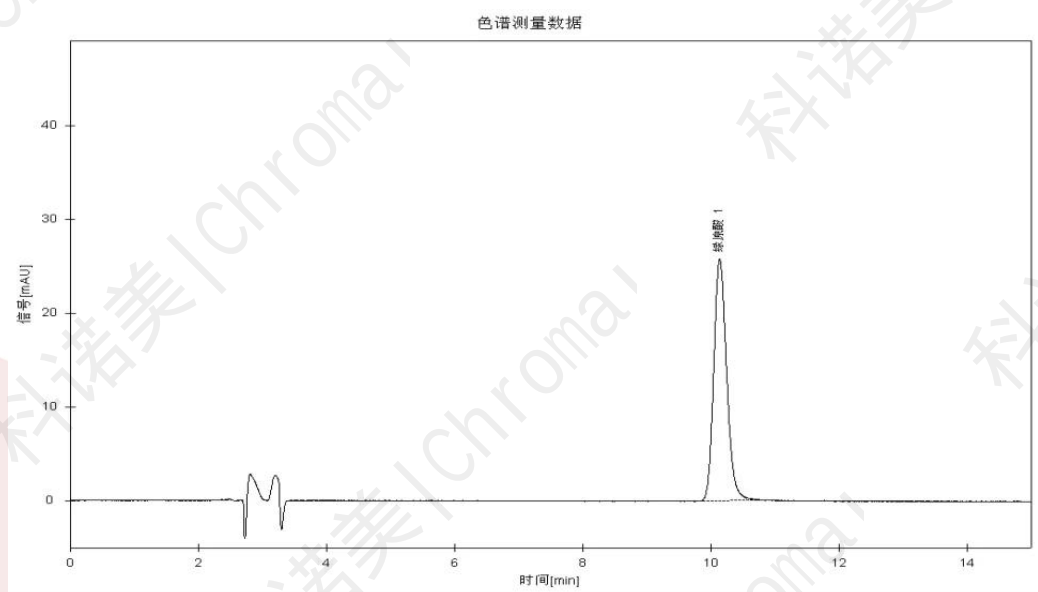


Figure 1. Chromatogram of Chlorogenic Acid Reference Substance

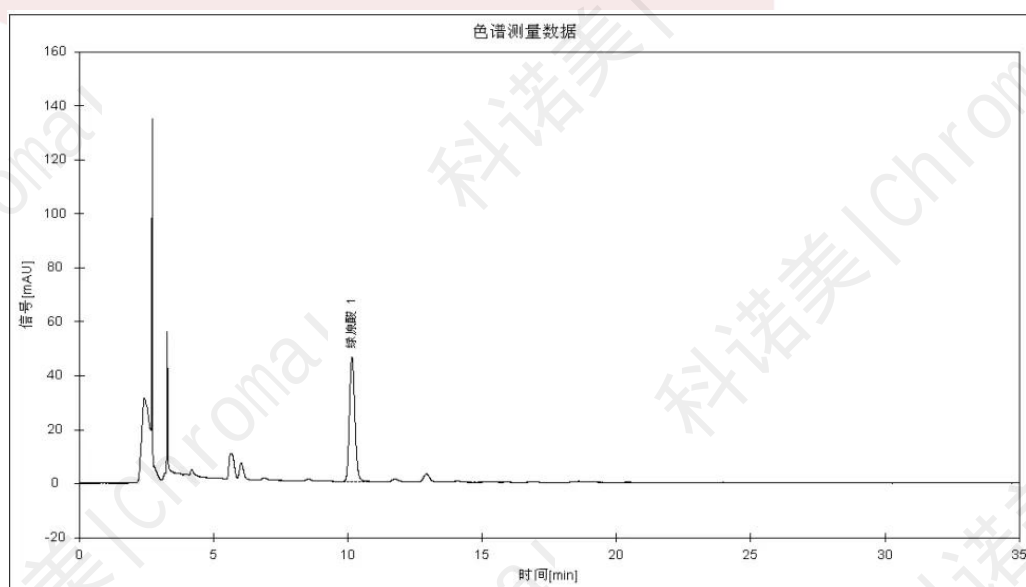


Figure 2. Chromatogram of Yinqiaojiedu Granules Sample



►► Experimental Conclusion

In this paper, the theoretical plate number calculated by chlorogenic acid peak is 10468 (the pharmacopoeia requirement is not less than 3000). The content of chlorogenic acid in each bag of Yinqiaojiedu Granules is 6.4 mg (the pharmacopoeia requires that each bag contains not less than 6 mg of chlorogenic acid from *Lonicerae Japonicae* Flos). Qualitative repeatability is 0.096%, quantitative repeatability is 0.255%, and the linear range is 0.03 μg ~ 0.3 μg ($r=0.9999$).

All test results fully meet the standard requirements of "Yinqiaojiedu Granules" in the Pharmacopoeia of the People's Republic of China. In addition, the instrument baseline is stable with low noise, which fully meets the analysis requirements.

