# 红外光谱法与党参及其伪品夜关门的分析与鉴定

黄冬兰　广东工业大学轻工化工学院　510009
孙素琴　清华大学化学系　100084
徐永群　韶关学院化学系　512005
等

摘　要：采用红外光谱三级鉴定法分析鉴别党参及其伪品夜关门。伪品夜关门一维红外光谱图和二阶导数谱分别与草酸钙标准谱图相比较，都验证该药材中含有一定量草酸钙。此外，谱图还验证党参及其伪品夜关门都在不同程度上含有糖苷类化合物和有机酯类化合物，而不同的是党参所含芳香类化合物高于夜关门。该方法不仅可以快速有效地鉴别党参及其伪品夜关门，还提供两者的有机酯类化合物以及芳香类和糖苷类化合物具有很大差别的一些有用的结构信息。因此，运用红外光谱法可以快速有效地分析和鉴定党参及其伪品夜关门。

关键词：红外光谱法,党参,夜关门,真伪鉴别



# Analysis and identification of Dangshen and its counterfeit Yeguanmen by fourier transform infrared spectroscopy

510009

100084

512005

Abstract：Standard Dangshen (Codonopsis pilosula (Franch.) Nannf.) and its counterfeit Yeguanmen (Lespedeza cuneate (Dum Cours)G. Don) can be discriminated and identified by using multi-steps infrared maro-fingerprint method. By comparing the general infrared spectra (FTIR) and secondary derivative spectra of Yeguanmen with the standard infrared spectra of CaC2O4, it's easy to find the fingerprint characteristic peaks of CaC2O4 in the infrared spectra of Yeguanmen. Furthermore, the spectra aslo testified that the glucoside and organic ester compounds between standard Dangshen and its counterfeit Yeguanmen were different, and the aromatic compounds in Dangshen was much more than Yeguanmen. The method not only can identify standard Dangshen and its counterfeit Yeguanmen rapidly, but also show the differences of organic ester compounds, aromatic compounds and glucoside between Dangshen and its counterfeit Yeguanmen.It is proved that multi-steps infrared maro-fingerprint method can be used to analyze and distinguish Dangshenand its counterfeit Yeguanmen.

Key words：Fourier transform infrared spectroscopy,Dangshen(Codonopsis pilosula (Franch.) Nannf),Yeguanmen (Lespedeza cuneate (Dum Cours)G. Don),Identification