

RP-HPLC Analysis For Active Constituents In “Yin Qiao Jie Du” Tablets.**Xudong Yuan and Wai-Keung Chui****Department of Pharmacy, National University of Singapore**

In Singapore, Chinese Proprietary Medicines are readily available and are widely used amongst the Chinese population. “Yin Qiao Jie Du” tablets (YQJD) are commonly used in self-medication to relieve symptoms of the common cold. About ten different brands of YQJD tablets are imported for sale in the local market. The objective of the study is to develop HPLC methods of analysis for active constituents of YQJD tablets.

Ethanol extract of each brand of YQJD tablets was successfully separated into their constituents by using a RP-18 column and a mobile phase consisting of acetonitrile and 0.1% acetic acid. A linear gradient elution was employed which involved increasing the percentage of acetonitrile from 0% to 44% over a period of 66 minutes at a flow rate of 1ml/min.

Another method was developed to determine the

quantity of glycyrrhizin present in the YQJD tablets. This chromatographic method employed isocratic elution on a RP-18 column, using acetonitrile and 0.1% acetic acid (25:52) as mobile phase and a flow rate of 1ml/min. A calibration curve for glycyrrhizin was constructed using warfarin as internal standard. The linear regression equation of the calibration curve was $y = 0.04186x - 0.00269$ ($r^2 = 0.99861$). The quantity of glycyrrhizin per tablet in four different brands of YQJD tablets was found to be 0.2223 ± 0.0045 mg, 0.6027 ± 0.0048 mg, 0.7230 ± 0.0020 mg and 2.6150 ± 0.0184 mg. While a fifth brand did not contain any glycyrrhizin at all. This method of analysis can therefore be used to quantify reliably the amount of glycyrrhizin in YQJD tablets and results have indicated that there is a large variation in the amount of glycyrrhizin amongst different brand of YQJD tablets even though they claim to have used the same formula.