



## Multiple Compounds Determination and Fingerprint Analysis of Herbal Preparation Shuang-Huang-Lian Capsule by HPLC-DAD

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**SUMMARY.** The objective of this paper was to develop a high performance liquid chromatography with diode array detection both for chromatographic fingerprint and simultaneous determination of twelve analytes of Shuang-Huang-Lian (SHL) capsule. The chromatographic separation was performed on an Agilent Zorbax SB-C<sub>18</sub> column with a gradient elution program using a mixture of acetonitrile and 0.2 % acetic acid as mobile phase within 110 min detected at 278 nm wavelength. For fingerprint analysis, 50 peaks were selected as the common peaks to evaluate the similarities of different samples collected from different pharmaceutical companies in China, and two kinds of data, relative retention time and relative peak area were used to identify the common peaks in samples for investigation. SHL capsules from different batches of the same manufacturer or different manufacturers showed a close similarity. For quantitative analysis, linear regressions, limit of detection and quantification, intra-day and inter-day precisions, recovery, repeatability and stability were all tested and good results were obtained to simultaneously determine the 12 marker compounds in the samples. The validated method coupled with multiple compounds determination and fingerprint analysis is a powerful and meaningful tool to comprehensively conduct the quality control of TCM.

**KEY WORDS:** Fingerprint analysis, High performance liquid chromatography, Multiple compounds quantification, Shuang-Huang-Lian capsule.

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