

## Simultaneous Determination of Avicularin and Quercitrin in *Astilbe chinensis* by HPLC

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### ABSTRACT

This study developed a HPLC analysis method for the determination of avicularin (AL) and quercitrin (QT) in *Astilbe chinensis* by HPLC. HPLC was performed on a Capcell Pak C18 MGII column (4.6 × 250 mm, 5 μ m) with a gradient elution of 0.05% (v/v) trifluoroacetic acid (TFA) and acetonitrile at a flow rate of 1.0 mL/min at 30 °C and a UV detection wavelength of 254 nm. The analytical method was validated for its specificity, precision, accuracy, and linearity. The limits of detection and quantitation were AL 0.09 and 0.28 mg/mL, QT 0.03 and 0.09 mg/mL respectively. Calibration curves showed good linearity (AL  $r^2 > 0.99990$  and QT  $r^2 > 0.99994$ ), and the precision of analysis was satisfied (less than AL 0.59%, QT 0.63%). Recoveries of quantified compounds ranged from AL 100.57 to 102.08%, QT 99.94 to 100.64%. These results indicate that the developed HPLC method was applied successfully to the detection of AL and QT in *A. chinensis*.

Key words: *Astilbe chinensis*, Avicularin, Functional cosmetic, HPLC, Quercitrin, Validation

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\*\* (Acknowledgement) This study was carried out with the support of 'R&D program for Forest Science Technology (Project No.2017027A00-1919-BA01)' provided by Korea Forest Service(Korea Forestry Promotion Institute).