

# Determination of Aucubin, Genipoides, and Pinoresinol Diglucoside in *Cortex Eucommiae* Using ASE and HPLC

This Application Brief (AB) describes an efficient method for the determination of aucubin, genipoides, and pinoresinol diglucoside in *Cortex eucommiae* using Accelerated Solvent Extraction (ASE®) and an UltiMate® 3000 HPLC system. The ASE method for the extraction of *C. eucommiae* replaced the soxhlet extraction method in the Chinese Pharmacopeia Edition, 2005.<sup>1</sup> The Soxhlet method requires large volumes of two organic solvents and at least 12 h, whereas the ASE method required only 15 mL of methanol and 15 min per extraction. The extract was separated on an Acclaim® PA column. As shown in Figure 1, aucubin, genipoides, and pinoresinol diglucoside were found in a *C. eucommiae* sample, with the extraction and separation being completed within 1 h.

## **INSTRUMENTATION**

Dionex UltiMate 3000 HPLC system consisting of:  
HPG 3400A pump  
WPS 3000TSL autosampler  
TCC-3200 thermostatted column compartment  
VWD3400 UV-vis Detector  
Chromeleon® 6.80 SP5 Chromatography Data System  
ASE 200 Accelerated Solvent Extractor

## **SAMPLE PREPARATION USING ASE**

Add an accurately weighed 2 g of powdered (through a 250 µm sifter) *C. eucommiae* sample to an 11 mL stainless steel extraction cell equipped with two cellulose filters on the bottom. The samples should nearly fill the cell. Then extract with the ASE method, using the conditions described in Figure 1, and transfer the extracts into separate 50 mL volumetric flasks. Bring the flasks to volume with water.

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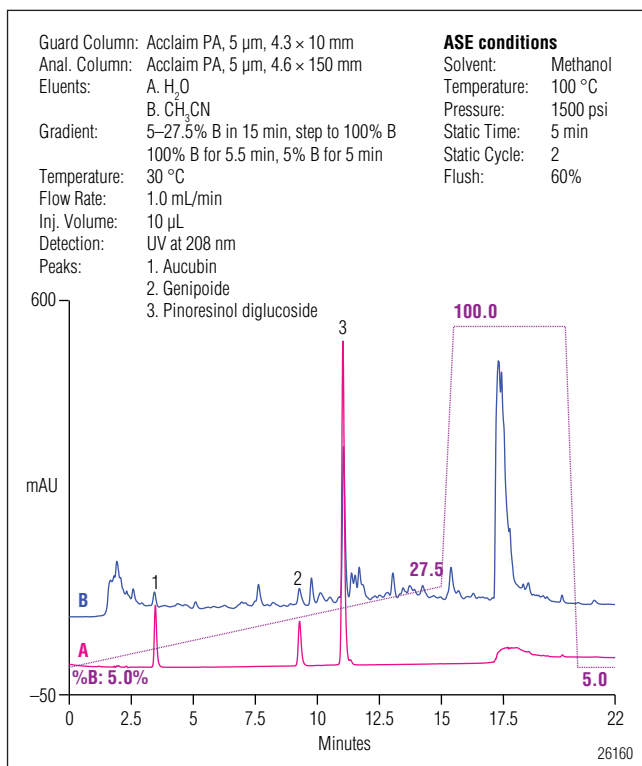


Figure 1. Chromatograms of A) mixed standards, and B) a *c.eucommiae* sample.

## REFERENCE

1. Chinese Pharmacopoeia (Vol. 1) 2005, p114.

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LPN 2192-01 PDF 08/09  
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