

Reveleris® X2 Flash System

Reveleris® X2 Flash Chromatography System in Purification of Galla Chinensis (Wubeizi)

Introduction

Crude plant extracts have various compounds that may interfere with bioassays or are common constituents of plant extracts. Galla chinensis, a traditional Chinese medicinal plant, contains complex components that have been studied for antibacterial and antioxidant properties.

Extraction Conditions:

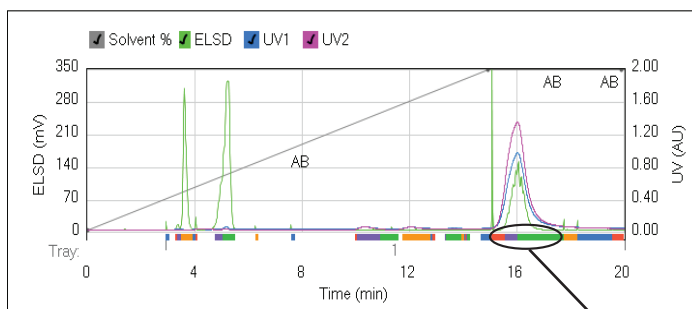
Extract Type: Pulverized
Weight: 6g
Extraction Solvent: Ethanol
Solvent Volume: 60mL
Ultra-sonication: 30 min

Flash Chromatography Conditions:

Cartridge: Reveleris® silica 12g
Solvent A: Hexane
Solvent B: Ethyl acetate
Flow Rate: 25mL/min
UV1 Wavelength: 254nm
UV2 Wavelength: 280nm
Cartridge Equilibration: 4.0 min
Injection Type: Liquid

HPLC Chromatography Conditions:

HPLC System: Agilent 1100
Column: Alltima™ silica 5µm, 250 x 4.6mm, Part No. 88171
Flow Rate: 1mL/min
Detector: UV@280nm
Mobile phase: A: 1% Formic acid in hexane
B: Ethyl acetate



Gradient Table		
Step	Time (min.)	%B
1	0.0	0
2	15.0	100
3	5.0	100

Figure 1: The chromatogram shows the purification of Galla Chinensis extract using the Reveleris® X2 flash chromatography system.

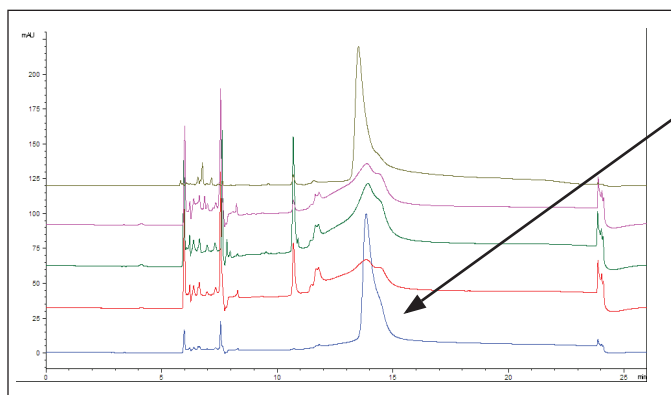


Figure 2: Fractions analyzed using HPLC show higher purity peaks as they are well isolated during flash chromatography using the Reveleris® Silica cartridge.

Conclusion

Reveleris® cartridges provide greater loading capacity, allowing the use of smaller size cartridge beds and thus helping to reduce cost. As peaks are well resolved during separation, fractions can be isolated with high purity and recovery. Traditional flash chromatography would also fail to detect the early eluting non-chromophoric components as purified by the RevealX™ technology using the Reveleris® X2 flash chromatography system.

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07/2013 M354a

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