

Isolation of Bioactive Diterpenoids Using RevealX™ Technology in Tu-Jing-Pi Extract

Reveleris® iES Flash Chromatography System

Introduction

Root bark of pseudolarix kaempferi, well known as Tu-Jing-Pi, has been used in the treatment of skin diseases caused by microbial infection.¹ It contains diterpenoids, such as pseudolaric acid (A-C), that have a variety of biological activities.

Experimental

Extraction Conditions

Extract type: Pulverized

Weight: 2 g

Extraction solvent: Ethanol

Solvent volume: 20 mL

Ultra-sonication: 30 min

Run Conditions

Cartridge: Reveleris® silica 4g

Flow rate: 18 mL/min

Equilibration: 5.0 min

UV1 wavelength: 254 nm

UV2 wavelength: 280 nm

ELSD carrier: Iso-propanol

Injection type: Liquid

Solvent A: Hexane

Solvent B: Ethyl acetate

Gradient Method

Step	Time (min.)	%B
1	0	0
2	0.6	0
3	2.6	25
4	3.2	40
5	3.8	100
6	1.8	100



Results and Discussion

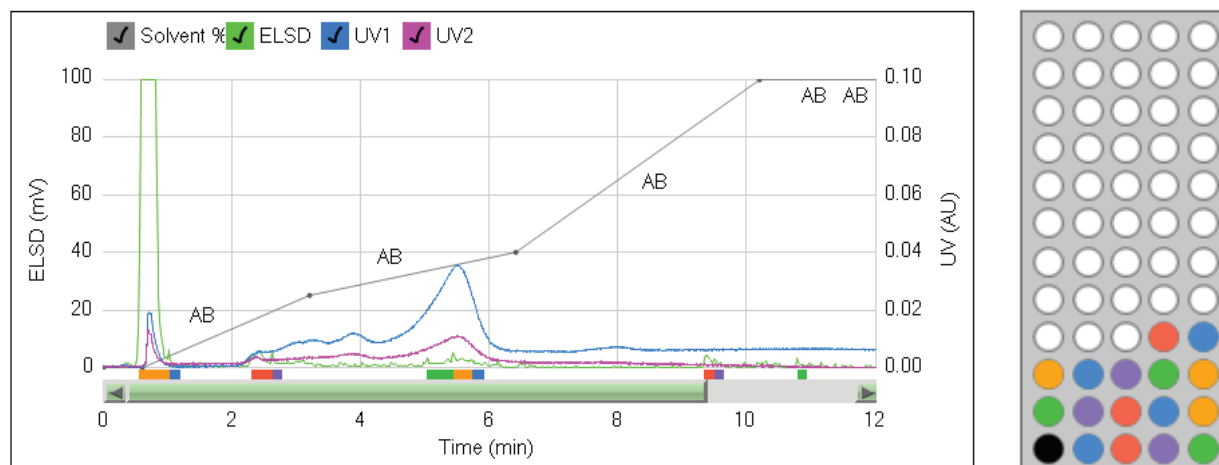


Figure 1: The chromatogram shows the purification of Tu-Jing-Pi extract using the Reveleris® iES flash chromatography system.

Conclusion

The Reveleris® flash chromatography system shows the benefits of RevealX™ technology in having multiple detection capabilities and integrated fraction collection for productive purification. The ELSD signal shows the elution of non-polar compounds, while UV detects compounds at low levels.

References

1. Qiao, C.; Han, Q.; Song, J.; Mo, S.; Tai, C.; Xu, H.; HPLC analysis of Bioactive diterpenoids from the root bark of pseudolarix kaempferi; J. of Food and Drug Analysis, 14 (4), (2006), pp. 353-356.

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