

Purification of Conjugated Quercetin with Rutinose Using Reveleris® Flash System is Fast and Productive

Reveleris® iES Flash Chromatography System

Introduction

Flavanol glycoside Rutin has been used in dietary supplements as Vitamin P for therapeutic treatments.¹ Besides its antioxidant property, this bioflavonoid works with vitamin C and helps in reducing pain and intraocular pressure. It has been synthesized from the conjugation of carbohydrates such as rhamnose and glucose with the flavonoid quercetin.

Experimental

Run Conditions

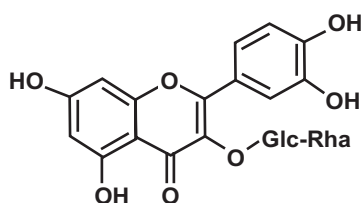
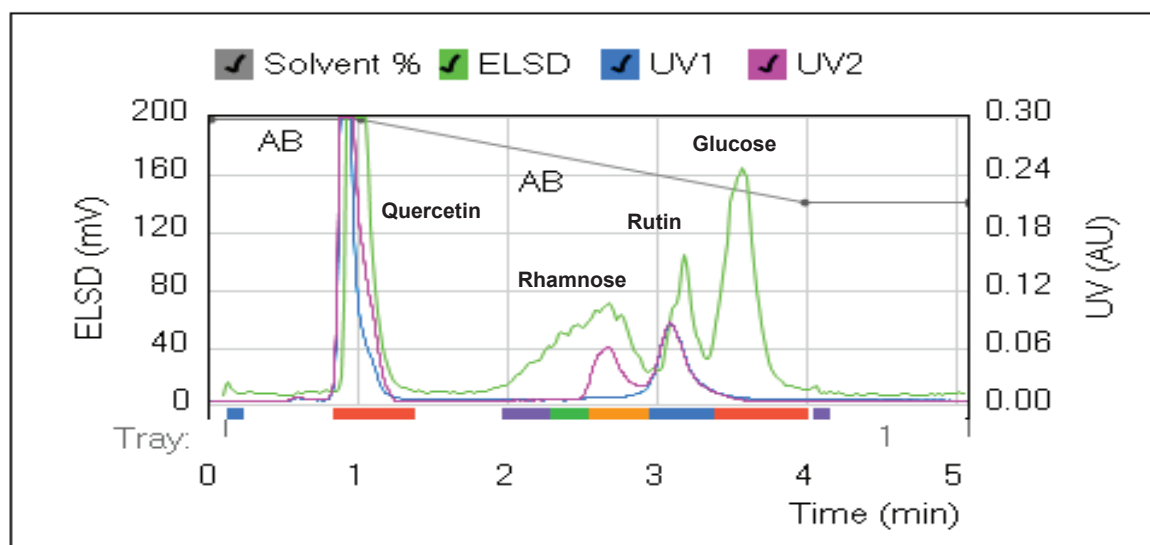
Cartridge: Reveleris® amino 12g
Flow rate: 36 mL/min
Equilibration: 10.0 min
Run length: 9.0 min
UV1 wavelength: 265 nm
UV2 wavelength: 220 nm
ELSD carrier: Iso-proponal
Solvent A: Water
Solvent B: Acetonitrile with 0.5% TFA

Gradient Method

Step	Time (min.)	%B
1	0	99
2	1	99
3	3	70
4	5	70



Results and Discussion



Rutin

Conclusion

Using the Reveleris® amino cartridge and the ELSD detector of the RevealX™ technology, sugar impurities from rutin can be isolated and purified. With other lower capacity cartridges, closely eluting peaks may co-elute

resulting in poor recovery during isolation. As amino phase media is ideal for separating sugar compounds, all the components in the reaction mixture are separated using trifluoroacetic acid as the solvent modifier with speed.

References

1. Medicinal natural products; a biosynthetic approach, 3rd edition; Dewick, P.; John Wiley & Sons, Inc., Hoboken, New Jersey, 2009.

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