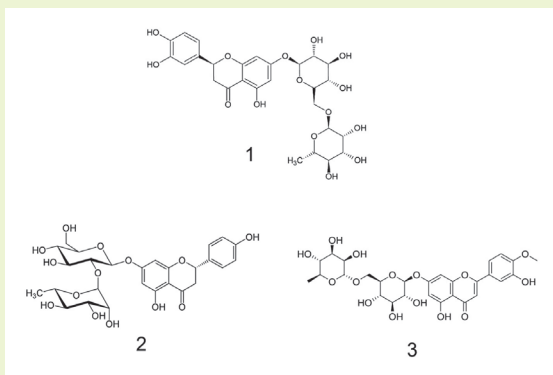
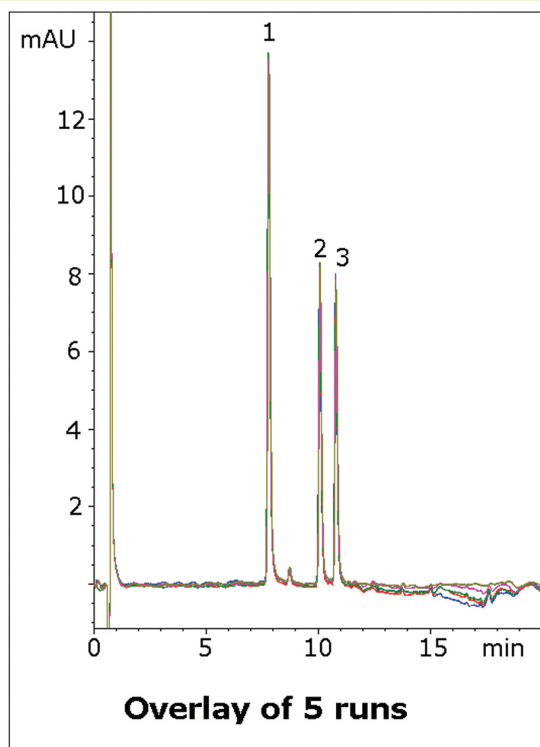


Glycosidic Flavonoids

Separation of diosmin, eriocitrine, and naringin



Note: Flavonoids are an important class of compounds found in citrus fruits. They have been shown to have anti-inflammatory, anti-allergic, anti-carcinogenic, antihypertensive and anti-arthritis activities. Therefore, there is a need for a reliable HPLC method for their separation and quantitation.

Method Conditions

Column: Cogent Bidentate C18 2.0™, 2.2µm, 120Å

Catalog No.: 40218-05P-2

Dimensions: 2.1 x 50 mm

Mobile Phase: A: DI H₂O / 0.1% formic acid (v/v)
B: Acetonitrile / 0.1% formic acid (v/v)

Gradient:	time (min.)	%B
	0-1	10
	15	30
	16	30
	17	10

Post Time: 3 min

Injection vol.: 0.2µL

Flow rate: 0.3mL/min

Detection: UV 254 nm (Perkin-Elmer instrument)

Sample: **Stock Solutions:** 1.0mg/mL diosmin in DMSO diluent, 1.0mg/mL naringin in 1:1 DMSO:MeOH diluent, and 1.0mg/mL eriocitrin in 1:1 DMSO:MeOH diluent. **Mixture:** 0.02mg/mL diosmin, 0.7mg/mL eriocitrin, and 0.2mg/mL naringin in 1:1 DMSO:methanol diluent.

Peaks: 1. Eriocitrin
2. Naringin
3. Diosmin

t₀: 0.6 min

Discussion

In this method, three glycosidic flavonoid standards are separated with good resolution. The data illustrates the ability of the column to distinguish amongst different chemicals in a given class of compounds. In addition, the Cogent Bidentate C18 2.0 column produces high efficiency peaks with reproducible retention (see figure overlay). Separation is also observed for a small impurity peak, eluting between peaks 1 and 2. This separation of standards could be applied to more complex samples such as citrus fruit extracts.