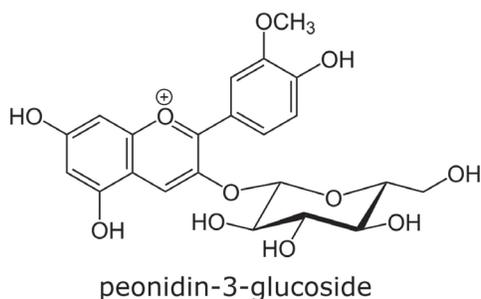
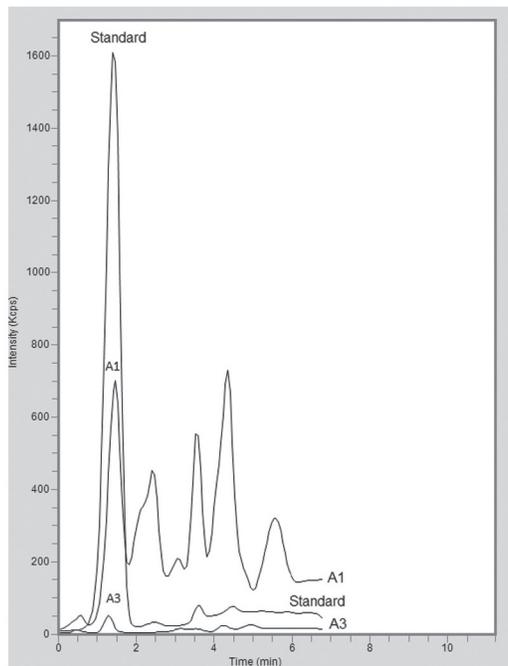


Peonidin-3-Glucoside

LC-MS method for fruit or vegetable extracts



Note: Anthocyanins are plant pigments and have recently been used as natural colorants in food products instead of synthetic dyes used in the food industry, which have been suspected to cause adverse neurological effects. The rapidly growing food and beverage market demands more and more of plant pigments. Also the main secondary metabolites in black rice are anthocyanins, mainly cyanidin-3-O-glucoside and peonidin-3-O-glucoside.

Method Conditions

Column: Cogent Phenyl Hydride™, 4µm, 100Å

Catalog No.: 69020-05P-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	15
	4	80
	6	80
	7	15

Post Time: 3 min

Injection vol.: 1µL

Flow rate: 0.4 mL/min

Detection: ESI - POS - Perkin Elmer, Flexar SQ 300 mass spectrometer

Sample: Four proprietary fruit or vegetable extracts were analyzed. Samples were marked A1 to A4.

Peak: Peonidin 3-O-glucoside 463 m/z [M⁺]

t₀: 0.4 min

Discussion

The Cogent Phenyl Hydride column was used for analysis of proprietary fruit or vegetable extracts. The presence of peonidin-3-O-glucoside was confirmed in two out of four extracts. The peaks were symmetrical and retained beyond the dead volume. Due to the MS detection and comparison of the retention time, it was possible to find the peak for peonidin-3-O-glucoside among many peaks with similar m/z values present in the A1 extract.

The method after validation can be used for quality control of commercial fruit extracts as well in studies of bioactivities of this important class of compounds.