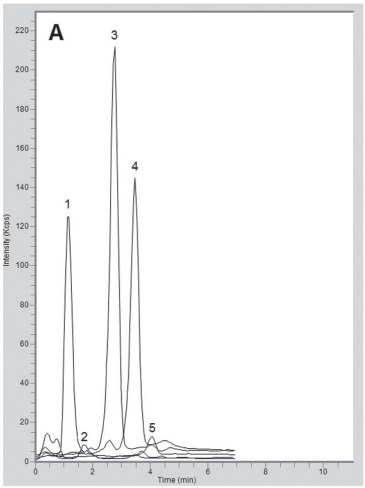
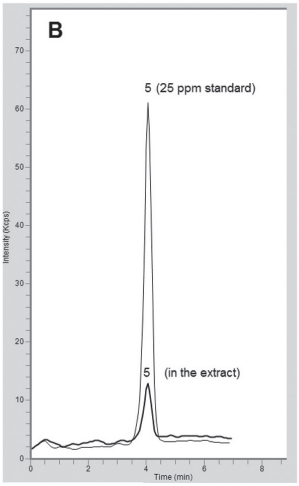
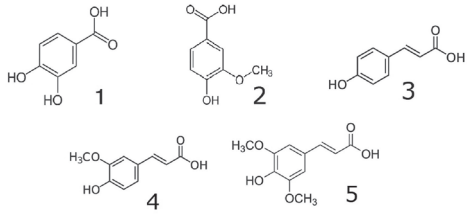
5 Phenolic Compounds Separated

Commercial rice extract







Note: Rice is a staple food in many countries. It contains phenolic compounds which have anticancer, antioxidant, and antimutagenic effects. It is important to analyze rice extracts to confirm the content of the phenolic compounds in rice.

Method Conditions

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

Catalog No.: 69020-05P-2

Dimensions: 2.1 x 50 mm

Mobile Phase: A: DI H_2O / 0.1% formic acid (v/v)
B: Acetonitrile / 0.1% formic acid (v/v)

Gradient:

time (min.)	%B
0	10
5	20
6	20
7	10

Post Time: 3 min

Injection vol.: 1µL

Flow rate: 0.4 mL/min

Detection: ESI – NEG - PerkinElmer Flexar SQ 300 mass spectrometer

Samples: **Fig. A:** Commercial rice extract was analyzed.
Fig. B: Peak of 3,5-dimethoxy-4-hydroxycinnamic acid in commercial rice extract overlaid with the peak for 25 ppm standard.

Peaks: 1. 3,4-hydroxybenzoic acid 153 m/z $[M-H]^-$
2. Vanillic acid 167 m/z $[M-H]^-$
3. p-coumaric acid 163 m/z $[M-H]^-$
4. Ferulic acid 193 m/z $[M-H]^-$
5. 3,5-dimethoxy-4-hydroxycinnamic acid 223 m/z $[M-H]^-$

t_0: 0.4 min

Discussion

A commercial rice extract was analyzed using the Cogent Phenyl Hydride column and peaks were assigned based on retention times and m/z values for the compounds of interest.

After method validation the developed procedure can be used to evaluate the quality of rice and to develop the best extraction procedure.

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