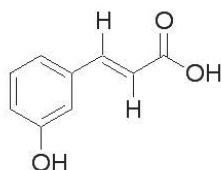
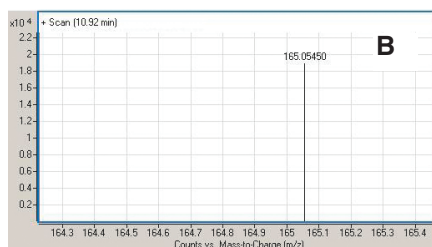
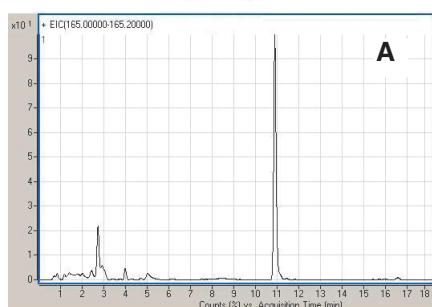


## Antioxidants in Human Urine



*trans*-3-Hydroxycinnamic acid



**Figure A:** EIC – extracted ion chromatogram of selected compound

**Figure B:** Corresponding mass spectrum

### Notes:

Hydroxycinnamic acids exhibit antioxidative activity and are present in plants. It is important to determine the antioxidant capacity of plant extracts by measuring the concentration levels of hydroxycinnamic acids before and after enzymatic treatments. The determination of the concentration of 3HCA is essential when determining protective effects against free radical-induced damage.

**Trans-3-hydroxycinnamic acid (3-HCA) known antioxidant analyzed**

### Method Conditions

**Column:** Cogent Diamond Hydride™ 4µm, 100Å.

**Catalog No.:** 70000-15P-2

**Dimensions:** 2.1 x150 mm

**Solvents:** A: DI water + 0.1% formic acid

B: acetonitrile + 0.1% formic acid

Mobile phase:	Gradient	Time	%B	Time	%B
		0.0	95	13.1	50
		0.2	95	14.0	50
		12.0	75	14.1	95
		13.0	75	20.0	95
		$t_0 = 1.44$ min			

**Flow rate:** 0.4 mL/min.

**Sample:** Human urine – after simple extraction

**Peak:** Trans-3-hydroxycinnamic acid

165.05405 m/z (M+H)<sup>+</sup>, RT = 10.92 min

**Detection:** ESI – pos - Agilent 6210 MSD TOF mass spectrometer.

### Discussion

Polar metabolites are reproducibly retained using an MS friendly, ANP (inverse gradient) mobile phase. The sample preparation required is very easy and cost effective (\$3 per sample to \$0.35 per sample of urine) compared to ordinary methods. The sample is diluted with the ANP solvents and ready to inject in 5-10 minutes. With this method, investigating metabolite excretion of laboratory animals or determining endogenous urinary biomarkers or working on phenolic composition of plant extracts is simple and easy.

For more information visit [www.MTC-USA.com](http://www.MTC-USA.com)

Cat. No.	Description
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70000-15P-2	Cogent Diamond Hydride™ HPLC Column, 100Å, 4µm, 2.1 x 150 mm
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