

APPLICATION

Simple Sugars Analysis from Oyster Sauce by ELSD using Strata[®] ABW and Luna[®] Omega SUGAR LC Column

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Overview

Presented is an analysis for sugar content in Oyster Sauce by LC-ELSD. The final method makes use of a cation-anion mixed mode ion exchange solid phase extraction (SPE) sorbent, Strata ABW to remove potential matrix interference from the sample while also removing salt ions which facilitated the successful analysis of key sugars.

Sample Preparation

Sample Pre-Treatment

- ~1 ml of sample was diluted in 9mL of Milli-Q[®] Water
- Vortex at 4700 RPM
- Pass supernatant through a Phenex[®] Nylon 25mm syringe filter
- Load sample and perform Solid Phase Extraction step

Solid Phase Extraction (Non-Retentive)

- SPE Column:** Strata ABW 2 g/12 mL Tube
- Part No.:** 8B-S030-KDG
- Condition:** Not Required
- Load Sample:** 10 mL (from sample pre-treatment step) – To prevent further dilution of sample, compressed air was used to push the sample through (positive pressure)
- Elute and Collect:** Elute thoroughly to bed dryness and collect entire loaded sample – after the visible sample volume has soaked into the sorbent with about 1.5 mL visibly collected, the vacuum pressure can be increased to expedite full elution.
- Analysis:** Transfer aliquot of collected eluent directly into an autosampler vial for injection onto the LC.

LC-ELSD Conditions

Column:	Luna Omega 3 μm SUGAR	
Dimensions:	150 x 4.6 mm	
Part No.:	00F-4775-E0	
Mobile Phase:	A: Water	
	B: Acetonitrile/Isopropano/Water (90:5:5)	
Gradient:	Time (min)	% B
	0	90
	0.5	90
	15.5	70
	17	70
	18	90
	20	90
Flow Rate:	1 mL/min	
Temperature:	35 °C	
Injection Volume:	0.5 μL	
Detection:	ELSD	
Sample:	Analyte	RT (min)
	1. Fructose	6.078
	2. Unknown	6.373
	3. Glucose	6.93
	4. Sucrose	9.458



Figure 1.
Pre Strata ABW SPE Clean-Up

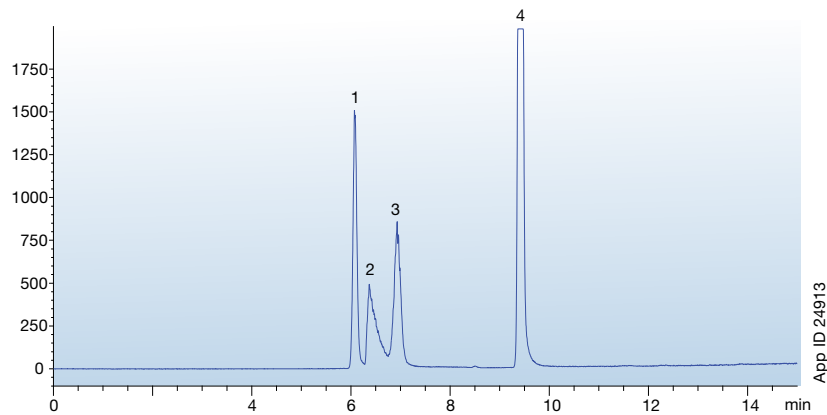
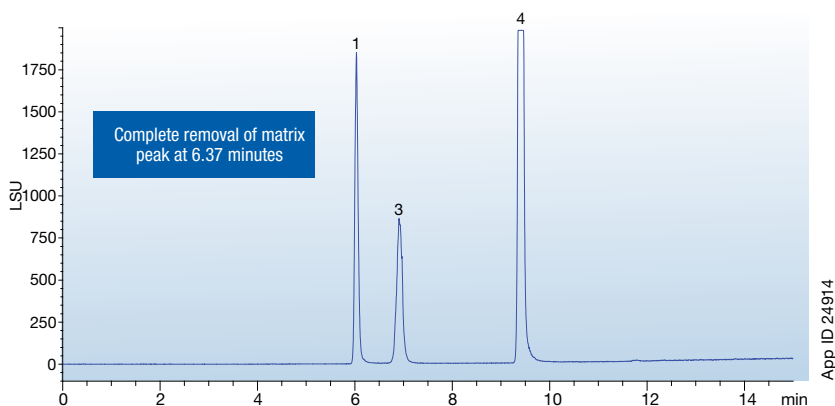


Figure 2.
Post Strata ABW SPE Clean-Up



APPLICATION

Luna[®] Omega SUGAR Ordering Information

3 µm Minibore Columns (mm)				SecurityGuard [™] Cartridges (mm)
Phases	50 x 2.1	100 x 2.1	150 x 2.1	4 x 2.0*
				/10pk
SUGAR	00B-4775-AN	00D-4775-AN	00F-4775-AN	AJ0-4496

for ID: 2.0-3.0 mm

3 µm MidBore [™] Columns (mm)		SecurityGuard Cartridges (mm)
Phases	150 x 3.0	4 x 2.0*
		/10pk
SUGAR	00F-4775-Y0	AJ0-4496

for ID: 2.0-3.0 mm

3 µm Analytical Columns (mm)				SecurityGuard Cartridges (mm)
Phases	100 x 4.6	150 x 4.6	250 x 4.6	4 x 3.0*
				/10pk
SUGAR	00D-4775-E0	00F-4775-E0	00G-4775-E0	AJ0-4495

for ID: 3.2-8.0 mm

* SecurityGuard Standard Analytical Cartridges require holder, Part No.: KJ0-4282



Strata[®] ABW Ordering Information

Sorbent Mass	Part No.	Unit/Box
Tube		
1 g	8B-S030-JCH	6 mL (30/Box)
Giga Tube		
2 g	8B-S030-KDG	12 mL (20/Box)
5 g	8B-S030-LEG	20 mL (20/Box)
10 g	8B-S030-MFF	60 mL (16/Box)
20 g	8B-S030-VFF	60 mL (16/Box)

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Strata-X is patented by Phenomenex. U.S. Patent No. 7,119,145
SecurityGuard is patented by Phenomenex. U.S. Patent No. 6,162,362

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