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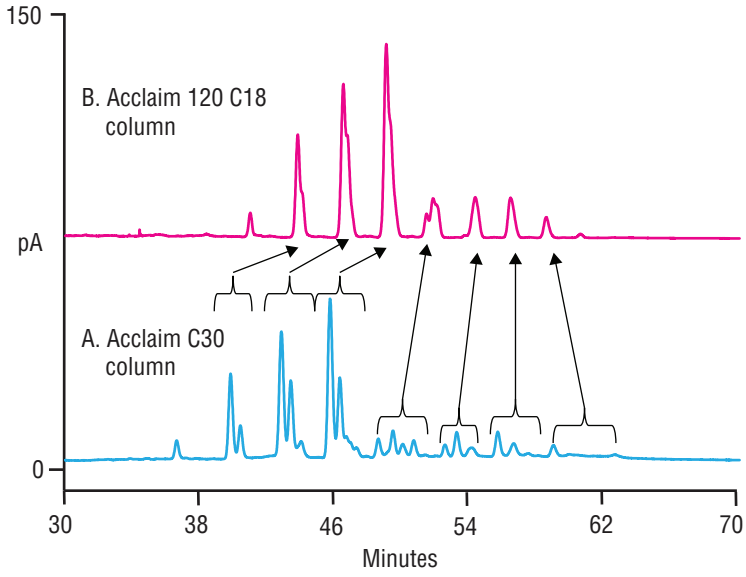
Triglyceride Profile of Cooking Oil Using a Thermo Scientific™ Acclaim™ C30 Column vs an Acclaim C18 Column



Columns:	A. Thermo Scientific™ Acclaim™ C30, 5 µm (4.6 × 150 mm) B. Acclaim 120 C18, 5 µm (4.6 × 150 mm)
Mobile Phase:	Acetonitrile (CH_3CN)/Iso-propanol (IPA)/ Ammonium acetate buffer (0.1 M, pH 5.0)

Gradient:

Time (min)	*CH_3CN*	*IPA*	*Buffer*
-15	90	5	5
0	90	5	5
0.1	90	5	5
60	0	95	5
70	0	95	5

Temperature:	40 °C
Flow Rate:	1.0 mL/min
Inj. Volume:	2 µL
Detection:	Thermo Scientific™ Dionex™ Corona™ *ultra*™ Charged Aerosol Detector (gain = 100 pA; filter = medium; neb. temp. = 25 °C)
Sample:	Peanut oil (5 mg/mL in iso-propanol)

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Cooking oils are purified lipids from plants, and they are typically liquid at room temperature. These compounds contain triglycerides as major components, and small quantities of free fatty acids and mono- and diglycerides. The composition of cooking oils is highly complex due to the wide variety of alkyl chain length, degree of unsaturation, origin, etc. While normal-phase chromatography is often used to characterize oils by their hydrophilicity, reversed-phase chromatography provides high resolution for analyzing major and minor components, and a detailed fingerprint. High shape selectivity of the Acclaim C30 column provides higher resolution than the Acclaim C18 column for oil analysis as shown here.