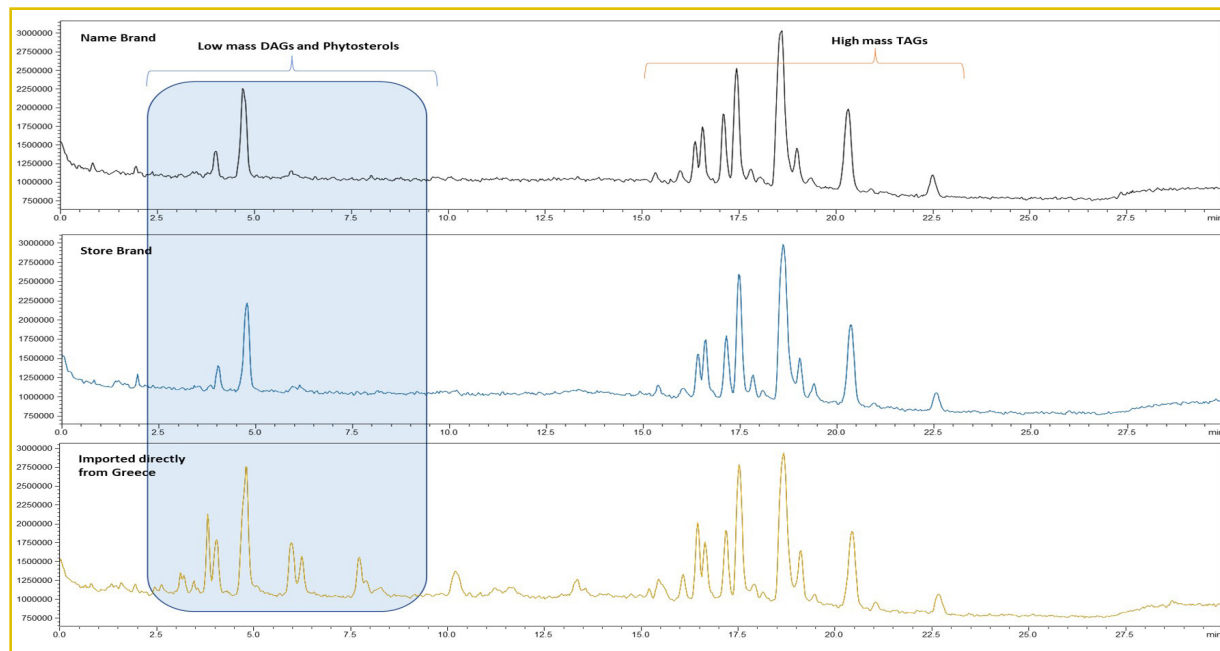




LCMS Profiling of Olive Oils Using the HALO® C30 Column

328



TEST CONDITIONS:

Column: HALO 160 Å C30, 2.7µm, 2.1 x 150 mm

Part Number: 92112-730

Mobile Phase A: Methanol

Mobile Phase B: IPA/0.1% Formic Acid

Gradient:	Time	%B
	0.00	10
	10.00	10
	14.00	40
	25.00	40
	25.01	10
	30.00	10

Flow Rate: 0.3 mL/min

Temperature: Ambient

Injection Volume: 2 µL

Sample Solvent: MeOH

LC System: Shimadzu Nexera X2

MS System: Shimadzu 2020

Olive oil is one of the most popular cooking oils and is known for its health benefits due to its high amount of antioxidants. However the quality of olive oil can vary depending on the brand, production method, and geographical origin of the olives themselves which impacts the product cost. Thus, profiling of the oil can be beneficial for authenticity testing. Liquid chromatography-mass spectrometry is a powerful analytical tool for identifying and quantifying compounds in complex mixtures like olive oil. In this application note, we compare the LCMS chromatograms of three different brands of olive oil to identify any differences in their chemical composition. Two store bought brands show very similar profiles with fewer diacylglycerides (DAGs) and phytosterols. The imported olive oil, sourced from Greece, has more DAGs and phytosterols which may be attributed to less processing for a final product. Using the HALO® C30 HPLC column, complex separations of glycerols, such as olive oils, can be achieved and used for product quality testing.

