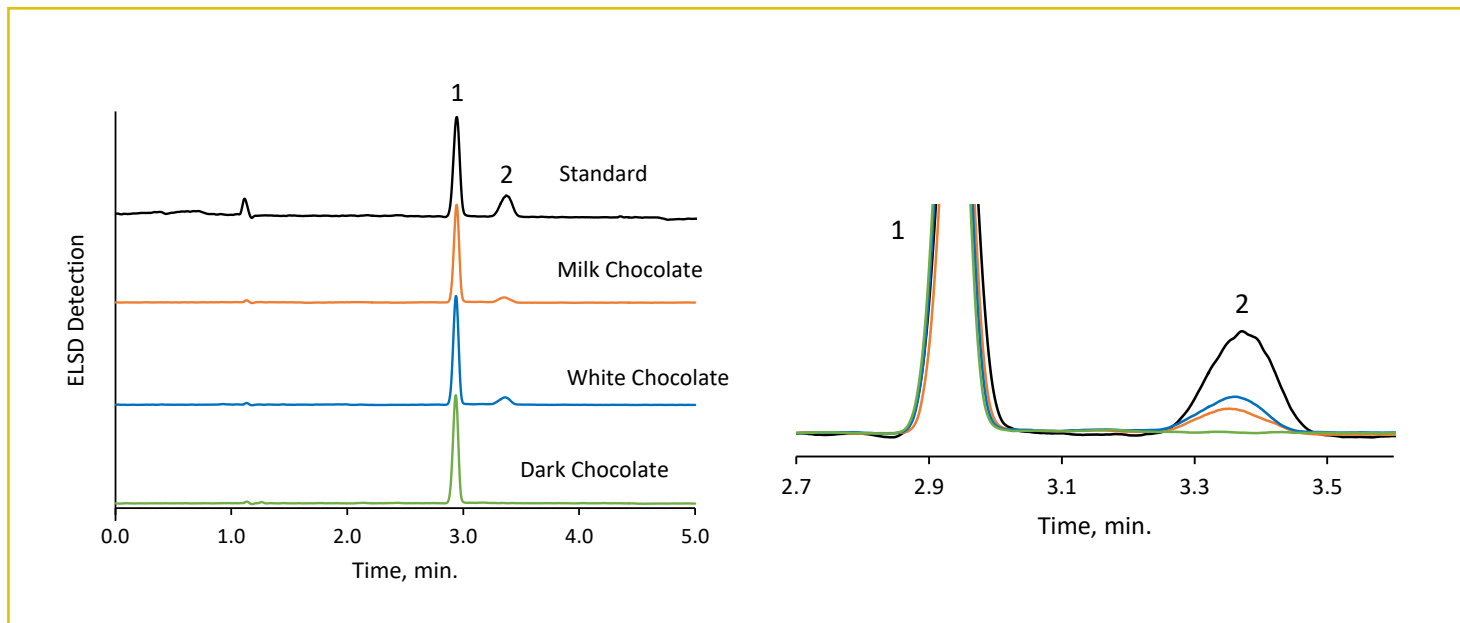# Chocolate Analysis Using HALO® 90 Å Penta-HILIC

Application Note: 216-SU

PEAK IDENTITIES

1. Sucrose
2. D-(+) Lactose monohydrate

TEST CONDITIONS

Column:	HALO 90 Å Penta-HILIC, 2.7 μm, 4.6 x 150 mm
Part Number:	92814-705
Mobile Phase A:	Water
Mobile Phase A:	Acetonitrile
Flow Rate:	1.4 mL/min
Pressure:	213 bar
Temperature:	65 °C
Detection:	ELSD, 40 °C, 3.3 bar
Injection Volume:	15 μL
Sample Solvent:	80/20 ACN/ Water
Response Time:	0.10 sec
Data Rate:	10 Hz
LC System:	Shimadzu Nexera X2

Chocolate is a very well known, popular food type worldwide. It is used for all occasions and can even have some health benefits as well, which include improved blood flow and brain function. There are four main types of chocolate to choose from- milk, white, dark, and raw. Analysis of three different types of chocolate (milk, white, and dark) was carried out in HILIC mode using an ELSD detector. The compounds of interest were sucrose and lactose. The HALO® Penta-HILIC column was used, which has a polar ligand with 5 hydroxyl groups tethered via novel proprietary linkage chemistry to Fused-Core® silica particles.