Nicotine Analysis Using HALO® Elevate C18

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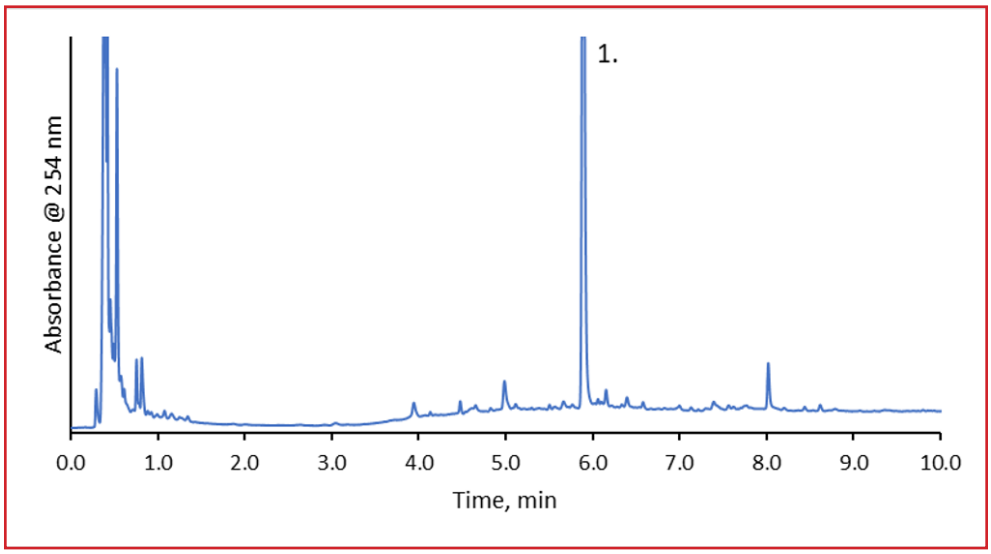

PEAK IDENTITIES

1. Nicotine

TEST CONDITIONS:

Column: HALO 120 Å Elevate C18, 2.7 µm, 2.1 x 100 mm
Part Number: 92272-602
Mobile Phase A: Ammonium Hydroxide, pH: 10.15
Mobile Phase B: Acetonitrile

Gradient:	**Time**	**%B**
	0.0	5
	2.0	5
	10.0	45
	11.0	45
	12.0	5

Flow Rate: 0.4 mL/min
Back Pressure: 256 bar
Temperature: 30 °C
Injection: 0.5 µL
Sample Solvent: 95/5 Water/ ACN
Wavelength: PDA, 254 nm
Flow Cell: 1 µL
Data Rate: 100 Hz
Response Time: 0.05 sec.
LC System: Shimadzu Nexera X2

Nicotine is a naturally produced alkaloid found in several plants including tobacco. This analyte is highly addictive and can come in the form of a cigarette, patch, chewing tobacco, and even vaping oils. High pH mobile phases are ideal for analyzing nicotine due to the increase in retention and improved peak shape. (compared to low pH conditions) A cigarette is analyzed using a HALO® Elevate column under high pH conditions. Excellent peak shape and retention is achieved using a combination of ammonium hydroxide and acetonitrile.