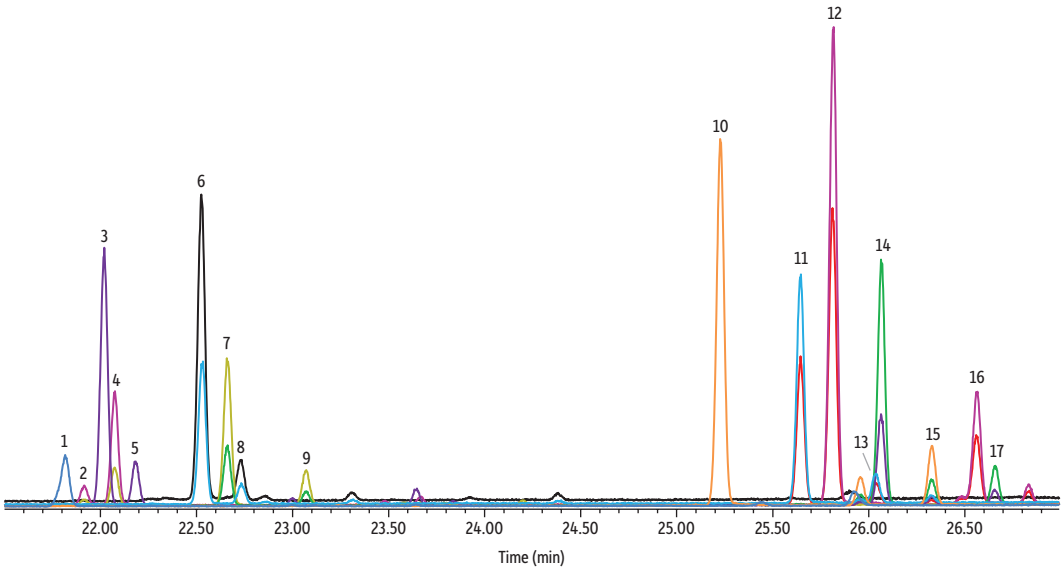
Sugar TMS oximes on Rtx-225



Peaks	t_R (min)	Peaks	t_R (min)
1. (E)-Arabinose-TMS-oxime	21.180	9. (Z)-Fucose-TMS-oxime	23.072
2. (Z)-Xylose-TMS-oxime	21.916	10. (E)-Fructose-TMS-oxime	25.277
3. (E)-Ribose-TMS-oxime	22.018	11. (E)-Mannose-TMS-oxime	25.643
4. (E)-Xylose-TMS-oxime	22.075	12. (E)-Galactose-TMS-oxime	25.816
5. (Z)-Ribose-TMS-oxime	22.186	13. (Z)-Mannose-TMS-oxime	26.041
6. (E)-Rhamnose-TMS-oxime	22.529	14. (E)-Glucose-TMS-oxime	26.066
7. (E)-Fucose-TMS-oxime	22.662	15. (Z)-Fructose-TMS-oxime	26.329
8. (Z)-Rhamnose-TMS-oxime	22.735	16. (Z)-Galactose-TMS-oxime	26.562
		17. (Z)-Glucose-TMS-oxime	26.653

Column Rtx-225, 30 m, 0.25 mm ID, 0.25 µm (cat.# 14023)
Standard/Sample Sugar TMS oximes
Diluent: Ethyl acetate
Conc.: 1-5 mg of starting material
Injection
Inj. Vol.: 1 µL split (split ratio 400:1)
Liner: Topaz 4.0 mm ID Precision Inlet Liner w/ Wool (cat.# 23305)
Inj. Temp.: 250 °C
Oven
Oven Temp.: 40 °C (hold 0.5 min) to 220 °C at 4.5 °C/min
Carrier Gas He, constant flow
Flow Rate: 1.4 mL/min
Linear Velocity: 43.4 cm/sec @ 40 °C
Dead Time: 1.14 min @ 40 °C
Detector MS
Mode: Scan
Scan Program:

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	7	50-750	7.5

Transfer Line Temp.: 280 °C
Analyzer Type: Quadrupole
Source Type: Extractor
Source Temp.: 280 °C
Quad Temp.: 150 °C
Electron Energy: 978 eV
Solvent Delay Time: 7 min
Tune Type: PFTBA
Ionization Mode: EI
Instrument Agilent 7890B GC & 5977A MSD
Notes Approximately 1 mg of sugar was dissolved in 100 µL of 40 mg/mL ethylhydroxylaminehydrochloride (EtOx) and heated at 70°C for 30 min. Samples were cooled to room temperature for approximately 5 min. 120 µL of N,O-bis(trimethylsilyl)trifluoroacetamide (BSTFA) was added to each sample and then heated at 70°C for 30 min. Samples were diluted 1:100 in ethyl acetate.