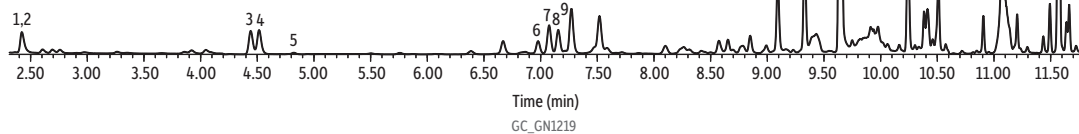
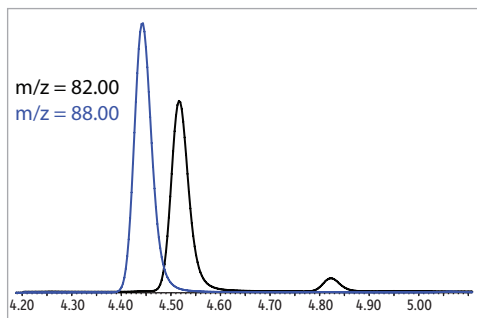
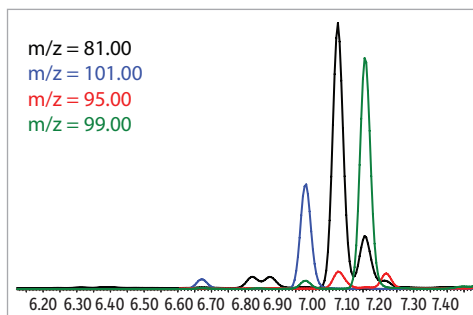


Furan and Alkylfurans in Baby Formula Spiked at 5 µg/kg on Rxi-624Sil MS

- SPME Arrow is sufficiently sensitive to meet low levels of detection in complex food matrices.
- SPME Arrow provides enhanced mechanical robustness and less breakage compared to traditional SPME fibers.



Peaks	Retention Time (min)	Ion (Quantifier)	Ion (Qualifier)	Dwell Time (ms)
1. Furan-d4	2.428	72	42	50
2. Furan	2.447	68	39	50
3. 2-Methylfuran-d6	4.464	88	58	30
4. 2-Methylfuran	4.536	82	53	30
5. 3-Methylfuran	4.846	82	53	30
6. 2-Ethylfuran-d5	7.001	101	55	30
7. 2-Ethylfuran	7.100	81	96	30
8. 2,5-Dimethylfuran-d3	7.179	99	84	30
9. 2,5-Dimethylfuran	7.243	95	67	30
10. 2-Pentylfuran-d11	11.501	149	83	30
11. 2-Pentylfuran	11.570	138	81	30

Column Rxi-624Sil MS, 30 m, 0.25 mm ID, 1.40 µm (cat.# 13868)
Standard/Sample
 Diluent: N/A
 Conc.: 5 µg/kg
Injection split (split ratio 10:1)
 Liner: Topaz 1.8 mm ID straight/SPME inlet liner (cat.# 23280)
 Inj. Temp.: 280 °C
 Split Vent Flow Rate: 14 mL/min
Oven
 Oven Temp.: 35 °C (hold 3 min) to 75 °C at 8 °C/min to 200 °C at 25 °C/min (hold 1 min)
Carrier Gas He, constant flow
 Flow Rate: 1.4 mL/min
Detector MS
 Transfer Line Temp.: 280 °C
 Analyzer Type: Quadrupole
 Source Temp.: 325 °C
 Quad Temp.: 200 °C
 Electron Energy: 70 eV
 Tune Type: PFTBA
 Ionization Mode: EI
Instrument Agilent 7890B GC & 5977B MSD
Sample Preparation Data was collected by extracting via HS-SPME from a 20 mL vial (cat.# 23083) capped with a magnetic screw-thread cap (cat.# 23091). The vial contained 0.5 g of baby formula and 10 mL of sodium chloride solution spiked with 2.5 ng of each analyte (5 ng/g final concentration). Internal standards were spiked at 100 ng/g. A Restek PAL SPME Arrow (120 µm carbon wide range [WR]/PDMS; cat.# 27487) was used.

SPME Arrow sampling conditions: 10 min extraction time, 10 min incubation at 50 °C, 1 min desorption at 280 °C, agitation at 250 rpm.