SPE Cartridges

Gel Free

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SPE Cartridge

Compounds:

acetaldehyde, acetone, ethyl acetate, diethyl acetal, methanol, benzene, 2-butanol, n-propanol, iso-butanol, n-butanol, iso-amyl alcohol, n-amyl alcohol

SPE EXTRACTION METHOD:

Gel Free SPE Cartridge

GC-FID METHOD

Column: Agilent DB-FATWAX, 30 m, 0.25 mm diameter, 0.25 µm film
Inlet Temp: 250°C
Detector Temp: 250 °C

Oven Temp Gradient Table

	Rate (°C/min)	Value (°C)	Hold Time (min)
Initial		32	10
Ramp1	10	100	0
Ramp2	5	220	5

Column flow rate: 0.7 mL/min

Injection volume: 1 µL

Run time: 29.8 min

Sample Pretreatment:
2 g of hand sanitizer gel is dissolved in acetonitrile and diluted to 10-mL. Mix well. Centrifuge and aliquot the supernatant.

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Load:
0.5 mL of gel/acetonitrile supernatant to the Gel Free SPE cartridge. Discard eluent.

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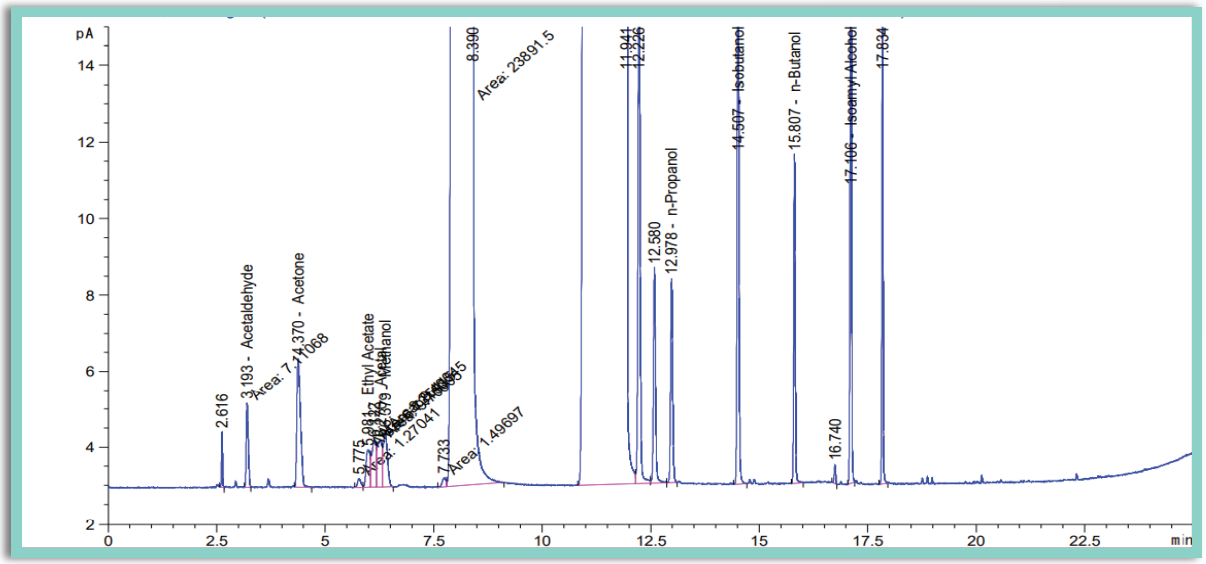
Collect:
1 mL of gel/acetonitrile supernatant to the same cartridge. Analyze eluent by GC directly.

Analyte	Avg. Recovery%	CV%
Acetaldehyde	94.46	1.59
Acetone	99.87	0.6
Ethyl acetate	98.96	0.41
Diethyl acetal	100.31	1.08
Methanol	99.37	1.26
Benzene	100.18	8.36
2-Butanol	100.78	2.21
n-Propanol	100.88	0.61
Iso-Butanol	101.18	0.44
n-Butanol	101.55	0.24
Iso-Amyl alcohol	101.18	0.30
n-Amyl alcohol	101.51	0.13



Analyte	Retention Time (min)
Acetaldehyde	3.24
Acetone	4.42
Ethyl acetate	6.07
Diethyl acetal	6.20
Methanol	6.48
Benzene	7.85
2-Butanol	12.70
n-Propanol	13.05
Iso-Butanol	14.58
n-Butanol	15.88
Iso-Amyl alcohol	17.18
n-Amyl alcohol	17.91

Analyte	Linear range (ppm)
Acetaldehyde	25-500
Acetone	50-2000
Ethyl acetate	25 – 1000
Diethyl acetal	25 – 1000
Methanol	25 – 1000
Benzene	2 – 80
2-Butanol	25 – 1000
n-Propanol	25 – 1000
Iso-Butanol	50 – 2000
n-Butanol	25 – 1000
Iso-Amyl alcohol	50 – 2000
n-Amyl alcohol	25 – 1000