

APPLICATIONS

Solvent Purity Estimation Using a Zebron™ ZB-624PLUS™ GC Column

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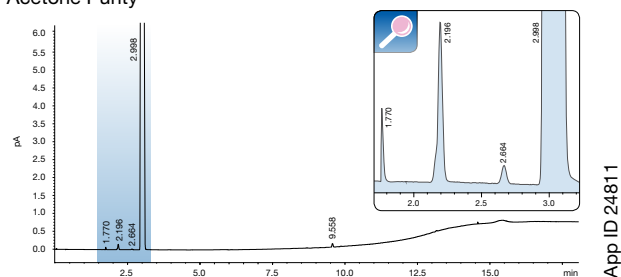
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Ramkumar loves to write poems, and to watch & read Shakespeare's plays.

Introduction

Organic solvents are a medium for many chemical reactions and are essential for the synthesis of compounds. Industries including Pharmaceutical, Chemical, Contract Manufacturing, and Polymer Production utilize solvents for their manufacturing process. In the present study, a Zebron ZB-624PLUS GC column is utilized to

characterize the purity of solvents such as Acetone, Ethyl Acetate, Tetrahydrofuran, and n,n-Dimethylformamide. The selectivity and temperature resistance of ZB-624PLUS makes it a versatile stationary phase for both nonpolar and polar solvent purity characterization.

Figure 1.
Acetone Purity



GC-FID Conditions

- Column:** Zebron ZB-624PLUS
- Dimensions:** 30 meter x 0.53 mm x 3.00 µm
- Part No.:** 7HK-G040-36
- Injection:** Split 50:1 @ 250°C, 1 µL
- Recommended Liner:** Zebron PLUS Straight Z-Liner™
- Liner Part No.:** AG2-OA03-05 (for Agilent® and Thermo Scientific® systems)
- Carrier Gas:** Helium @ 3.9 mL/min (Constant Flow)
- Oven Program:** 60 °C for 5 min, to 260 °C @ 25 °C/min for 5 min
- Detector:** FID @ 300 °C
- Sample:** Figure 1. Acetone
Figure 2. Ethyl Acetate
Figure 3. Tetrahydrofuran
Figure 4. n,n-Dimethylformamide

Figure 2.
Ethyl Acetate Purity

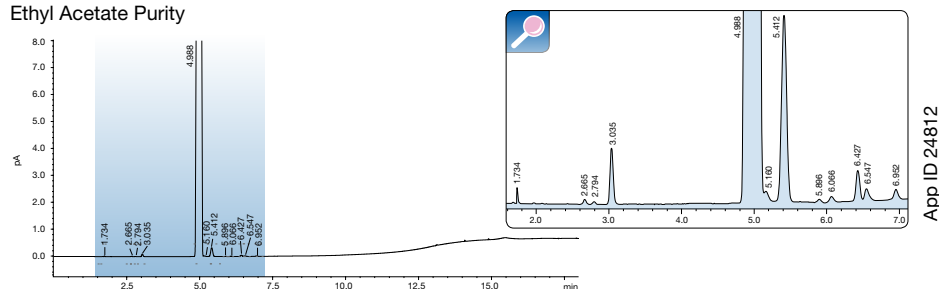


Figure 3.
Tetrahydrofuran Purity

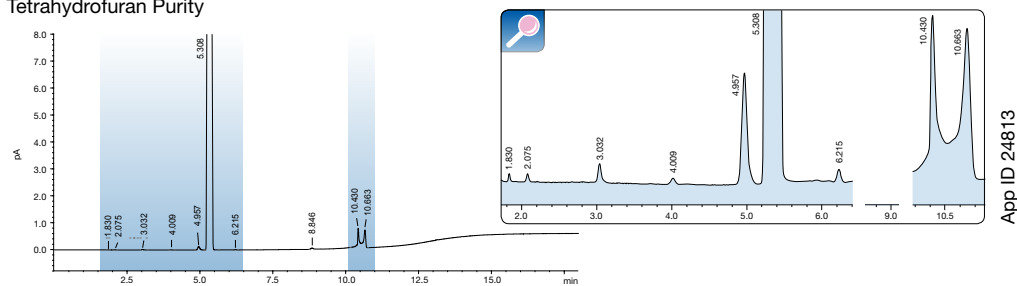
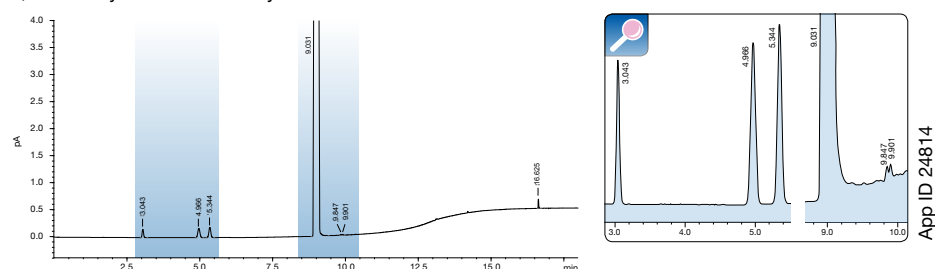



Figure 4.
n,n-Dimethylformamide Purity



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Ordering Information Zebron PLUS GC Liner

Description	Application	Inlet Style	Dimensions ID x L (mm)	Deactivation	Part No.	Unit
For 5890, 6890 and 7890 Models						
Straight Z-Liner™ 	Dirty samples, Volatiles, High initial oven temperatures	S/SL	4 x 78.5	PLUS Inert	AG2-0A03-01 AG2-0A03-05 AG2-0A03-25	ea 5/pk 25/pk

Ordering Information Zebron™ ZB-624PLUS™ GC Columns

ID(mm)	df(µm)	Temp. Limits °C	Part No.
20-Meter			
0.18	1.00	-20 to 300/320	7FD-G040-22
30-Meter			
0.25	1.40	-20 to 300/320	7HG-G040-27
0.32	1.80	-20 to 300/320	7HM-G040-31
0.53	3.00	-20 to 300/320	7HK-G040-36
60-Meter			
0.25	1.40	-20 to 300/320	7KG-G040-27
0.32	1.80	-20 to 300/320	7KM-G040-31
0.53	3.00	-20 to 300/320	7KK-G040-36

Note: If you need a 5 in. cage, simply add a (-B) after the part number, e.g., 7HG-G040-27-B. Some exceptions may apply. Agilent 6850, some SRI and process GC systems use only 5 in. cages.

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