

APPLICATIONS

Analysis of 20 Terpenes in Cannabis by GC-FID using Zebron™ ZB-624^{PLUS}™ GC Column

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Overview

Terpenes are the source for the aroma and flavor of cannabis products. Thus, terpenes profiling via GC-FID is a very important analysis for identifying and quantifying the terpenes and content in cannabis products for both quality and branding purposes.

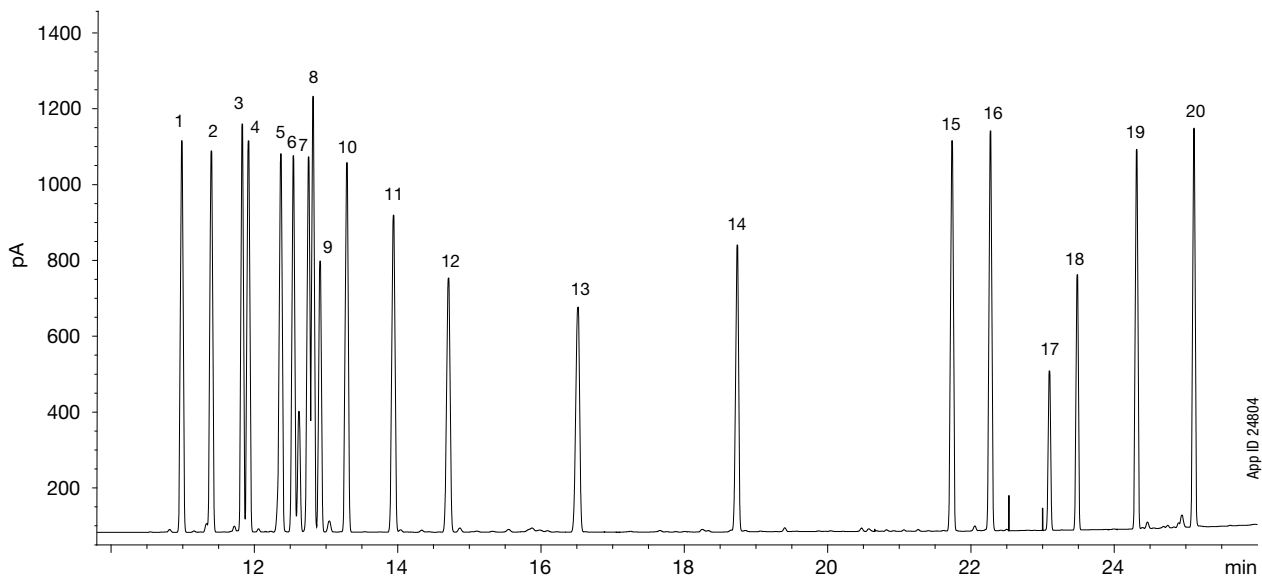
Developed is a GC-FID method for 20 terpenes from cannabis using a Zebron ZB-624^{PLUS} GC column. ZB-624^{PLUS} upper temperature limit is 300/320 °C, which gives the flexibility to elute out high boiling terpenes analytes.

GC-FID Method

- Column:** Zebron ZB-624^{PLUS}
- Dimension:** 30 meter x 0.25 mm x 1.40 μm
- Part No.:** 7HG-G040-27
- Recommended Z-Guard™:** 7CG-G000-00-GHK
- Injection:** Split 20:1 @ 250 °C, 1 μL
- Recommended Liner:** Zebron PLUS Straight Z-Liner™
- Liner Part No.:** AG2-0A03-05 (for Agilent® systems)
- Carrier Gas:** Helium @ 1.0 mL/min (constant flow)
- Oven Program:** 50 °C for 1 minute, 160 °C @ 10 °C/min for 4 min, then go to 280 °C @ 12 °C/min
- Detector:** FID @ 300 °C
- Sample:** Terpenes 20 mix
 1. α-Pinene
 2. Camphene
 3. β-Myrcene
 4. (-)-β-Pinene
 5. δ-3-Carene
 6. α-Terpinene
 7. d-Limonene
 8. p-Cymene
 9. Ocimene
 10. γ-Terpinene
 11. Terpinolene
 12. Linalool
 13. Isopulegol
 14. Geraniol
 15. β-Caryophyllene
 16. α-Humulene
 17. Nerolidol 1
 18. Nerolidol 2
 19. Guaiol
 20. α-Bisabolol



Figure 1.
20 Terpenes in Cannabis

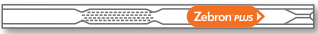


App ID 24804



APPLICATIONS

Ordering Information Zebtron™ PLUS GC Inlet Liners

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

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Ordering Information

Zebtron™ 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 and some SRI and process GC systems use only 5 in. cages.



If Phenomenex products in this technical note do not provide at least an equivalent separations as compared to other products of the same phase and dimension, return the product with comparative data within 45 days for a FULL REFUND.

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