

Rtx[®]-2330 Columns (fused silica)

(highly polar phase; biscyanopropyl cyanopropylphenyl polysiloxane)

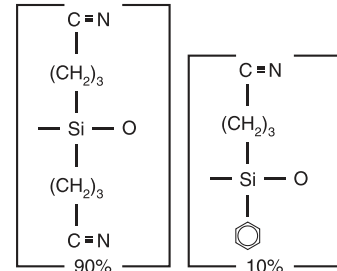
- General-purpose columns for *cis/trans* FAMES, dioxin isomers.
- Temperature range: 0 °C to 275 °C.
- Equivalent to USP G8 and G48 phase.

Rtx[®]-2330 is one of the most polar capillary column stationary phases. Cyano groups on both sides of the polymer backbone give the phase a strong dipole moment and high selectivity for *cis/trans* compounds or compounds with conjugated double bonds. Highly polar columns typically exhibit poor column efficiencies, high bleed, and short column lifetimes when thermally cycled. To overcome some of these problems, we developed a surface treatment that is more compatible with the Rtx[®]-2330 phase. In addition, our improved polymer produces columns with better column efficiency and lower bleed.

| ID | df | temp. limits* | 30-Meter cat.# | 60-Meter cat.# | 105-Meter cat.# |
|---------|---------|-----------------|----------------|----------------|-----------------|
| 0.25 mm | 0.10 μm | 0 to 260/275 °C | 10708 | 10711 | 10714 |
| | 0.20 μm | 0 to 260/275 °C | 10723 | 10726 | 10729 |
| 0.32 mm | 0.20 μm | 0 to 260/275 °C | 10724 | 10727 | 10730 |
| 0.53 mm | 0.20 μm | 0 to 260/275 °C | 10725 | 10728 | |

| ID | df | temp. limits | 10-Meter cat.# | 20-Meter cat.# | 40-Meter cat.# |
|---------|---------|--------------|----------------|----------------|----------------|
| 0.18 mm | 0.10 μm | 0 to 260 °C | 40701 | 40702 | 40703 |

*Maximum temperatures listed are for shorter length columns. Longer columns may have a different maximum temperature.

Rtx[®]-2330 Structure

Similar to: (95%-cyanopropyl)-phenyl polysiloxane

similar phases

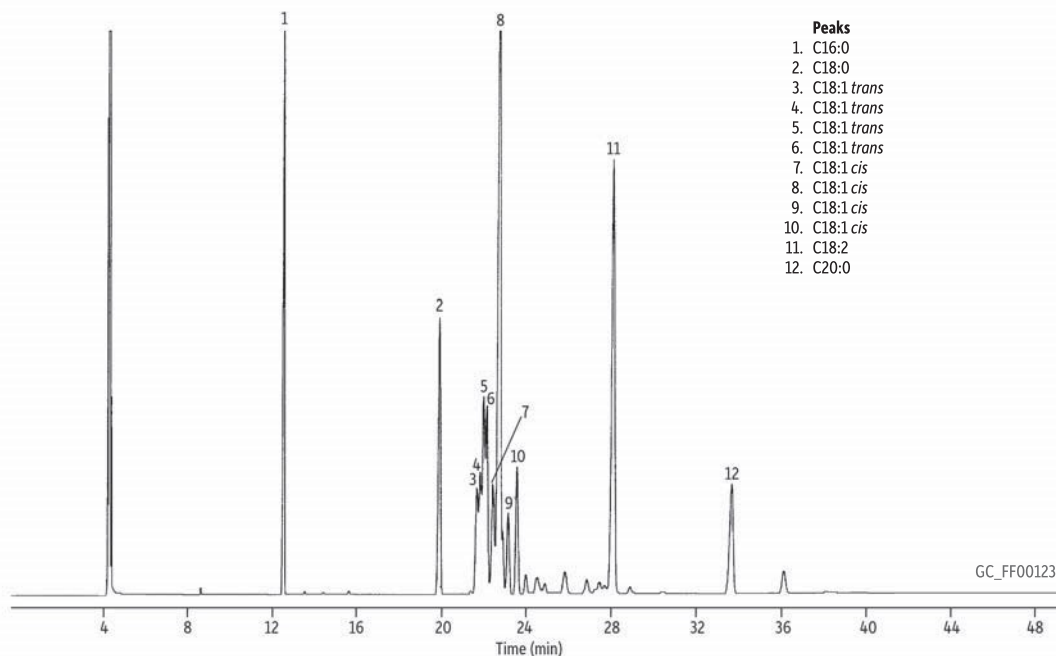
VF-23ms

i tech tip

Do not solvent rinse Rtx[®]-2330 and Rt[®]-2560 columns. These columns are not fully bonded and solvent rinsing will remove the stationary phase.

FAMES (Commercial Margarine) on Rt[®]-2330

(split injection)



Column Rt[®]-2330, 105 m, 0.25 mm ID, 0.20 μm (cat.# 10729)
Sample Commercial margarine mixture
Conc.: Approximately 5 μg
Injection
Inj. Vol.: 1.0 μL split (split ratio 50:1)
Inj. Temp.: 275 °C

Oven
Oven Temp.: 165 °C
Carrier Gas Hz, constant pressure
Linear Velocity: 40 cm/sec
Detector FID @ 275 °C
Notes FID sensitivity: 4 x 10⁻¹¹ AFS

similar phases

HP-88, CP-Sil 88, SPB-2560

Rt®-2560 Column (fused silica)

(highly polar phase; biscyanopropyl polysiloxane—not bonded)

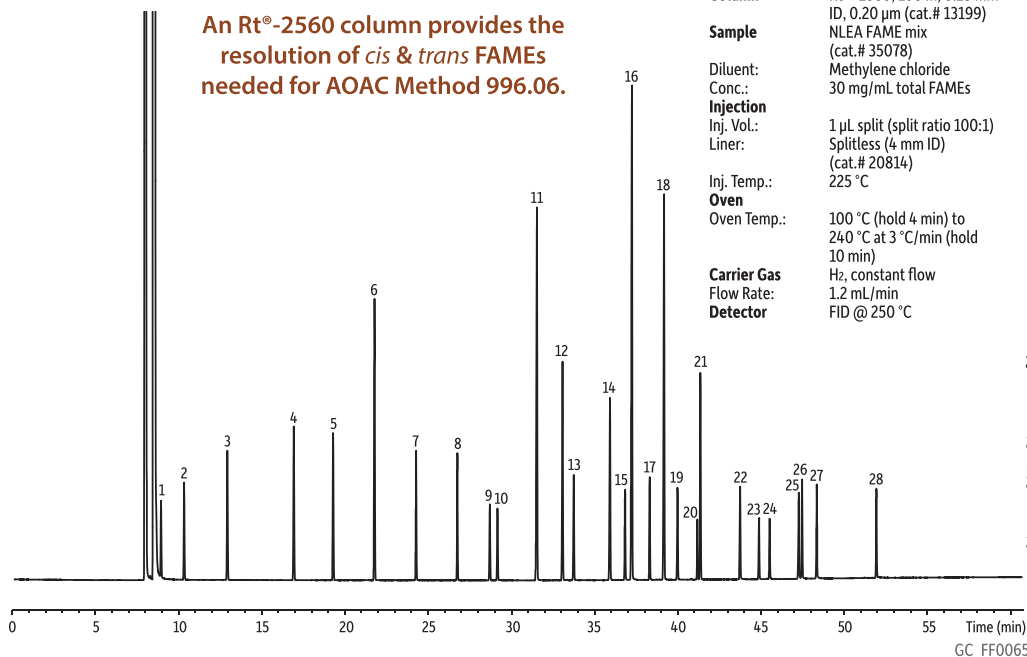
- Application-specific column for *cis/trans* FAMES.
- Stable to 250 °C.

Because the Rt®-2560 stationary phase is not bonded, it should not be solvent rinsed.

| ID | df | temp. limits | 100-Meter cat.# |
|---------|---------|--------------|--------------------|
| 0.25 mm | 0.20 µm | 20 to 250 °C | 13199 |

FAMES (NLEA Mix) on Rt®-2560

An Rt®-2560 column provides the resolution of *cis* & *trans* FAMES needed for AOAC Method 996.06.



Column Rt®-2560, 100 m, 0.25 mm ID, 0.20 µm (cat.# 13199)
Sample NLEA FAME mix (cat.# 35078)
Diluent: Methylene chloride
Conc.: 30 mg/mL total FAMES
Injection 1 µL split (split ratio 100:1)
Inj. Vol.: Splitless (4 mm ID) (cat.# 20814)
Liner: 225 °C
Inj. Temp.: 225 °C
Oven 100 °C (hold 4 min) to 240 °C at 3 °C/min (hold 10 min)
Oven Temp.: 100 °C (hold 4 min) to 240 °C at 3 °C/min (hold 10 min)
Carrier Gas H₂, constant flow
Flow Rate: 1.2 mL/min
Detector FID @ 250 °C

Peaks

1. C4:0 methyl butyrate
2. C6:0 methyl hexanoate
3. C8:0 methyl octanoate
4. C10:0 methyl decanoate
5. C11:0 methyl undecanoate
6. C12:0 methyl laurate
7. C13:0 methyl tridecanoate
8. C14:0 methyl myristate
9. C14:1 methyl myristoleate (*cis*-9)
10. C15:0 methyl pentadecanoate
11. C16:0 methyl palmitate
12. C16:1 methyl palmitoleate (*cis*-9)
13. C17:0 methyl heptadecanoate
14. C18:0 methyl stearate
15. C18:1 methyl elaidate (*trans*-9)
16. C18:1 methyl oleate (*cis*-9)
17. C18:2 methyl linoleidate (*trans*-9,12)
18. C18:2 methyl linoleate (*cis*-9,12)
19. C20:0 methyl arachidate
20. C20:1 methyl eicosanoate (*cis*-11)
21. C18:3 methyl linolenate (*cis*-9,12,15)
22. C22:0 methyl behenate
23. C22:1 methyl erucate (*cis*-13)
24. C23:0 methyl tricosanoate
25. C24:0 methyl lignocerate
26. C20:5 methyl eicosapentaenoate (*cis*-5,8,11,14,17)
27. C24:1 methyl nervonate (*cis*-15)
28. C22:6 methyl docosahexaenoate (*cis*-4,7,10,13,16,19)

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