



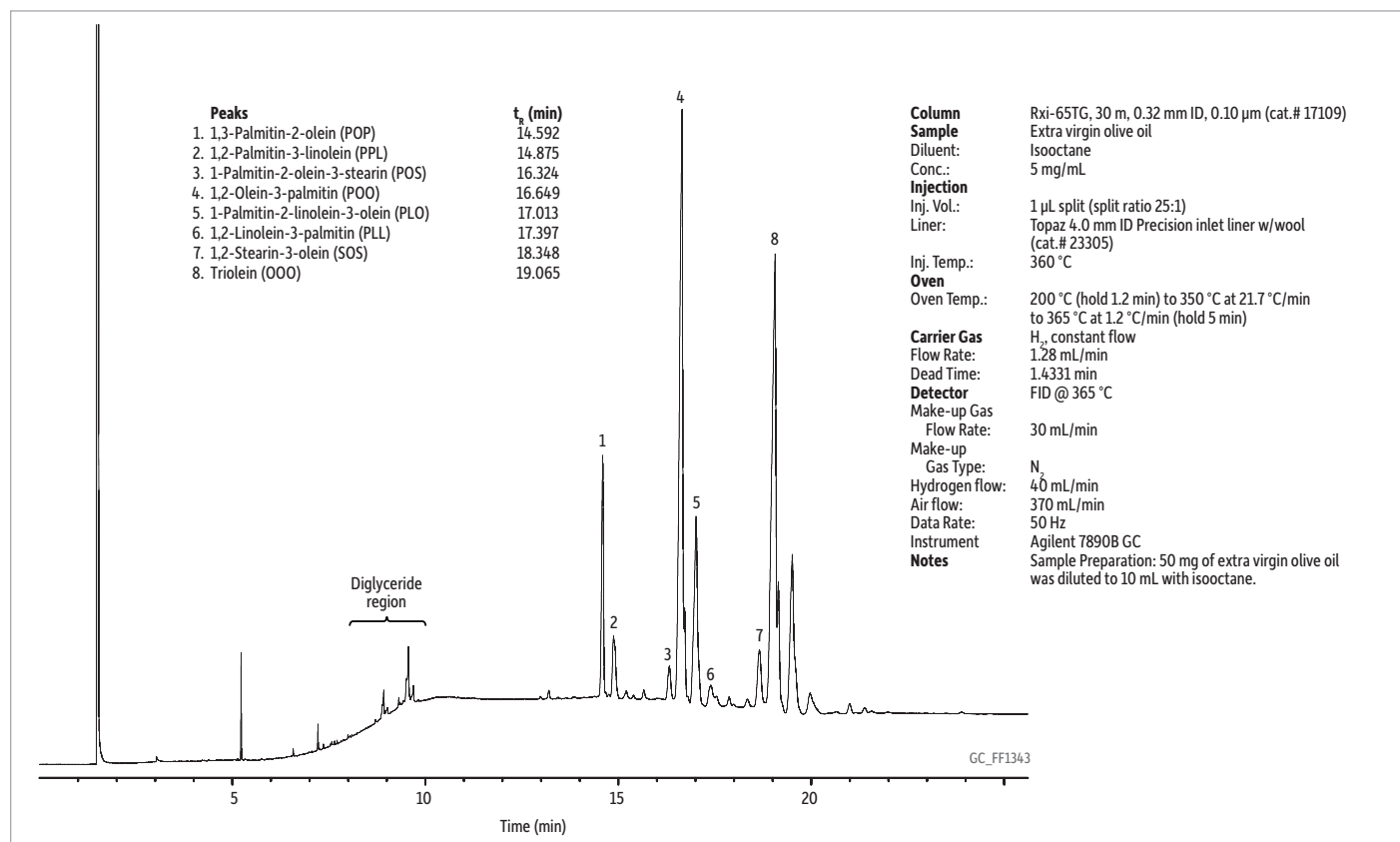
Featured Application: Glycerides (Acylglycerols) in Edible Oils on Rxi-65TG

Robust GC Analysis of Glycerides in Edible Oils

- Good resolution and stable retention times ensure reliable triglyceride profiles.
- Detection of mono- and diglycerides without derivatization.
- High-temperature stability provides consistent results and fewer column changes.

Characterization of edible oils is essential to the food industry because adulteration is common, especially with expensive oils, such as extra virgin olive oil. Reliable GC analysis of glycerides in edible oils is vital to ensure product quality, and testing falls into two primary categories: (1) triglyceride fingerprint profiles are used to verify oil authenticity, and (2) diglyceride ratios (1,2-diacylglycerols to 1,3-diacylglycerols) are used to determine oil freshness. Testing is typically done using 65-type columns, but historically these columns exhibit high column bleed, low inertness, poor resolution of triglycerides, and shifting retention times due to poor thermal stability. Overall, this results in unreliable identification and quantification, as well as short column lifetimes.

These problems can be overcome by using new Rxi-65TG columns, which are made using a modified polymer backbone that increases thermal stability up to 370 °C (compared to 360 °C for most columns). In addition, a new polymerization process is used that results in less column activity. As shown in this analysis of extra virgin olive oil, low column bleed means less interference, good resolution, and more accurate determination of edible oil triglycerides. Low column bleed and high inertness also ensure that mono- and diglycerides are detected when present, even without derivatization. Labs performing GC analysis of glycerides in edible oils will benefit from the reproducible retention times, longer column lifetimes, and consistent performance of low-bleed Rxi-65TG columns.



Rxi-65TG Columns (fused silica)

High-polarity Crossbond phase

- Ideal for the analysis of triglycerides in edible oils.
- Excellent thermal stability up to 370 °C ensures consistent results and longer column lifetimes.
- Separate and quantify critical triglycerides (acylglycerols) without interference from column bleed.
- Observe even underivatized mono- and diglycerides.
- Novel manufacturing techniques ensure consistent column-to-column quality.

| ID | df | Length | temp. limits | qty. | cat.# |
|---------|---------|--------|--------------|------|-------|
| 0.25 mm | 0.10 µm | 15 m | 40 to 370 °C | ea. | 17105 |
| | 0.10 µm | 25 m | 40 to 370 °C | ea. | 17107 |
| | 0.10 µm | 30 m | 40 to 370 °C | ea. | 17108 |
| 0.32 mm | 0.10 µm | 15 m | 40 to 370 °C | ea. | 17106 |
| | 0.10 µm | 25 m | 40 to 370 °C | ea. | 17110 |
| | 0.10 µm | 30 m | 40 to 370 °C | ea. | 17109 |



Topaz 4.0 mm ID Precision Inlet Liner w/ Wool

for Agilent GCs equipped with split/splitless inlets

| Geometry | Deactivation | Packing | Material | ID x OD x Length | qty | Similar to Part # | cat.# |
|-----------|--------------|-------------|--------------------|---------------------------|-------|--------------------|-------|
| Precision | Premium | Quartz Wool | Borosilicate Glass | 4.0 mm x 6.3 mm x 78.5 mm | 5-pk. | Agilent 210-4004-5 | 23305 |

* 100% SATISFACTION GUARANTEE: If your Topaz inlet liner does not perform to your expectations for any reason, simply contact Restek Technical Service or your local Restek representative and provide a sample chromatogram showing the problem. If our GC experts are not able to quickly and completely resolve the issue to your satisfaction, you will be given an account credit or replacement product (same cat.#) along with instructions for returning any unopened product. (Do not return product prior to receiving authorization.) For additional details about Restek's return policy, visit www.restek.com/warranty



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