

**BIODIESEL - Glycerin, mono- , di- and triglycerides**  
(UNI EN ISO 14105, ASTM 6584)

Column: **MEGA-BIODIESEL 105 - 0.32mm, 0.10µm, 15m**

Catalog Code: C-BIODIESEL105-032-010-15

Analysis carried out with DANI MASTER-GC.

**Conditions:**

Injection: PTV program Temp. 50°C, 999°C/min, 360°C (15min).

Sample: standards derivatized by MSTFA.

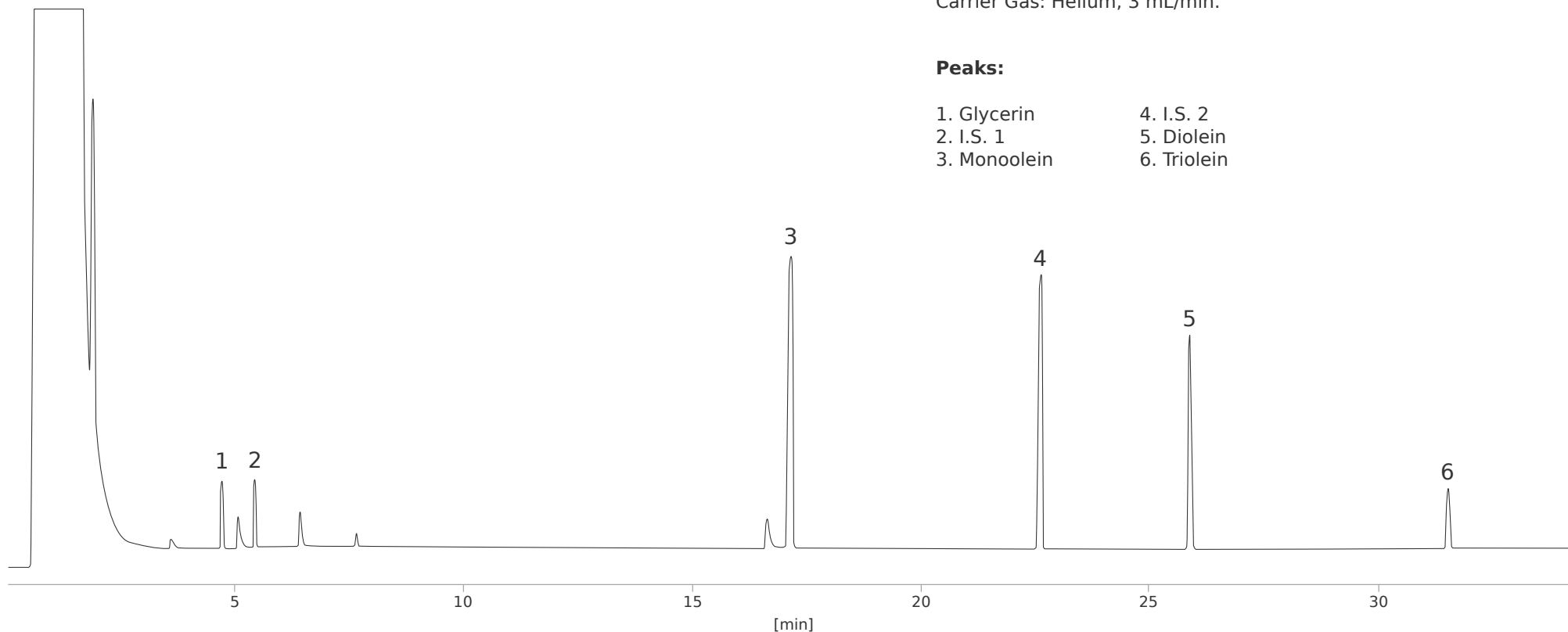
Detector: FID 380°C.

Oven Temp.: 50°C (1min), 15°C/min, 180°C, 7°C/min,  
230°C, 10°C/min, 370°C (5min).

Carrier Gas: Helium, 3 mL/min.

**Peaks:**

- |              |             |
|--------------|-------------|
| 1. Glycerin  | 4. I.S. 2   |
| 2. I.S. 1    | 5. Diolein  |
| 3. Monoolein | 6. Triolein |



## Butter Triglycerides - (T24 - T56)

Column: **MEGA-1 - 0.32mm, 0.10µm, 3m + 1m Built-In Ret. Gap**

Catalog Code: GAP-1-032-010-3-1

### Conditions:

Injection: On-Column.

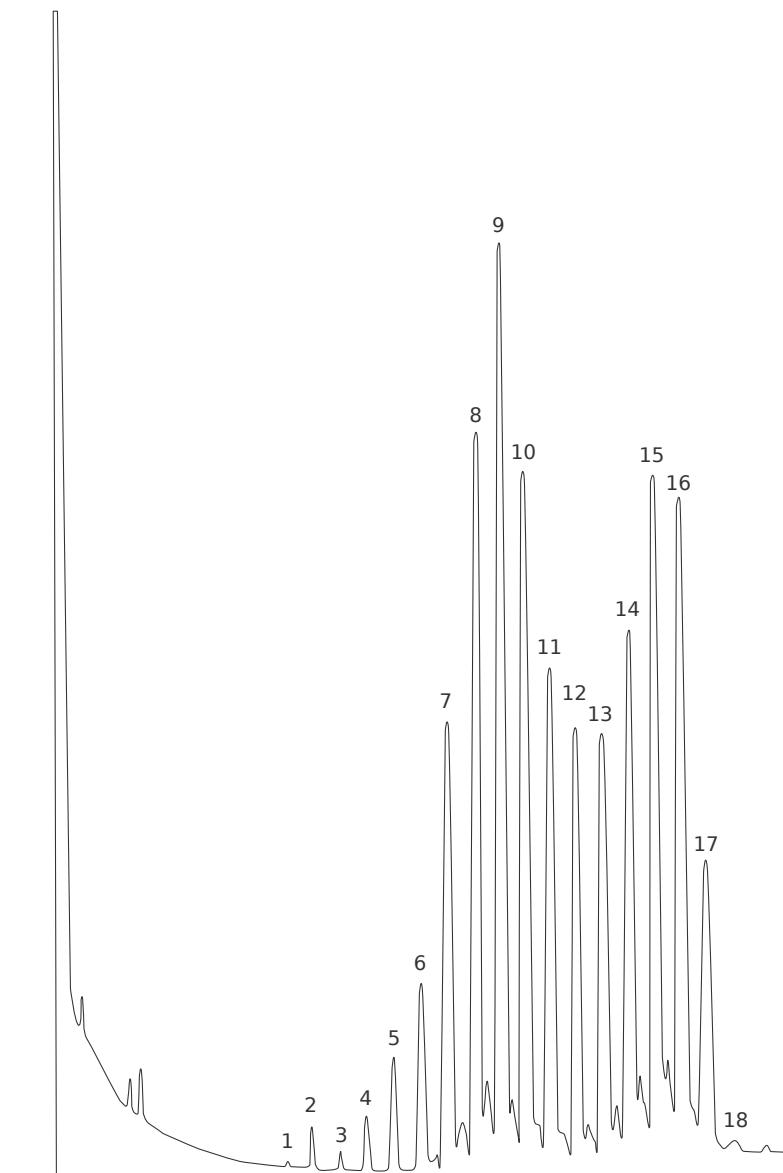
Detector: FID, 350°C.

Oven Temp.: 60°C, 15°C/min, 340°C.

Carrier Gas: Hydrogen, 30kPa.

### Peaks:

- |                |                             |
|----------------|-----------------------------|
| 1. T24         | 13. T46                     |
| 2. Cholesterol | 14. T48                     |
| 3. T26         | 15. T50                     |
| 4. T28         | 16. T52                     |
| 5. T30         | 17. T54                     |
| 6. T32         | 18. T56                     |
| 7. T34         |                             |
| 8. T36         | T = Total number of Carbons |
| 9. T38         |                             |
| 10. T40        |                             |
| 11. T42        |                             |
| 12. T44        |                             |



## Triglycerides - Olive Oil on MEGA-LAP Column

Column: **MEGA-LAP - 0.32mm, 0.10 $\mu$ m, 25m**

Catalog Code: C-LAP-032-010-25

**MEGA-LAP (Lipid Analysis Phase) is a dedicated stationary phase optimized for Lipids, Sterols and saturated and unsaturated Triglycerides separations, stable over 370°C.**

### Conditions:

Injection: Split 300°C, 1.0 $\mu$ L, 1:80 Split Ratio.

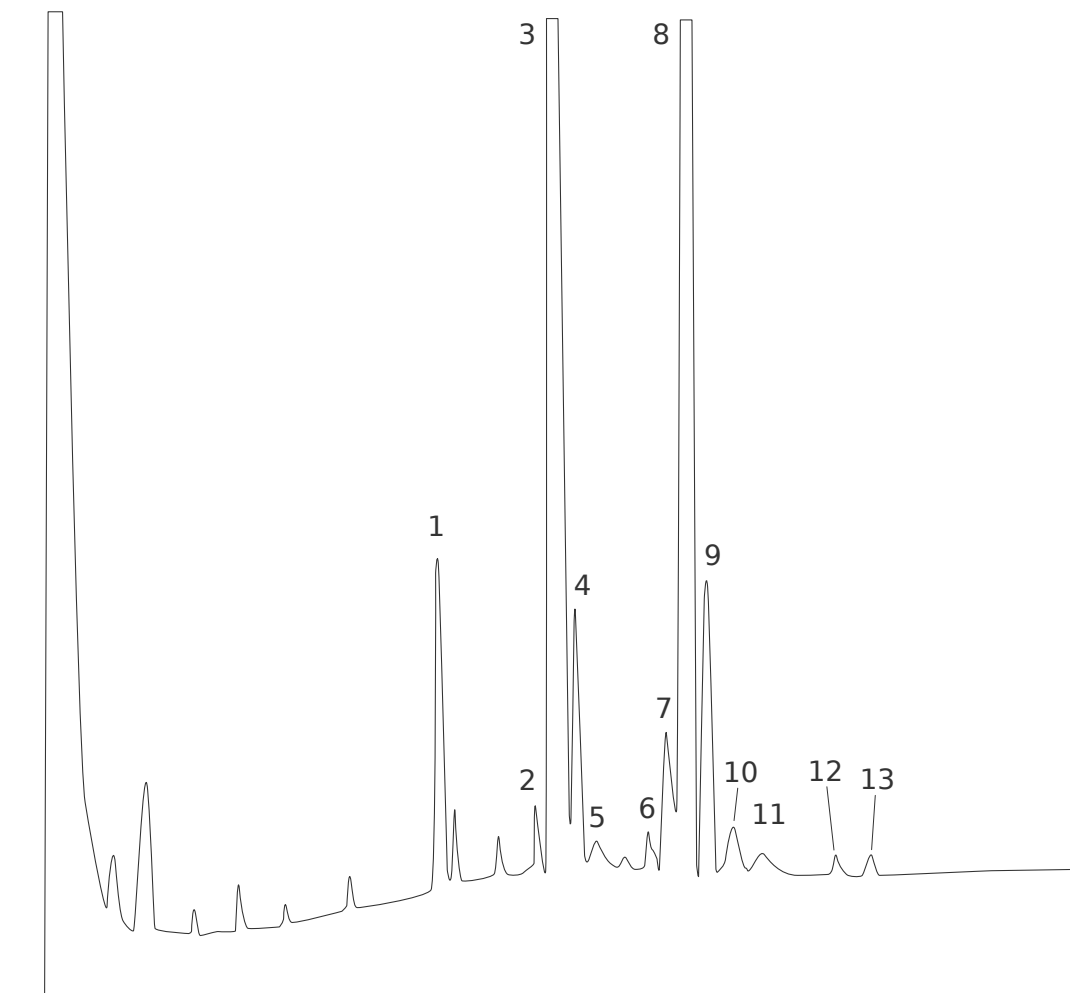
Detector: FID 300°C.

Oven Temp.: 120°C, 5°C/min, 330°C.

Carrier Gas: Hydrogen, 2mL/min.

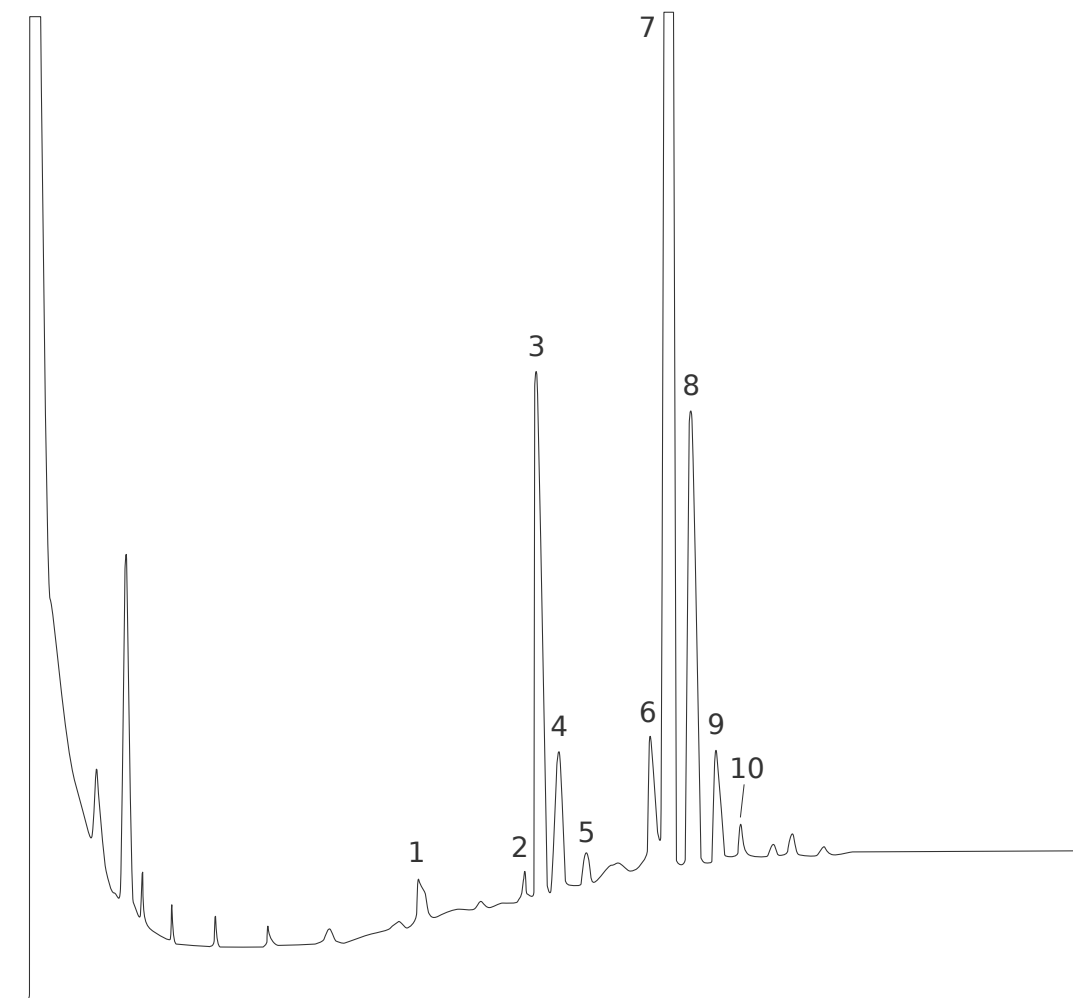
### Peaks:

- |               |          |
|---------------|----------|
| 1. PPO        | 9. OOL   |
| 2. POS        | 10. OLL  |
| 3. POO        | 11. LLL  |
| 4. PLO + OOPo | 12. OOO  |
| 5. PLL + PoOl | 13. GoOO |
| 6. SSO        |          |
| 7. SSO        |          |
| 8. OOO        |          |



Acknowledgement: Dott. C. Mariani - Stazione Sperimentale Oli e Grassi, Via Giuseppe Colombo 79 - Milano - Italy.





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## Triglycerides - Hazelnut Oil on MEGA-LAP Column

Column: **MEGA-LAP - 0.32mm, 0.10 $\mu$ m, 25m**

Catalog Code: C-LAP-032-010-25

**MEGA-LAP (Lipid Analysis Phase) is a dedicated stationary phase optimized for Lipids, Sterols and saturated and unsaturated Triglycerides separations, stable over 370°C.**

### Conditions:

Injection: Split 300°C, 1.0 $\mu$ L, 1:80 Split Ratio.

Detector: FID 300°C.

Oven Temp.: 120°C, 5°C/min, 330°C.

Carrier Gas: Hydrogen, 2mL/min.

### Peaks:

1. PPO
2. POS
3. POO
4. PLO + OOPo
5. PLL + PoOl
6. 800
7. 000
8. OOL
9. OOL
10. LLL



**BIODIESEL - Glycerin, mono- , di- and triglycerides**  
(UNI EN ISO 14105, ASTM 6584)

Column: **MEGA-BIODIESEL 105 - 0.32mm, 0.10µm, 15m**

Catalog Code: C-BIODIESEL105-032-010-15

Analysis carried out with DANI MASTER-GC.

**Conditions:**

Injection: PTV program Temp. 50°C, 999°C/min, 360°C (15min).

Sample: standards derivatized by MSTFA.

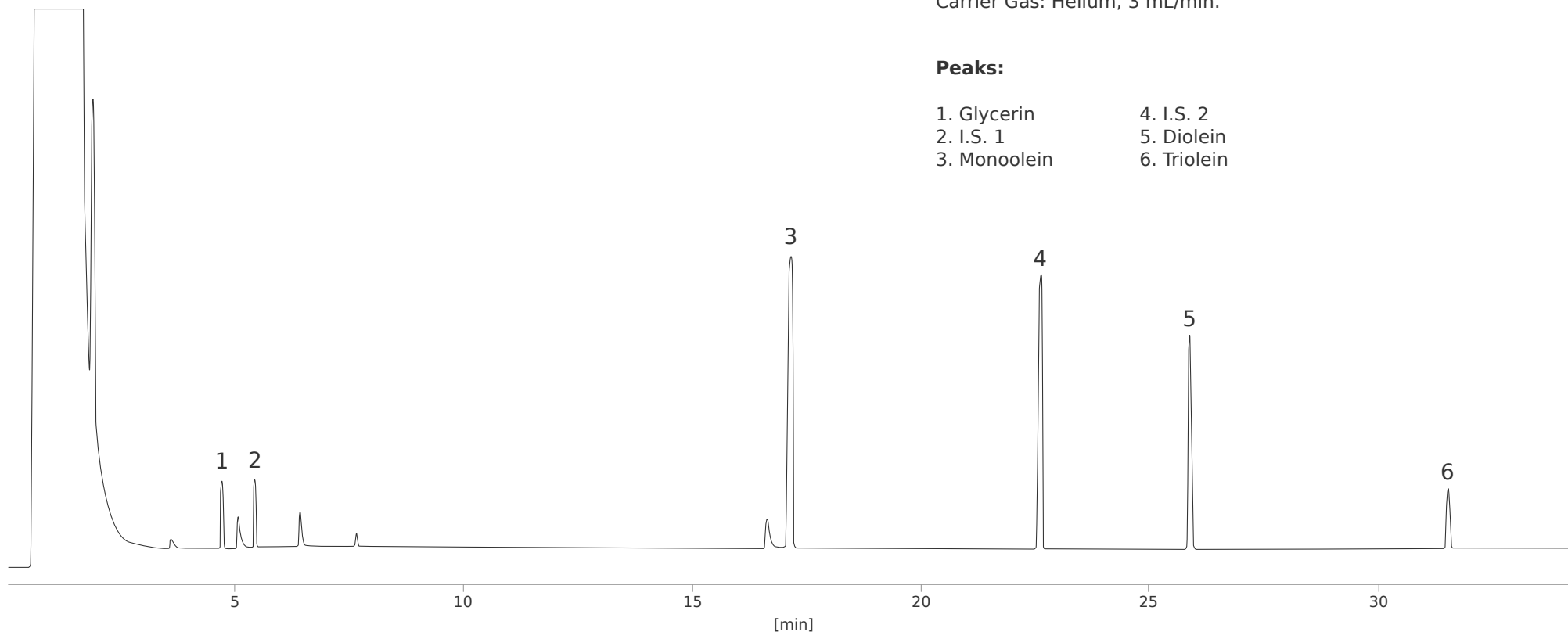
Detector: FID 380°C.

Oven Temp.: 50°C (1min), 15°C/min, 180°C, 7°C/min,  
230°C, 10°C/min, 370°C (5min).

Carrier Gas: Helium, 3 mL/min.

**Peaks:**

- |              |             |
|--------------|-------------|
| 1. Glycerin  | 4. I.S. 2   |
| 2. I.S. 1    | 5. Diolein  |
| 3. Monoolein | 6. Triolein |



## Butter Triglycerides - (T24 - T56)

Column: **MEGA-1 - 0.32mm, 0.10µm, 3m + 1m Built-In Ret. Gap**

Catalog Code: GAP-1-032-010-3-1

### Conditions:

Injection: On-Column.

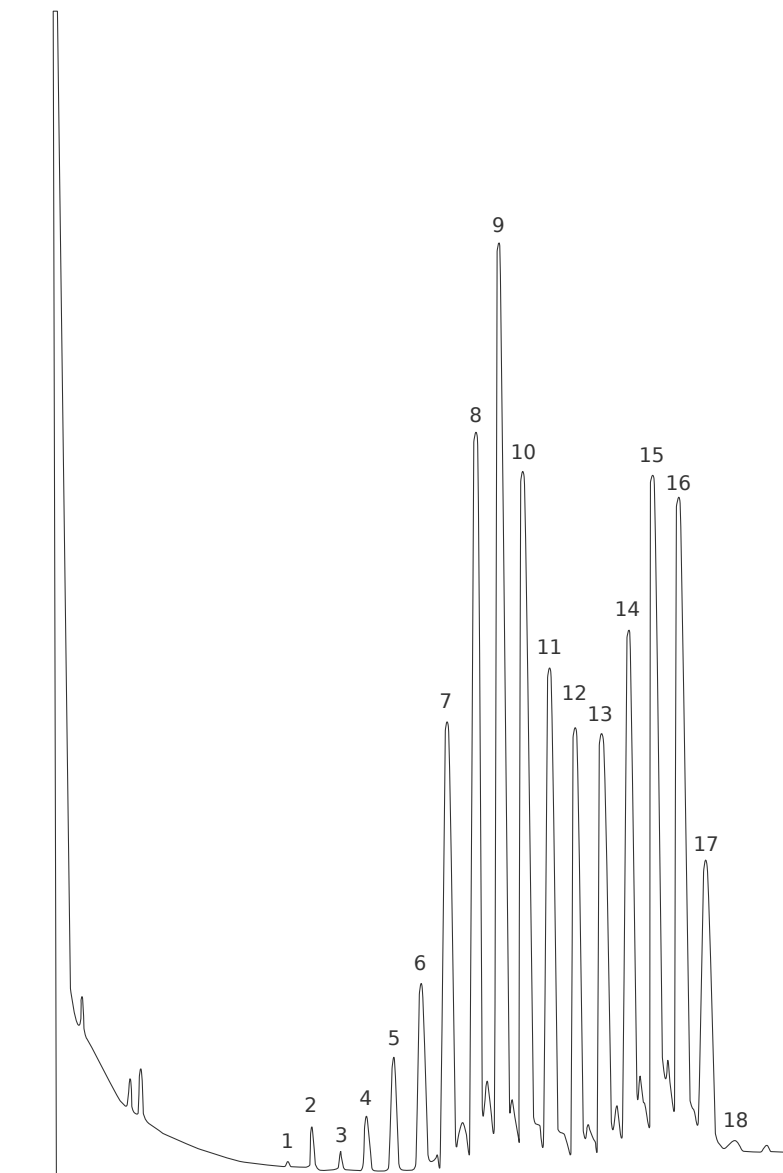
Detector: FID, 350°C.

Oven Temp.: 60°C, 15°C/min, 340°C.

Carrier Gas: Hydrogen, 30kPa.

### Peaks:

- |                |                             |
|----------------|-----------------------------|
| 1. T24         | 13. T46                     |
| 2. Cholesterol | 14. T48                     |
| 3. T26         | 15. T50                     |
| 4. T28         | 16. T52                     |
| 5. T30         | 17. T54                     |
| 6. T32         | 18. T56                     |
| 7. T34         |                             |
| 8. T36         | T = Total number of Carbons |
| 9. T38         |                             |
| 10. T40        |                             |
| 11. T42        |                             |
| 12. T44        |                             |



## Triglycerides - Olive Oil on MEGA-LAP Column

Column: **MEGA-LAP - 0.32mm, 0.10 $\mu$ m, 25m**

Catalog Code: C-LAP-032-010-25

**MEGA-LAP (Lipid Analysis Phase) is a dedicated stationary phase optimized for Lipids, Sterols and saturated and unsaturated Triglycerides separations, stable over 370°C.**

### Conditions:

Injection: Split 300°C, 1.0 $\mu$ L, 1:80 Split Ratio.

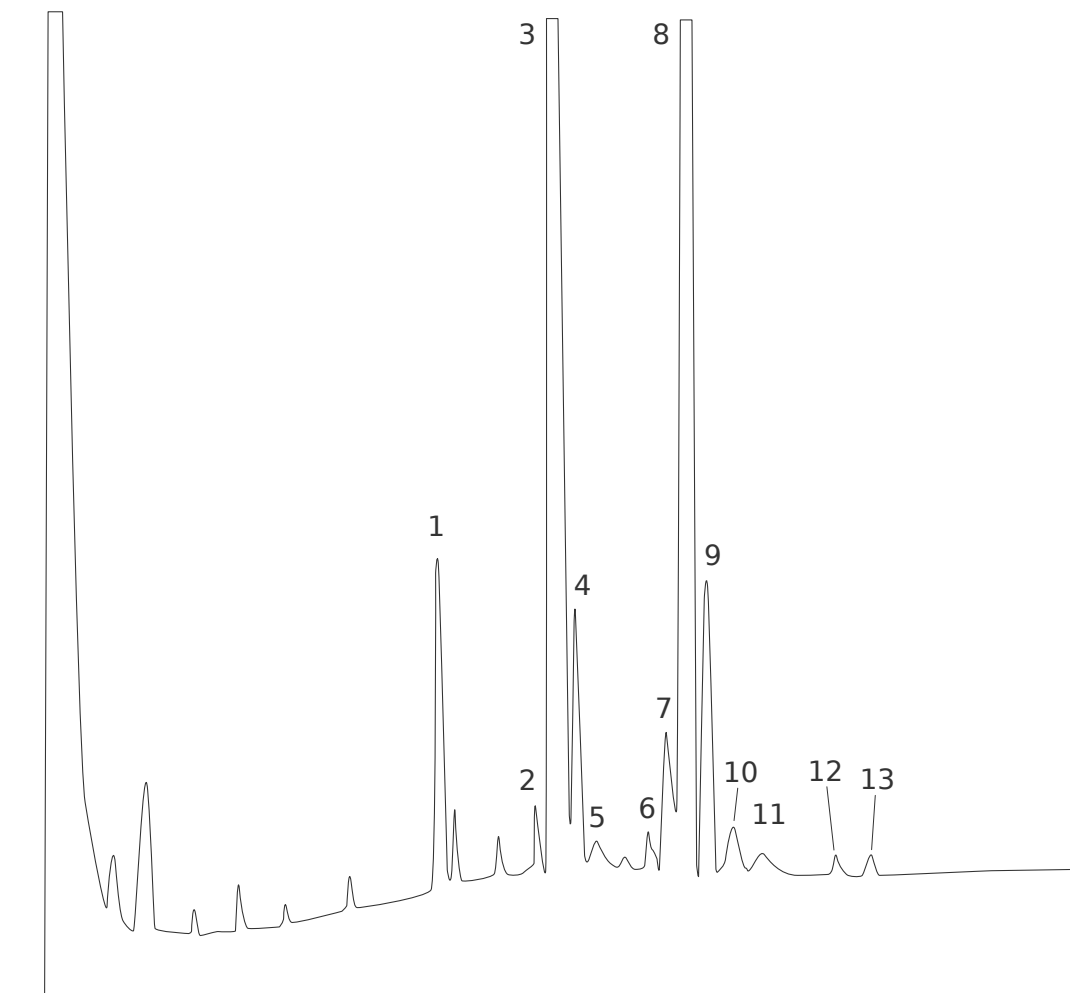
Detector: FID 300°C.

Oven Temp.: 120°C, 5°C/min, 330°C.

Carrier Gas: Hydrogen, 2mL/min.

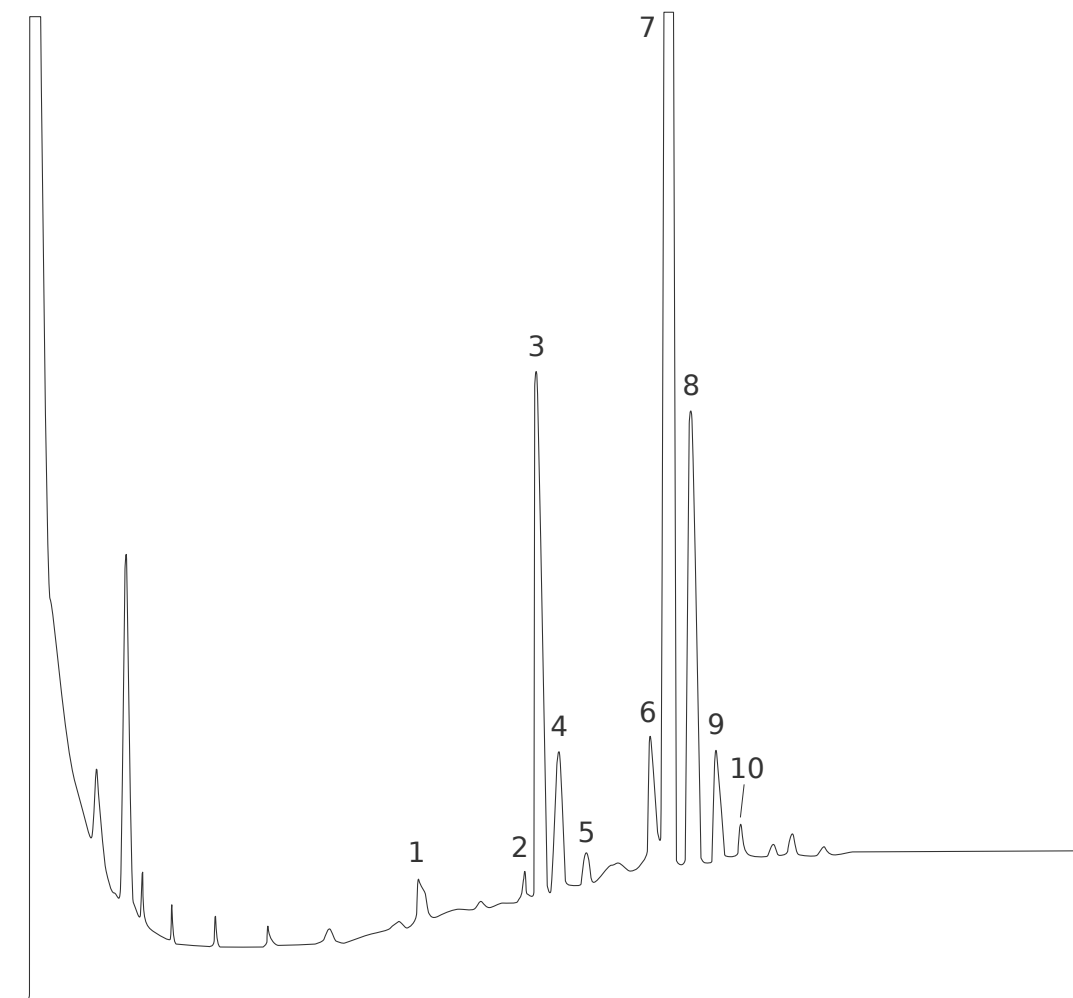
### Peaks:

- |               |          |
|---------------|----------|
| 1. PPO        | 9. OOL   |
| 2. POS        | 10. OLL  |
| 3. POO        | 11. LLL  |
| 4. PLO + OOPo | 12. OOO  |
| 5. PLL + PoOl | 13. GoOO |
| 6. SSO        |          |
| 7. SSO        |          |
| 8. OOO        |          |



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## Triglycerides - Hazelnut Oil on MEGA-LAP Column

Column: **MEGA-LAP - 0.32mm, 0.10 $\mu$ m, 25m**

Catalog Code: C-LAP-032-010-25

**MEGA-LAP (Lipid Analysis Phase) is a dedicated stationary phase optimized for Lipids, Sterols and saturated and unsaturated Triglycerides separations, stable over 370°C.**

### Conditions:

Injection: Split 300°C, 1.0 $\mu$ L, 1:80 Split Ratio.

Detector: FID 300°C.

Oven Temp.: 120°C, 5°C/min, 330°C.

Carrier Gas: Hydrogen, 2mL/min.

### Peaks:

1. PPO
2. POS
3. POO
4. PLO + OOPo
5. PLL + PoOl
6. 800
7. 000
8. OOL
9. OOL
10. LLL



# Di- and Triglycerides in Vegetable Oils



Column: MEGA-SE52 - 0.32mm, 0.10µm, 6m + 2m  
(2m of integrated built-in deactivated Retention Gap; see [MEGA-GAP columns](#))

Catalog Code: GAP-SE52-032-010-6-2

Conditions:

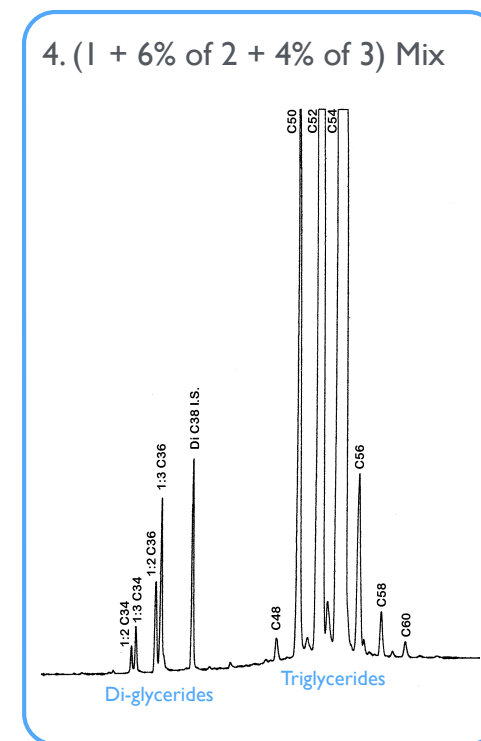
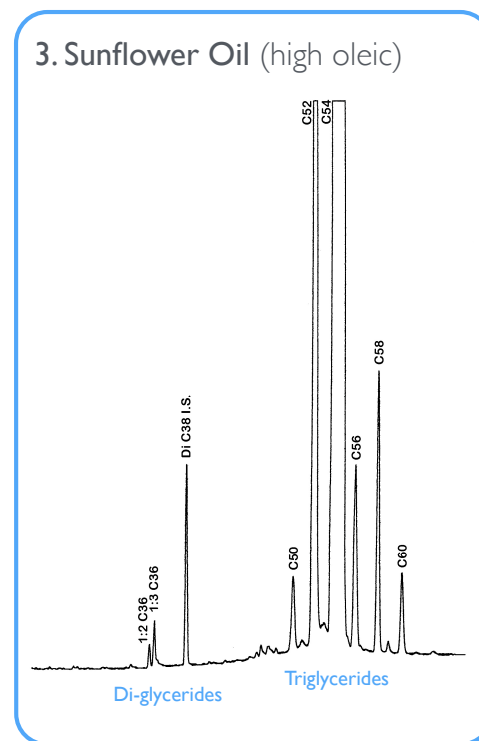
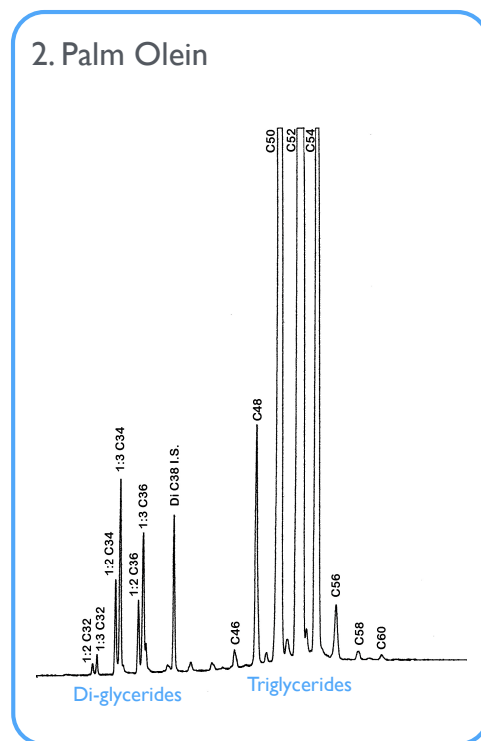
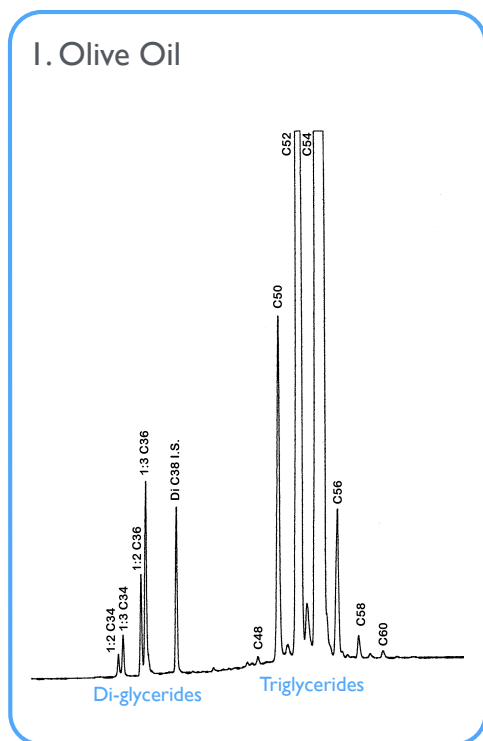
Injection: Cold On-Column.

Detector: FID 350°C.

Temperature Program: 80°C (1 min), 20°C/min, 220°C, 5°C/min, 340°C (10min).

Carrier Gas: Hydrogen with linear speed of 60-80cm/s, Helium with linear speed of 30-40cm/s

[Contact us](#) for more info.



The use of a short GC capillary column and of the Cold On-Column injection, allows to avoid thermal degradation of the compounds and to have correct areas and ratios values, mainly for C58 and C60 triglycerides monitoring.

Acknowledgments: many thanks to Prof. C. Mariani, Stazione Sperimentale Oli e Grassi (SSOG), Milano, Italy.

[Read here the full analytical method and procedure.](#)