

## PT 21: Fats and oils

### Details of the program:

- Proficiency testing scheme created in 1993
- **96 registered laboratories from 29 countries**
- **PTS accredited by COFRAC**
- 10 rounds per annual series
- The time for analysis is 4 weeks
- Samples are shipped via express carrier at the end of the previous month.



### Schedule:

DATE	CODE	MATRIX	VOLUME
September	0121	Olive oil	250 ml
October	3221	Crude sunflower oil	250 ml
November	1121	Fish oil	250 ml
December	3521	Refined palm oil	250 ml
January	1421	Refined soya oil	250 ml
February	2021	Fat oil	250 ml
March	1821	Sesame oil	250 ml
April	0421	Frying oil	250 ml
May	0521	Crude rapeseed oil	250 ml
June	1521	Anhydrous milk fat	250 ml

### ANALYTES

#### Analyses to be carried out firstly:

Moisture and volatile matter content  
 Moisture content  
 Peroxide value  
 Para-anisidine index  
 Oxidability accelerated test  
 Tocopherols (alpha, beta, delta, gamma)

#### Fatty acids composition:

Arachidic, Behenic, Erucic, Gondoic, Heptadecenoic, Lauric, Lignoceric, Linoleic, Linolenic, Margaric, Myristic, Nervonic, Oleic, Palmitic, Palmitoleic, Stearic.

#### Trans fatty acids:

Trans-octadecenoic, Trans-octadecadienoic, Trans-octadecatrienoic...  
 Sum of saturated acid<sup>NA</sup>.

#### Sterols:

Brassicasterol, Cholesterol, Cholestanol, Stigmasterol, Campesterol + 2,4 methylene cholesterol, Delta 7-campesterol, Delta 5-avenasterol, Delta 7-stigmastenol, Delta 7-avenasterol...

Triglycerides by (HPLC and GC)

#### Other analyses:

Impurities  
 Oleic acidity  
 Iodine value  
 Index of saponification  
 Unsaponifiable matter  
 Total sterols  
 Phosphorus  
 Lovibond colour  
 Mineral oil content  
 Benzo (a) anthracene  
 Benzo (a) pyrene  
 Benzo (b) fluoranthene  
 Chrysene  
 Density at 20 °C<sup>NA</sup>  
 Iron, Copper, Lead  
 Melting point  
 Cholesterol  
 Refractive index<sup>NA</sup>  
 Wax content<sup>NA</sup>

*Non exhaustive list*

NA \*: Not accredited parameter

Note: Matrices and analytes may be changed or removed for technical or scientific reasons.

Please refer to current application form available in your member area ([www.bipea.org](http://www.bipea.org)).