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oleotest
TRUST IT

QUALITY CONTROL OF FRYING OILS AND FATS

OIL QUALITY AND HEALTH EFFECTS

Because of the moisture contained in foods, atmospheric oxygen and high temperatures (160-200 °C) reactions such as hydrolysis, oxidation and polymerization are produced. These reactions change and modify the chemical composition of the used frying oils, accelerating its degradation. **Polar compounds** (usually known as Total polar materials – **TPM**) are formed and increase over time.

Polar compounds – **TPM** were found to be extremely **harmful to health** and are responsible for damages in the cardiovascular system and may contribute for the development of lung and stomach cancer. Moreover, other immunological deficiencies and skin diseases also occurred.

REGULATORY ASPECTS AND METHODOLOGY

Although **there are many criteria, laws and different analytical techniques** (refraction value, grade of acidity, peroxide value, iodine value, polar compounds, dielectric constant, etc.) to assess the quality of frying oils and fats, several European countries establish that the **legal parameter** to take into account is the **percentage of polar compounds** which must **not equal or exceed a value in the range of 24-27%**, depending on the country.

TPM are a group of alteration compounds, harmful to consumer health and formed during the deep-frying process where there are free fatty acids, monoacylglycerides, diacylglycerides, oxidized triacylglycerides, secondary compounds of oxidation, oxidized dimers and polymers, etc.

The technique of the official method - **ISO 8420** - to measure TPM, chromatography on silica column, is complex, requires several hours, and must be developed by specialized laboratories

WHO SHOULD CONTROL TPM

This quality standard applies to natural and legal people whose activities include the use and manipulation of heated edible oils and fats to manufacture food products.

- **Food Industry**
- **Catering Industry**
- **Restaurants**
- **Street food vendors**
- **Domestic use**

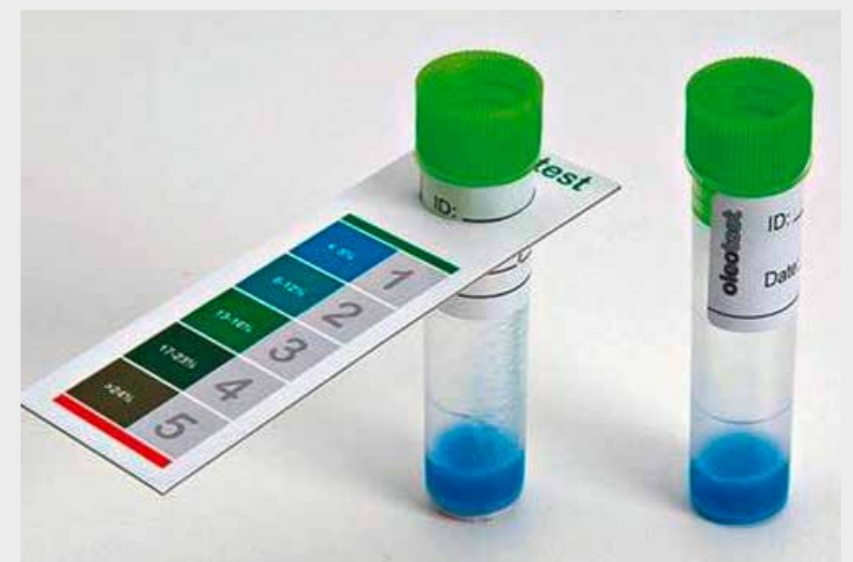
FEATURES ADVANTAGES OF OLEOTEST

OleoTest™ is a colorimetric assay that allows to determine the total polar compounds in frying fats in less than **2 minutes**.



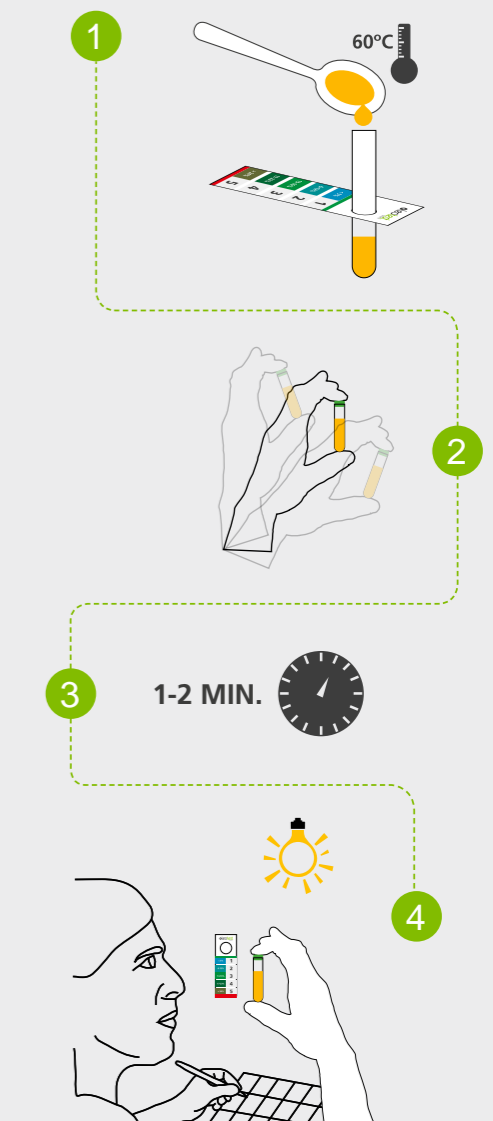
OLEOTEST is a rapid test suitable for replacing the traditional assays of quality control (oxifrit, food oil sensor, electric meters, fritest, 3M PCT 120, viscofrit), since there is **no need** of:

- Sophisticated instrument/equipments
- Calibrations
- Elements made of glass
- Flammable solvents
- Toxic chemical substances
- Oil does not need to be at controlled temperature



FEATURES ADVANTAGES OF OLEOTEST

- **Easy to use:** from technical/scientific personnel to home users. No technical skills needed.
- **Rapid and immediate results:** less than 2 minutes.
- **Simple:** it does not require any preparation, calibration, external reagents, or instruments.
- **It does not require any maintenance:** no need for washing or drying.
- **Easy to carry and to store:** fits in your pocket and can be stored at room temperature.
- **Variable collection temperature of the sample:** Room temperature or higher.



FEATURES ADVANTAGES OF OLEOTEST

- **The result can be kept:** the color persists for months and the tube can be used as a periodical register control. The tubes can be stored for later verification which is useful for: quality standard directors, inspectors, auditors, etc., or for comparisons in HACCP programs or in improvement studies.
- **It measures %TPM.** A correlation has been proven between the OleoTest method and the official method [IUPAC-AOAC]; other methods show poor correlation.
- **Economical** testing and **oil saver** due to extended scale to 24%



Stability >12 months



After 5 min.

FEATURES ADVANTAGES OF OLEOTEST

Easier readability of **OLEOTEST** when compared to other tests!



FEATURES ADVANTAGES OF OLEOTEST

- **No calibration** expenses; **No repair** expenses; **No replacement** expenses due to defects.
- Absence of solvents: no risk of smoke, fire or explosion.
- Safe for being used in food processing areas.
- Safe for the worker.
- Environmentally safe. Disposable in normal waste. No risk of contamination.

QUALITY CONTROL

- GMP's
- Quality management system
- Quality control for each Lot
- Different color scales can be developed for specific uses

 Certificados de Análise	 Certificates of Analysis	 Certificados de Analisis
Introduza no campo abaixo o lote de OleoTest® para o qual pretende obter o respectivo Certificado de Análise, e de seguida pressione OK.	Please type on the box below the OleoTest® lot number for which you need the respective Certificate of Analysis and press OK.	Por favor, escriba en la caja abajo el número de lote de Oleotest® para o qual necesita lo respectivo Certificado de Análisis y pulse OK.
<i>Disponível apenas para lotes produzidos a partir de Janeiro de 2013</i>	<i>Available for lots produced only after January 2013</i>	<i>Disponible solamente para lotes producidos a partir de Enero 2013</i>
Lote / Lot / Lote (ex: 113200): OT <input type="text" value=""/>		
<input type="button" value="OK"/>		

The certificates of analysis of each product lot placed on the market are available in the Website.