



## Vegetable Oils and Fats

### Eurofins – A strong partner of oil and fat analyses

Vegetable fats and oils play a crucial role concerning our daily nutrition - as a raw material for the food industry, e.g. the production of margarine, refined oils, cold pressed and native oils.

Eurofins gives advice by the multitudinous European and international provisions, regulations and recommendations. Furthermore, Eurofins tenders physical-chemical as well as sensory tests and labelling checks. To check the marketability of vegetable oils and fats for instance the guidelines of "Deutsches Lebensmittelbuch für Speisefette und Speiseöle" help. Likewise, the "Codex Alimentarius for Edible Fats and Oils" can be consulted. Above all, the service managers gladly assist the customer creating specifications or test plans.

Eurofins consequently develops the expertise regarding olive oil analytics. Hence, the company is both a steady member of numerous interlaboratory comparisons – such as DGF and FOSFA – and of multiple sensory panels. As a proud member of further relevant boards Eurofins will inform the customer in good time in terms of law developments and current occasions.

### Identity

Determining the oil's identity is important to clarify whether the product indeed is pure. Consequently, this check lets the customer see whether a blending of oils is on hand:

- Sensory
- Fatty acid profile incl. trans-fatty acids
- Triglyceride profile
- Sterole profile incl. Cholesterol
- Tocopherols
- Saponification value
- Iodine value

## Quality

Quality parameters provide information about quality, freshness and storage condition of the oil:

- Peroxide value / Anisidine value / TOTOX-value
- Free fatty acids/acid value
- Polar compounds
- Unsaponifiable matters
- Impurities
- Moisture and volatile matters
- Polymeric triglycerides (proof of a thermal treatment)

## Contamination

The following analytical parameters help checking for contaminations of vegetable oils and fats during its production, processing and storage:

- 3-MCPD-ester and related compounds (e.g. Glycidol)
- Mineral oil (incl. MOSH, POSH, MOAH)
- Mycotoxins (e.g. Zearalenone in corn oil, Aflatoxins), Ethylbenzol)
- Polycyclic aromatic hydrocarbons (PAHs)

- Softeners (Phthalates)
- Pesticides (by GC/MS(MS) and LC/MS/MS)
- Heavy metals (e.g. Cadmium, Lead, Mercury)
- Highly volatile chlorinated hydrocarbons
- BTEX (Benzene, Toluene, Xylols, Ethylbenzene)
- Dioxins and dioxin-like PCBs

## Additional offers

- Label check
- Density
- Smoking point / Flash point
- Melting point
- Colour (Lovibond, Gardner)
- Solid fat content
- Oxidative stability testing (Rancimat)
- Fat soluble vitamins
- Storage tests
- Sensory tests on packaging materials
- Chemical-analytical tests on packaging materials
- Microbiological and bio-molecular analyses

