

## A PRESENCE IN MANY SECTORS



Fats &  
Plant proteins



Green  
Chemistry



Cosmetics



Food



Pharmacy



Pet Food  
Feed

## QUALITY LABELS



Laboratory recognised by the International Olive Council (IOC) for  
- the sensory analysis of virgin olive oils (01/12/2022 - 30/11/2023)  
- the physico-chemical analysis of olive oils and olive-pomace oils - Type B: Advanced testing and Type C: Residues and contaminants testing (01/12/2022 - 30/11/2023)



For more information,  
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## ANALYSIS



## OUR ANALYTICAL EXPERTISE

Oils, fats, lipid matrices,  
constituent lipids and plant proteins

**ITERG  
LABORATORIES**

	CHARACTERISTICS		ALTERATIONS	ADULTERATIONS/ PURITY	UNDESIRABLES / FAN (Anti-nutritional factors)	CONTAMINANTS / TOXICS COMPOUNDS
	Glycerid Fraction	Unsaponifiable				
<b>EXTRACTION - FAT CONTENT</b>	Extraction adapted to the matrix - Fat content: all matrices / formulations (Soxhlet, Hydrolytic, Non-altering ..) - Free fat content					
<b>INDEXES - OXIDATION DETERMINATION</b>	Iodine Value Saponification Value Hydroxyl Value	Unsaponifiable matter content (hexane/diethyl ether)	Acid value / FFA Peroxide Value Rancimat/Oxipres Accelerating aging test Polar Compounds		Moisture and volatile matter content (oven 103°C) Water Karl Fischer Insoluble impurities Soaps	
<b>GAS CHROMATOGRAPHY</b>	Fatty acids composition (cis/trans) Glyceridic composition Triglycerides composition (C number) Fatty acids in 2-position (in TG and PL) FAME : esters content FAME : glycerol and glycerides content OPO-C52	Sterols Waxes Natural Hydrocarbons Fatty Alcohols, terpene alcohols Squalene	Free fatty Acids Profile / Content 1,2 and 1,3 diglycerides Alkyl esters	Stigmastadienes Fatty Acids, Sterols Triglycerides composition (Milk Fat, Cocoa Butter)		Hexane Chlorinated Solvents Methanol Pesticides
<b>GC/MS</b>		Glycosylated sterols	Aldehydes and volatiles compounds Residual Solvents			Pesticides Phthalates MCPD esters / Glicidol esters BTEX
<b>HIGH PERFORMANCE LIQUID CHROMATOGRAPHY</b>	Triglycerides composition (partition number) Polar lipid composition OPO	Tocopherols (Vitamin E) Vitamin A Carotenoids Polar lipids composition (ceramides, cerebrosides...) Polyphenols CoQ9/CoQ10	Tocopherols Antioxidants (ascorbyl palmitate, BHA, BHT, gallates, TBHQ,...) Triglycerides polymers Pyropheophytin Gamma - Oryzanol Karitene	Tocopherols ΔECN42 (EVOO) Triglycerides composition	Isoflavones Vicine/Convicine	Polycyclic Aromatic Hydrocarbons (PAH & BaP)
<b>HPLC/MS</b>						
<b>HPLC/GC</b>						MOSH/MOAH – Mineral oil
<b>SPECTROPHOTOMETRY UV / VISIBLE</b>	Phosphorus	Carotenoids Chlorophyll Polyphenols	Specific extinctions at 232 and 270 nm TBA value Para-anisidine value	Specific extinctions at 232 and 270nm	Phytic acid	
<b>SPECTROMETRY ICP</b>	Phosphorus				Fe, Cu, Ni, P, Al, Se, Si, Na, Ca, Mg, K, S, Pb, As, Cd, Sn, Cr, Hg	
<b>PHYSICAL MESUREMENTS</b>	Density - Melting point Solid content by NMR - DSC - Shukoff Color Lovibond, Gardner... Viscosity, flow test... Flash point					
<b>SENSORY ASSESSMENT</b>	Extra Virgin Olive Oil: Panel test Virgin oils: descriptive analysis Refined oils: comparative analysis Oils: descriptive analysis - detection of defects (rancid, soapy taste) Room Odor test: thermo-oxidation Plant proteins (isolates, concentrates, flours)					