

About the California Extra Virgin Olive Oil Standard



...and why were so proud of it

The OOC refers to our standard for California Extra Virgin Olive Oil required under the California Department of Food and Agriculture as one of the most stringent in the world for good reason. The CA Extra Virgin Olive Oil standard includes all the tests and parameters for olive oil purity found in the California Health and Safety Code. It also contains more stringent parameters for quality tests and incorporates the valuable tests for DAGs and PPP. Below is a chart comparing the CA Extra Virgin Olive standard to those under the United States Department of Agriculture and International Olive Council.

CA Extra Virgin Olive Oil Standard at a Glance

	USDA* and IOC*	CDFA*
Free fatty acid (%m/m)	≤ 0.8	≤ 0.5
Peroxide value (meq O ₂ /kg oil)	≤ 20	≤ 15
Absorbency in ultraviolet K ₂₃₂	≤ 2.50	≤ 2.40
Absorbency in ultraviolet K ₂₇₀	≤ 0.22	≤ 0.22
Absorbency in ultraviolet ΔK	≤ /0.01/	≤ /0.01/
Moisture and volatile matter (%m/m)	≤ 0.2	≤ 0.2
Insoluble impurities (%m/m)	≤ 0.1	≤ 0.1
Pyropheophytin a (PPP) (%)	–	≤ 17
1,2 Diacylglycerols (DAGs) (%)	–	≥ 35
Organoleptic analysis (Sensory)—		
Median defects	MeD = 0	MeD = 0
Median fruity	MeF > 0	MeF > 0



USDA - United States Department of Agriculture

IOC - International Olive Council

CDFA - California Department of Food and Agriculture

About the parameters

► Free fatty acid or free acidity (FFA)

A measurement of the breakdown of the fats. It gives some indication of oil quality based on fruit quality and handling. Although FFA does not change much over the life of oil, a lower FFA level at production will contribute to longer shelf life.

► Peroxide value (PV)

A measure of peroxide compounds arising from primary oxidation. A high peroxide value usually indicates poor processing, and that the oil might not keep well. The final stage in oxidation is peroxide breakage, resulting in the formation of new compounds that we can perceive as rancid smelling.

► Ultra violet absorbency (UV)

An indicator of oxidation using the UV spectrum at different wavelengths. K232 is considered a critical marker for good quality extra virgin olive oil. Oxidation is the result of natural aging or indicative of poor handling or heating during the refining process.

► Pyropheophytins (PPP)

Breakdown products of chlorophyll. Over time, chlorophyll breaks down first into pheophytins then into PPP, making PPP an excellent indicator of the age of an oil. Light and heat can accelerate the production of PPP.

► 1,2- and 1,3-diacylglycerol (DAGs)

Breakdown products of the fats. 1,2-DAG is high in well-made fresh olive oil from good fruit and 1,3-DAG is higher in olive oil made from poor quality fruit or oxidized or refined olive oils. The ratio between 1,2-DAGs and 1,3-DAGs declines steadily and is a good indicator of the age of an oil.

► Organoleptic (sensory)

Analysis by a trained taste panel using official protocols is an important part of determining the grade of virgin olive oil. Taste panels identify and quantify defects and basic positive attributes in an olive oil. To be classified as extra virgin, an olive oil may have no defects in flavor, and must have fruitiness.

THE COMPLETE PICTURE

Chemical analysis and sensory analysis are both required for a complete assessment of the quality of olive oil; they are complementary procedures. Chemical analysis provides valuable information about the current condition of an oil, but there is no single test that can definitively determine quality. For example, the strong relationships between DAGs, PPP and sensory intensity can be used to predict, track and monitor the quality of extra virgin olive oils over time. The combination of all chemical test results and sensory analysis gives the best picture of the product quality.