

Summary Table of California Olive Oil Standards

The Grade and Labeling Standards for Olive Oil, Refined-Olive-Oil, and Pomace Oil published by CDFA on September 18, 2014 (CDFA Standards) apply to California handlers of olives that are processed into olive oils, refined-olive oils, and olive-pomace oils in the amount of 5,000 gallons or more during a marketing season and who sell their oils into commercial channels of trade (Handlers).

The California Health and Safety Code (reference Chapter 9 of Part 6, Division 104 commencing with section 112875 also applies to all olives oils traded in California, and therefore the oils of Handlers. This California Code, adopted in 2011, references the United States Standards for Grades of Olive Oil and Olive-Pomace Oil Effective October 25, 2010 published by the USDA (USDA Standards). Handlers are advised to familiarize themselves with the USDA Standards.

With regard to several parameters Handlers are therefore subject to requirements that arise from two standards - the CDFA Standards and the USDA Standards. This will be the case until such time as research conducted by the OOCC enables further development of the CDFA Standard to reflect the natural variations in these parameters of California olive oils.

The OCC has issued this document as guidance to show complete Tables of parameters that affect its Handlers - in some cases arising from either Standard.

The OOCC suggests that Handlers who collect data for the parameters in Tables 2, 3, 4, and 5 provide these to the OOCC along with the certificates of analysis to assist the OOCC in building a data-base of results for California olive oils.

Please see below Tables 1, 2, 3, 4 and 5.

TABLE 1
QUALITY PARAMETERS

Parameter	OLIVE OIL			REFINED-OLIVE OIL		OLIVE-POMACE OIL		
	Extra Virgin olive oil	Virgin olive oil	Crude olive oil ₁	Refined olive oil blend	Refined olive oil	Refined olive pomace oil blend	Refined olive pomace oil	Crude olive pomace oil
Free Fatty Acid Content (%m/m)	≤0.5	≤1.0	>1.0	≤0.8	≤0.3	≤0.8	≤0.3	N/A
Peroxide Value (PV) (meq O ₂ /kg oil)	≤15.0	≤20.0	>20.0	≤15.0	≤5.0	≤15.0	≤5.0	N/A
Absorbency in ultraviolet K ₂₃₂	≤2.40	≤2.60	>2.60	N/A	N/A	N/A	N/A	N/A
Absorbency in ultraviolet K ₂₇₀	≤0.22	≤0.25	>0.25	≤0.90	≤1.10	≤1.70	≤2.00	N/A
Absorbency in ultraviolet Delta K	≤/0.01/	≤/0.01/	≤/0.01/	≤/0.15/	≤/0.16/	≤/0.18/	≤/0.20/	N/A
Moisture and volatile matter (MOI)(%m/m)	≤0.2	≤0.2	≤0.3	≤0.1	≤0.1	≤0.1	≤0.1	≤1.5
Insoluble impurities (INI) (%m/m)	≤0.1	≤0.1	≤0.2	≤0.1	≤0.1	≤0.1	≤0.1	N/A
Pyropheophytin a (PPPs) (%)	≤17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2 Diacylglycerols (DAGs) (%)	≥35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organoleptic Analysis Median of Defects(MeD)	=0.0	0.0<MeD≤2.5	>2.5	≤2.5	≤2.5	≤2.5	≤2.5	N/A
Organoleptic Analysis Median of Fruity(MeF)	>0.0	>0.0	N/A	>0.0	N/A	>0.0	N/A	N/A

¹ Note: These criteria are not required to be concurrent for crude olive oil, one is sufficient.

TABLE 2
PURITY PARAMETERS

Parameter	OLIVE OIL			REFINED-OLIVE OIL		OLIVE-POMACE-OIL		
	Extra Virgin olive oil	Virgin olive oil	Crude olive oil	Refined olive oil blend	Refined olive oil	Refined olive pomace oil blend	Refined olive pomace oil	Crude olive pomace oil
Total sterol Content (mg/kg)				≥1000	≥1000	≥1600	≥1800	≥2500
Wax Content (C40+C42+C44+C46)(mg/kg)	≤250	≤250	≤300 ¹	≤350	≤350	>350	>350	>350 ²
Trans fatty acid content (C 18:1 T %) (% trans fatty acids)	≤0.05	≤0.05	≤0.10	≤0.20	≤0.20	≤0.40	≤0.40	≤0.20
Trans fatty acid content (C 18:2 T % +C 18:3 T %) (% trans fatty acids)	≤0.05	≤0.05	≤0.10	≤0.30	≤0.30	≤0.35	≤0.35	≤0.10
Maximum difference between the actual and theoretical ENC 42 triacylglycerol content	≤/0.2/	≤/0.2/	≤/0.3/	≤/0.3/	≤/0.3/	≤/0.5/	≤/0.5/	≤/0.6/
Stigmastadienes content (mg/kg)	≤0.10	≤0.10	≤0.50	N/A	N/A	N/A	N/A	N/A
Content of 2-glyceryl monopalmitate (%)				≤1.8	≤1.8			

¹ When the oil has wax content between 300mg/kg and 350mg/kg, it is considered a crude olive oil if the erythrodiol + uvaol content is ≤3.5% and the total aliphatic alcohol content is ≤350mg/kg.

² When the oil has a wax content between 300mg/kg and 350mg/kg, it is considered a crude olive-pomace oil if the erythrodiol + uvaol is >3.5% and the total aliphatic alcohol content is >350mg/kg.

TABLE 3

FATTY ACID COMPOSITION (Expressed as % m/m Methyl Esters)		
Myristic acid	(C 14:0)	≤0.05
Heptadecanoic acid	(C17:0)	≤0.3
Stearic acid	(C 18:0)	0.5-5.0
Arachidic acid	(C20:0)	≤0.6
Behenic acid	(C22:0)	≤0.2 ₁
Lignoceric acid	(C24:0)	≤0.2

₁ ≤ 0.3 for olive-pomace oils

TABLE 4

STEROL AND TRITERPENE DIOL COMPOSITION (Expressed as % of Total Sterols)	
Brassicasterol	≤0.1
Stigmasterol	≤1.9

TABLE 5

TRACE METALS (Expressed as mg/kg)	
Iron (Fe)	≤3.0
Copper (Cu)	≤0.1