Applied Sensory, LLC
Detailed Sensory & Chemistry Report

CLIENT: Grumpy Goats Farm
NUMBER OF SAMPLES: 4
DATE OF EVALUATION: 12/06/2024

Sample #	Client Sample Description	Grade	Style / Intensity
1	Nocellara Del Belice (NO)	Extra Virgin	Medium
2	Picual (PI)	Extra Virgin	Medium
3	Coratina (CO)	Extra Virgin	Medium
4	Hojiblanca (HO)	Extra Virgin	Medium

Sample #	Client Sample Description	Free Fatty Acids^	Peroxide Value^	Absorbance at 232nm^	Absorbance at 270nm^	ΔK_{270}^	Polyphenols
1	Nocellara Del Belice (NO)	0.08	8	1.59	0.08	-0.002	284
2	Picual (PI)	0.04	4	1.45	0.13	-0.006	415
3	Coratina (CO)	0.06	7	1.82	0.16	-0.006	609
4	Hojiblanca (HO)	0.04	7	1.59	0.14	-0.010	473

^Values are pulled from chemical analysis report R125751 performed by Baker Wine & Grape Analysis on 12/06/2024

See pages 2 – 5 for detailed report of results

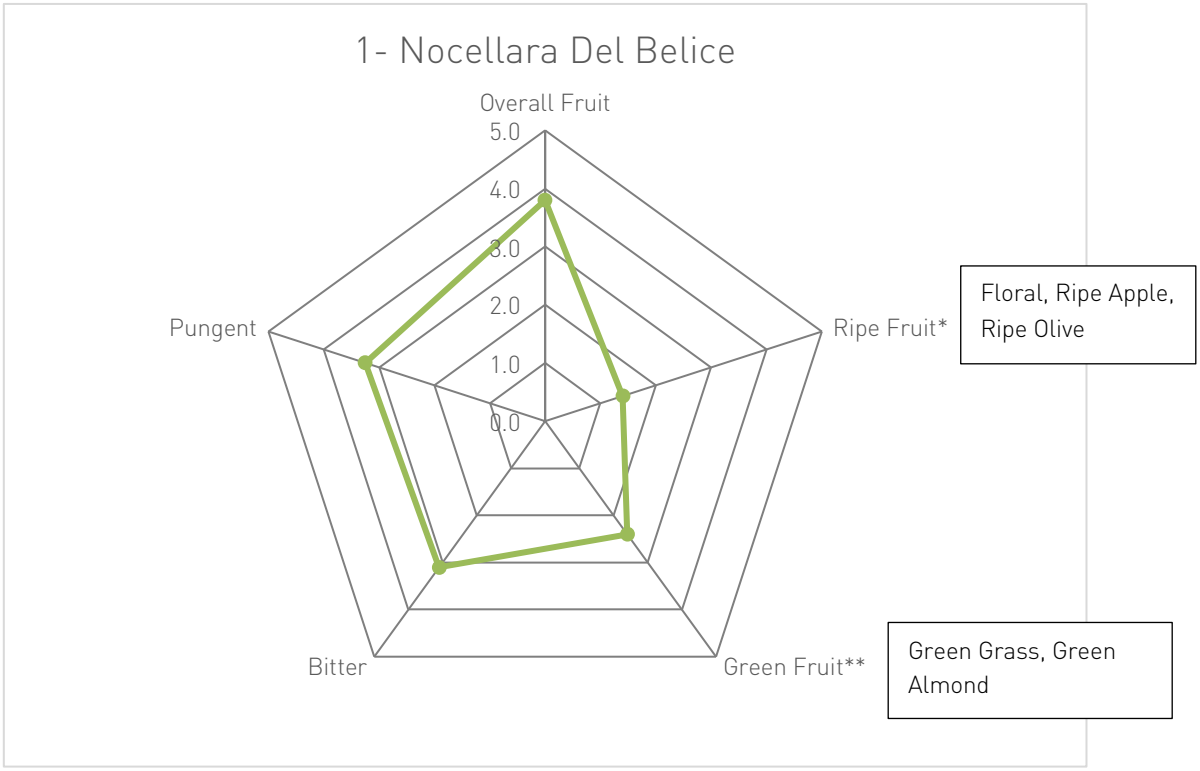
REPORT APPROVAL

Prepared and Approved by:

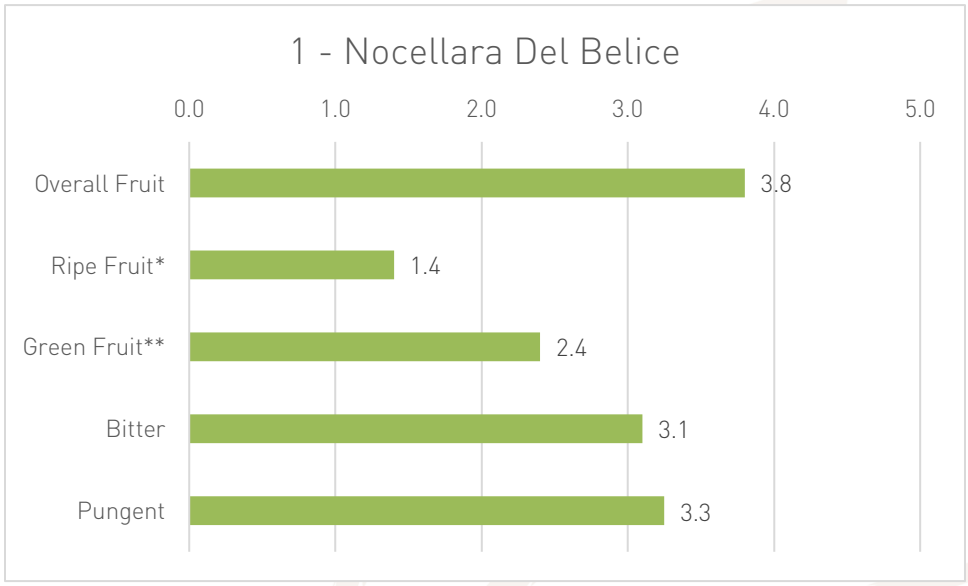
Anna Leachman, Applied Sensory Olive Oil Taste Panel Leader

Please direct any questions regarding this report to:
Anna Leachman – Applied Sensory Olive Oil Taste Panel Leader
(310)920-8715 / anna@appliedsensory.com

Applied Sensory, LLC
Detailed Sensory & Chemistry Report

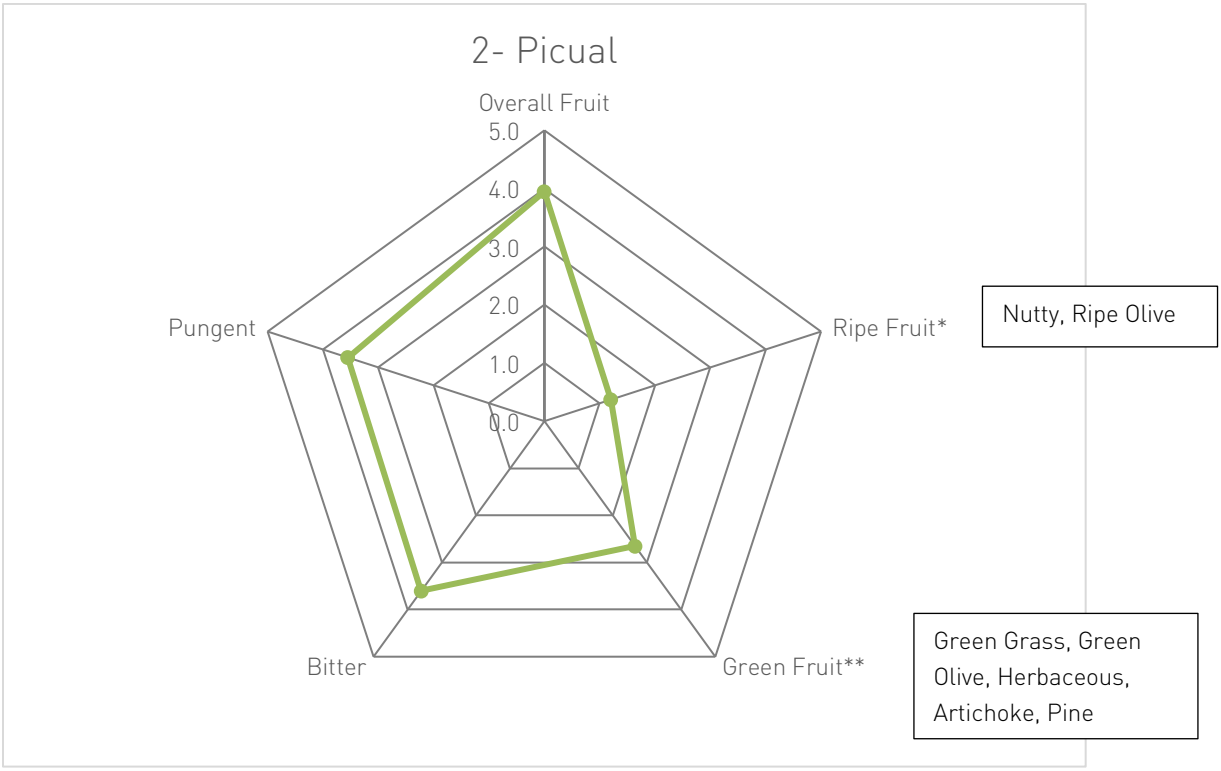


*Ripe fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency
**Green fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency.

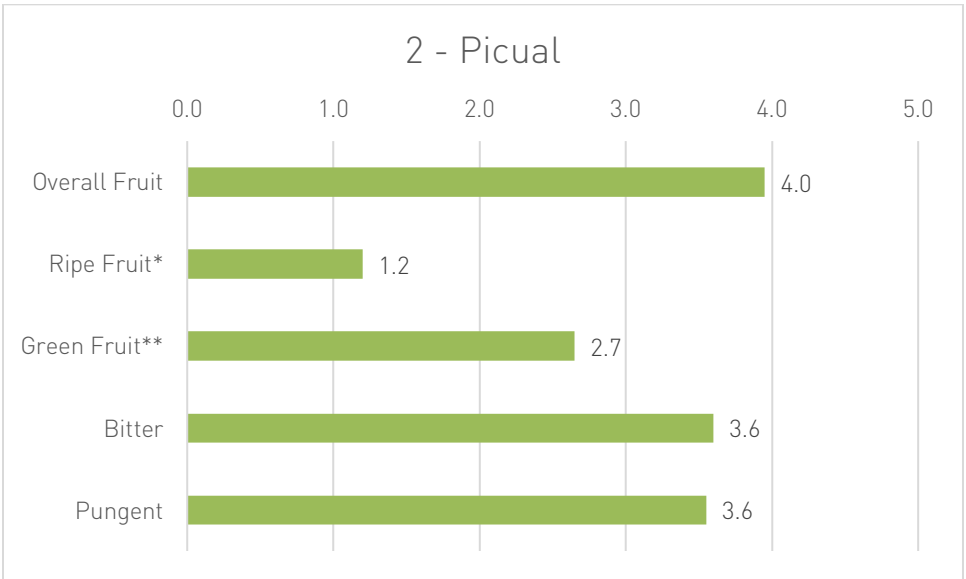


APPLIED SENSORY LLC
1625 Trancas St #2032, Napa, CA 94558 / (310)920-8715 / anna@appliedsensory.com

Applied Sensory, LLC
Detailed Sensory & Chemistry Report

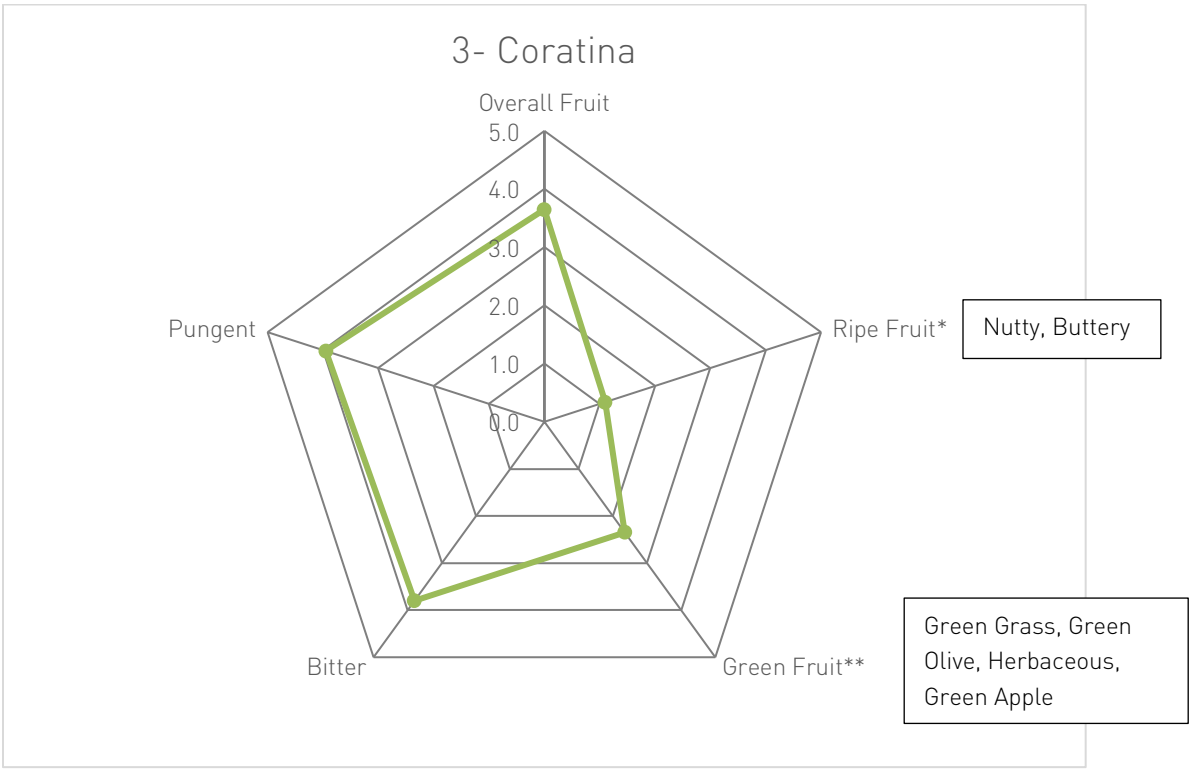


*Ripe fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency
**Green fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency.

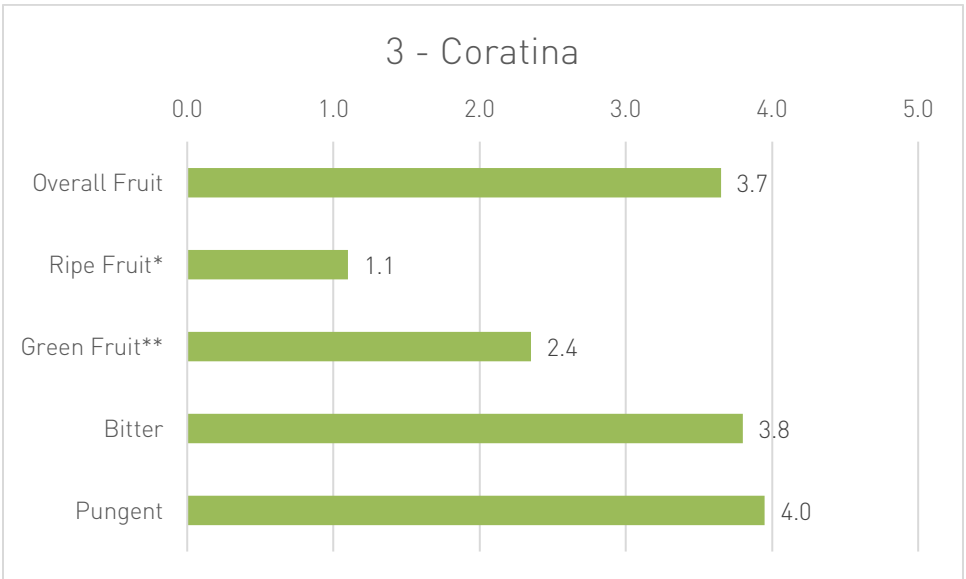


APPLIED SENSORY LLC
1625 Trancas St #2032, Napa, CA 94558 / (310)920-8715 / anna@appliedsensory.com

Applied Sensory, LLC
Detailed Sensory & Chemistry Report

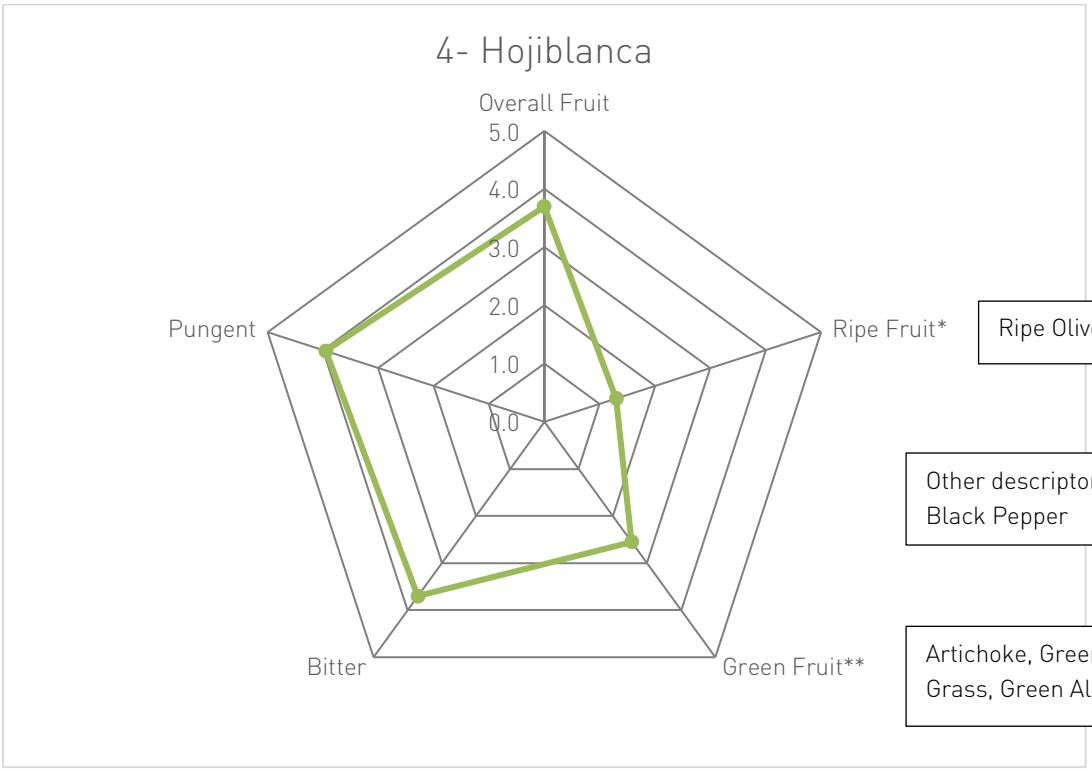


*Ripe fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency
**Green fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency.

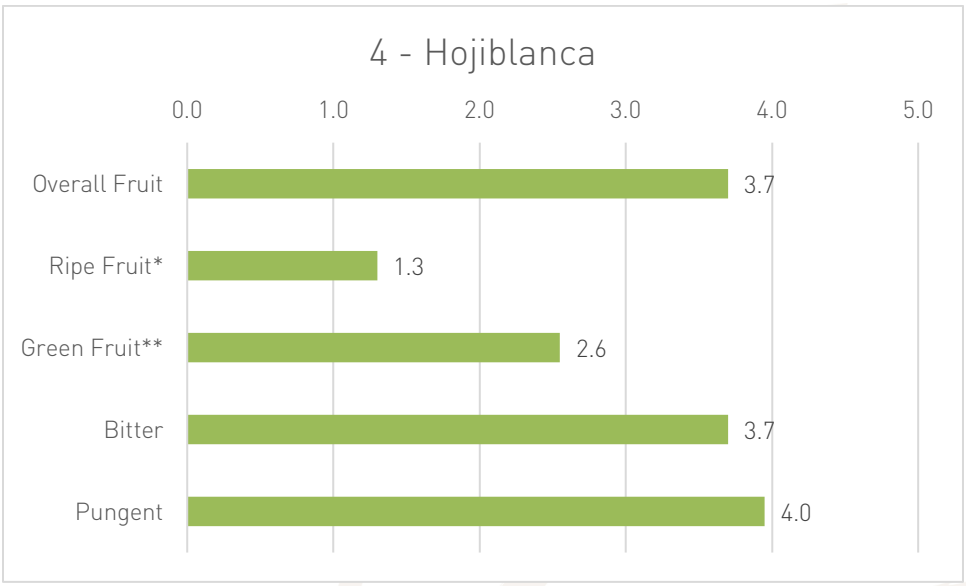


APPLIED SENSORY LLC
1625 Trancas St #2032, Napa, CA 94558 / (310)920-8715 / anna@appliedsensory.com

Applied Sensory, LLC
Detailed Sensory & Chemistry Report



*Ripe fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency
**Green fruit descriptors mentioned by the majority of the panelists. The attributes are listed in decreasing order of frequency.



APPLIED SENSORY LLC
1625 Trancas St #2032, Napa, CA 94558 / (310)920-8715 / anna@appliedsensory.com

Applied Sensory, LLC
Detailed Sensory & Chemistry Report

SUPPLEMENTAL INFORMATION

Sensory Evaluation Protocol

A panel of at least 8 olive oil tasters – each having a minimum of 3 years of experience - is used to evaluate the oils. The oils are served in standardized blue glasses covered with plastic lids coded with 3-digit random numbers to prevent bias. Oils are poured at least 30 minutes prior to evaluation and are heated to 80° F on warming mats. Panelists are isolated from each other by partitions and they evaluate the oils in a random order. Panelists use line scales to record their perceptions of the aroma and flavor intensities. Oil sensory attributes scored are: defects (fusty/muddy sediment, musty-humid-earthy, winey-vinegary-acid-sour, frozen/wet wood, rancid, others), overall fruit, bitterness and pungency. Panelists rest for a short period of time after each oil and for a longer period of time after a set of four to five oils. Slices of green apple and water are used as palate cleansers.

Descriptive Terms

The olive oil sensory attributes are pre-selected and include: intensity of defects*, overall fruit, ripe fruit*, green fruit*, other attributes*, bitterness, pungency and style/level of intensity. *Specific descriptors are listed below.

Defects	Ripe Fruit Attributes	Green Fruit Attributes	Other Attributes
Fusty/muddy sediment	Ripe olive	Green olive	Citrus
Musty-humid-earthy	Ripe banana	Green banana	Black pepper
Winey-vinegary-acid-sour	Ripe apple	Green apple	Spice
Frozen/wet wood	Floral	Green grass/freshly cut grass	Cinnamon
Rancid	Buttery	Green tea	Straw
Heated/burnt	Tropical	Green almond	Woody/olive pit
Hay-wood	Apricot/peach	Herbaceous	
Rough/coarse mouthfeel	Nutty	Minty	
Greasy/mineral oil flavor	Black currant	Eucalyptus	
Vegetable water		Artichoke	
Brine		Tomato leaf	
Grubby		Pine	
Cucumber			
Metallic			

Values Reported

Attribute intensity values are rated between zero and 10. Those attributes rated as zero are not shown. Median values are reported for defects, overall fruit, bitterness and pungency. Oils are NOT evaluated for preference.

How to Interpret a Cobweb Plot

A cobweb plot, also known as a radar plot or a spider web plot, has its zero starting point in the middle. From the middle, each axis of the chart protrudes out like the spokes on a wheel. Each spoke represents a single sensory attribute. The sensory panel intensity scores (see "Values Reported" above) are plotted on each axis and the scores increase the further away you get from the zero center of the plot. Highest scores are at the periphery of the plot. The cobweb plot is a nice graphic which shows areas of relative intensities of the various sensory attributes, as well as conveying a distinctive sensory profile or "fingerprint' of the olive oil.

California Grades of Olive Oil

Parameter	Extra Virgin Olive Oil	Virgin Olive Oil	Crude Olive Oil
Organoleptic Analysis (Sensory Evaluation) Median of Defects(MeD)	=0.0	0.0<MeD≤2.5	>2.5
Organoleptic Analysis (Sensory Evaluation) Median of Fruity(MeF)	>0.0	>0.0	N/A
Free Fatty Acids	≤0.50	≤1.0	>1.0
Peroxide Value	≤15	≤20	>20
Absorbance at 232nm	≤2.40	≤2.60	>2.60
Absorbance at 270nm	≤0.22	≤0.25	>0.25
ΔK_{270}	≤+0.010	≤+0.010	≤+0.010

California Department of Food and Agriculture
Grade and Labeling Standards for Olive Oil, Refined-Olive Oil and Olive-Pomace Oil
Table 1: Quality Parameters

U.S. Grades of Olive Oil

Quality Criteria	US Extra Virgin Olive Oil	US Virgin Olive Oil	Lampante Virgin Olive Oil
Odor and Flavor	Excellent	Good	Fair
Median of Defect (M_d)	$M_d = 0$	$0 < M_d \leq 2.5$	$M_d > 2.5$ Or When the median of the defect attribute is ≤ 2.5 and the median of the fruity attribute = 0
Median of The Fruity (M_f)	$M_f > 0$	$M_f > 0$	N/A
Free Fatty Acids	≤0.80	≤2.0	>2.0
Peroxide Value	≤20	≤20	No limit
Absorbance at 232nm	≤2.40	≤2.60	N/A
Absorbance at 270nm	≤0.22	≤0.25	N/A
ΔK_{270}	≤+0.010	≤+0.010	N/A

United States Standards for Grades of Olive Oil and Olive-Pomace Oil
§52.1539 Ascertaining the grade; Table 1