

Appendix "A"



**SAMPLING, TESTING AND
GRADING METHODOLOGY FOR
OLIVE OIL, REFINED-OLIVE OIL
AND OLIVE-POMACE OIL**

Effective October 1, 2024 Through June 30, 2025
Unless Subsequently Amended or Terminated



CALIFORNIA DEPARTMENT OF
FOOD & AGRICULTURE

**Appendix A: Sampling, Testing and Grading Methodology for
Olive Oil, Refined-Olive Oil and Olive-Pomace Oil**

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PREFACE

The goal of the Olive Oil Commission of California is to further the objectives of the Standards by requiring mandatory testing and grading of olive oil produced in California under the jurisdiction of the Commission using laboratories accredited by AOCS, COI and/or ISO in the methods prescribed by the Standard.

Notwithstanding anything in this section, handlers of olive oil covered by the Standard shall comply with testing, reporting and grading and submission of results as delineated in this Appendix.

1 GENERAL

- 1.1 **Applicability.** This appendix shall apply to all oil under the jurisdiction of the California Department of Food and Agriculture (CDFA) Olive Oil Commission of California (the Commission), Chapter 29 of Part 2, Division 22 of the California Food and Agricultural Code.
- 1.2 **Method of Sampling.** According to International Standards Organization (ISO) 5555:2001-International Standard, Animal and Vegetable Fats and Oils-Sampling as applicable. At all times, the most recently published version of the method must be used.
- 1.3 **Controlling rule.** Where differences exist between this appendix and ISO 5555-2001, this appendix shall be controlling.
- 1.4 **Requirement of Sampling.** All lots of olive oil shall be sampled, tested and graded.
- 1.5 **Frequency of Sampling.** Annually, all lots in handler’s inventory, including current and past harvest lots, are subject to these testing protocols and shall be sampled and tested under the rules as outlined below. Oil need not be sampled and retested if all the following apply:
 - (a) The oil was previously tested under this Appendix
 - (b) The oil is packed as a finished good for resale
 - (c) The oil is identified by a lot number on the container, and
 - (d) The oil container carries a “Best if Used By” or “Use By” date.
- 1.6 **Lots sold prior to Commission sampling.** In cases where the whole of a lot of oil is sold prior to sampling by the Commission, the lot must be sampled and tested by the handler. Retention samples taken according to the procedures described herein must be retained by the handler in quantities listed in section 3.4 and 4.3 of this Appendix.

2 DEFINITIONS

- 2.1 Bulk Sample.** Per ISO 5555-2001, Section 2.4 “quantity of fat [oil] obtained by combining the various increments from a lot in amounts proportional to the quantities they represent”
- 2.2** Good Manufacturing Practices (GMPs). Established guidelines to help ensure production of safe, quality food. These must be followed when pulling samples.
- 2.3 Increment.** Per ISO 5555:2001 Section 2.3 “a quantity of fat [oil] taken at one time from one place in a lot”.
- 2.4 ISO 5555 Oil Sampling Standard.** Standard used in creating the OOC detailed sampling protocol. All sampling details below are based on the guidelines of the ISO Standard using the most current published version.
- 2.5 Laboratory sample.** Per ISO 5555: 2001 Section 2.5 “quantity of fat [oil] obtained from the bulk sample after suitable homogenization and reduction in size which is representative of the lot and intended for laboratory examination”.
- 2.6 Lot.** A lot is a quantity of oil contained in one or more vessels that is declared by the handler to have uniform characteristics and that is marked in accordance with section 11.3.8 of the Standard. The maximum lot size is 200,000 gallons.
- 2.7 Nitrogen Capping.** Act of purging container’s/vessel’s headspace of oxygen with nitrogen or another inert gas, and then applying an air-tight cap.
- 2.8 Tanks with top opening.** Refers to storage tanks of oil that have easy access to the tops to pull samples. Samples are pulled through the top of the tank.
- 2.9 Tanks with sample port.** Oil storage tanks that do not have access through the top to pull a sample. Samples are pulled from sample port.
- 2.10 Retention Samples.** Containers of oil in quantities described in sections 3.4 and 4.3, saved by the producer and the OOC sampling party, of samples submitted to labs for testing. Retention samples shall be identified by lot code and each container shall be a minimum 250ml in volume.
- 2.11 Sampling Guidance Document.** A document which outlines the recommended sampling process and procedures including sampling from multiple Drums/Totes/Tanks of less than 1,510 gallons per container.
- 2.12 Small Storage Vessel.** A drum, tote, or tank of less than 1,510 gallons.
- 2.13 Standard.** Means the California Department of Food and Agriculture Grade and Labeling Standards for Olive Oil, Refined-Olive Oil and Olive-Pomace Oil pursuant to Chapter 29, Part 2 of Division 22 of the Food and Agricultural Code.

- 2.14 **Thief.** Tool made of food-grade stainless steel which provides the ability to accurately sample oil from a specified depth.
- 2.15 **Fiscal Year.** Means July 1 of any year through June 30 of the following year.

3 SAMPLING BY COMMISSION

- 3.1 **Sampling of Lots.** Five lots will be sampled at random from each handler subject to the jurisdiction of the Commission under the direction of the CDFA or by a CDFA and Commission approved independent third party (sampling party). Samples will be taken following the procedures and sampling plan in accordance with section 5.0 below.
- 3.2 **Sample Timing.** The date of the sampling as well as which lots are to be sampled will be determined by the sampling party. All sample collection must be completed by February 1 of the fiscal year. All results must be reported to the Commission administrator by March 1 of the fiscal year.
- 3.3 **Bulk samples per lot.** A single bulk sample is required per lot.
- 3.4 **Quantity and volume of laboratory sample containers per lot.** A minimum of five laboratory samples in dark colored glass of 250ml or larger are required per lot for testing and retention samples.
- 3.5 **Sampling technique.** The sampling technique shall be in accordance with Section 5 of ISO 5555:2001 as appropriate.
- 3.6 **Sampling Methods.** Methods of sampling shall be applicable to the container in which the oil is stored in accordance with Section 6 ISO 5555:2001 as appropriate.
- 3.7 **Sample handling.** Samples shall be packed and handled in accordance with ISO 5555:2001 as appropriate.
- 3.8 **Sample Information.** Samples shall contain the information identified in Section 7.2 items e, f, h, j, k, l, m, and n of ISO 5555:2001 as appropriate.
- 3.9 **Tamper Proof Boxes.** All laboratory samples shall have a tamper evident seal placed on the box and marked by the sampling party.
- 3.10 **Designated Labs.** The sampling party shall send to an accredited edible oil analytical laboratory designated by the Commission three laboratory samples for each lot sampled in accordance with this section for analysis and grading based on the quality parameters in Table 1 of the Standard, Induction Time (Oxidative Stability Index in Accordance with AOCS Cd 12b-092) and for the analysis of the purity parameters as described in the following paragraph.

- 3.11 Samples Tested for Purity.** The Commission shall direct the sampling party to randomly select from the samples of lots taken by the sampling party from handlers a number, fixed annually, of samples to be tested for the purity parameters in tables 2-5 of the Standard at an analytical laboratory designated by the Commission.
- 3.12 Retention Samples.** The sampling party shall retain two containers of the laboratory sample, designated as retention samples, for the purpose of replacement of a lost sample, or retesting. The laboratory samples shall be retained until the end of the fiscal year. Additional laboratory samples may be taken by sampling party and retained by the handler.
- 3.13 Test Results.** The Commission administrator shall distribute to each handler the results within 60 days of sampling; not to exceed 90 days. The name of the handler shall be confidential. The results shall be reported the Commission referencing only lot numbers. The results shall include the information listed in section 6 of this Appendix.
- 3.14 Payment for Commission Samples.** The Commission shall pay the cost of sampling, shipping testing, grading and reporting of the samples under this section.

4 SAMPLING BY HANDLERS

- 4.1 Tests Required.** All handlers subject to the jurisdiction of the Commission shall be required to annually sample, test and grade all lots of olive oil in inventory, regardless of harvest year, for the quality parameters listed in Table 1 of the Standard and for Induction Time defined in section 5.15, except as described in section 1.5. Testing must be done by a certified laboratory chosen by the handler, including the handler's own laboratory if certified, following an official testing method described in the Standard. If the Induction Time temperature used is 120° C, a conversion factor for Induction Time from 120° C to 110° C must be included. The handler is required to assign a distinct number to each lot.
- 4.2 Sampling protocol.** Samples will be taken following the procedures and sampling plan in accordance with section 5 below.
- 4.3 Retention Samples.** The handler shall retain a minimum of two containers of oil from each lot sampled for the purpose of retesting. These retention samples shall be dark colored glass no smaller than 250ml nitrogen sealed and no more than 10% head spaced and be retained until the end of the fiscal year in which the oil was produced.
- 4.4 Payment for handler samples.** The handler shall pay the cost of sampling, quality testing and retention of samples required under this section and section 5 below.
- 4.5 Reporting of Handler Test Results.** The results of the quality tests and grades assigned under this section shall be sent to the Commission administrator, and shall include the name of the handler. The results of sampling shall be reported to the commissioners using only the lot number and without the name of the producer or handler.

- 4.6 Reporting deadline.** The results of the sampling testing and grading must be reported to the Commission no later than March 1 of the fiscal year of production and must include all information required by section 6 of this Appendix and values for all parameters listed in Table 1 “Quality Parameters” of the Standard.
- 4.7 Extension of reporting deadline for handlers.** Handlers may apply to the Commission for a 30-day extension of the reporting deadline for lots of oil processed after February 1 of the fiscal year. Application for extension must be received by March 1.
- 4.8 Partial waiver of testing requirement.** For any lot of oil of 350 gallons or less, a handler may receive a waiver from all testing except for Free Fatty Acid, Peroxide Value, UV and Organoleptic Analysis per Table 1 of the Standard. Such a waiver must be requested in writing and presented to the Commission or its representative. Nothing in this subsection shall relieve the requesting handler from the requirement to correctly grade and label every lot of oil according to the Standard.

5 SAMPLING PROTOCOLS

- 5.1 Materials.** All materials used must be food grade and approved materials to minimize contamination or risk to the product (i.e., stainless steel, PET, etc.)
- 5.2 Compliance with Good Manufacturing Practices and Cal OSHA Regulations.** All equipment cleaning and sampling protocols shall comply with GMPs and Cal OSHA regulations.
- 5.3 Tank samples from tanks with top access.** Large tank samples shall be drawn through the top opening and consist of one part from the top 10% of the tank, three parts from the middle 30% of the tank and one part from the bottom 10% of the tank. Blend all samples in equal portions to create one final sample. All sample labels must include Date Sampled, Lot Number and Varietal(s).
- 5.4 Tank samples from tanks with sample port but no top access.** Samples will be drawn from the sample port after purging the sample port of approximately 200ml of oil. Fill labeled bottles straight from the sample port. All sample labels must include Date Sampled, Lot Number and Varietal(s).
- 5.5 Sampling from Small Vessels.** These are vessels of 1,510 gallons or less and only require one sample from the middle of the container. If multiple vessels comprise one lot, reference the **Sampling Guidance Document** for proper sample quantities by number of containers per lot. All sample labels must include Date Sampled, Lot Number and Varietal(s).
- 5.6 Sampling for Multiple Containers.** For lots of oils that have multiple containers per lot, multiple samples shall be pulled and combined in equal portions for the final lot sample. Reference **Sample Guidance Document** for the number of samples to pull from each lot by container size. All sample labels must include Date Sampled, Lot Number and Varietal(s).

- 5.7 Finished samples.** All finished samples shall be bottled in dark colored glass no smaller than 250ml and no more than 10% headspace remaining in bottle. It is recommended by the Commission that all samples be capped in nitrogen after filling.
- 5.8 Sample Storage.** Samples need to be kept as cool as is practical during storage and transport prior to testing.

6 REPORTING

- 6.1 Sample and lot reporting.** The designated sampling party or the handler shall send to the Commission or its representative the following information:
- (a) The identifying number of each lot sampled.
 - (b) The volume or weight of each lot.
 - (c) The date and time each lot was sampled.
 - (d) The percentage of all varieties in each sample to the extent known.
 - (e) A complete copy of the laboratory report or reports.
 - (f) The grade assigned to each sample.

7 GRADING

- 7.1** Based on the results of the testing each lot will be assigned a grade subject to review by the Commission or its representative.
- 7.2** Lots that fail chemical purity testing are not eligible to be graded and shall not be sold as olive oil, refined-olive oil or olive-pomace oil provided however, that traceability documentation as described in section 12 of the Standard, after review and acceptance by the Commission will negate failure to comply with the limits of Tables 2, 3, 4 and 5 of the Standard.

8 RIGHT TO REVIEW AND RETEST

- 8.1** Any handler is entitled to a retest of any or all lots of oil tested by the Commission; provided however that the retesting is at the sole expense of the handler. Retesting is only required for parameters that did not meet the limits set in the Standard.
- 8.2** The handler must notify the Commission of his or her desire to have a Commission retest within 10 days of receipt of test results. Retesting by the Commission must be completed within 21 days of the date of notification to the Commission.
- 8.3** All Commission retests must be done using retention samples or a new sample drawn from the same lot by the sampling party at the handler's expense using a laboratory as agreed upon by the Commission and handler.

However, the results of a handler retest shall be accepted as a substitute for the first Commission retest, provided that the sampling and testing by the handler is performed in accordance with all the requirements of Section 4 "Sampling by Handlers" and is reported to the Commission in a timely manner.

- 8.4** The results of the first Commission retest, if the same as the original test, shall be final. If however the first Commission retest results in the assignment of a different grade, a second Commission retest will be required using a laboratory selected by the Commission but paid for by the handler. The result of the second Commission retest will be final.

9 OCCC VOLUNTARY MEMBERSHIP AND STANDARD PARTICIPATION

- 9.1** Any California handler of olive oil not covered by the OCCC standard may participate voluntarily provided that all of the following conditions are met:
- (a)** The handler voluntarily participates in the commission program or is member of an OCCC approved organization that requires testing and certification of their members' olive oils for the following quality parameters: FFA, UV, Peroxide Value and Organoleptic Analysis.
 - (b)** The handler agrees to participate in the OCCC testing and sampling program described in Appendix A of the Standard and agrees to label oil only in accordance with the Standard and the Appendix.
 - (c)** The handler agrees to pay an annual fee calculated by taking the current assessment rate multiplied by the quantity of olive oil produced.
 - (d)** The handler agrees that all oil produced by the handler will be assigned a lot number and graded according to the requirements of the Standard including those that are in addition to those listed in (a) above and /or beyond those of the approved organization.
 - (e)** The program applies only to 100% California olive oils.
 - (f)** The handler agrees in a written contract to conditions (a) – (e) above.
- 9.2** Any handler meeting the above conditions may use the OCCC logo and approved language provided however that the same conditions for use by compulsory handlers will apply.