

**UC Davis Olive Center  
Press Release  
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**Quality of imported extra virgin olive oil often unreliable, study finds**

Nearly three-quarters of samples of top-selling imported brands failed international standards for extra virgin olive oil according to a new report by researchers at the University of California, Davis, and in Australia. The oils failed due to being oxidized, of poor quality, and/or adulterated with cheaper refined oils.

“The United States is the third-largest consumer of olive oil in the world,” said Dan Flynn, executive director of the UC Davis Olive Center. “While there are many excellent imported and domestic olive oils available, our tests indicate that there are serious quality problems out there.”

In this second and final report in a year-long study of extra virgin olive oil sold at retail, the research team examined 134 samples of eight high-volume brands of olive oil, purchased in major supermarkets throughout California. Sensory and chemical tests were conducted by the UC Davis Olive Center and the Australian Oils Research Laboratory.

Extra virgin is the top grade of olive oil, evaluated according to standards established by the International Olive Council (IOC) and the United States Department of Agriculture (USDA). To be considered extra virgin, the oils must have no sensory defects such as rancidity, offer some fruity flavor and aroma, and meet specific chemistry-based criteria.

The report found that:

- **Top-selling brands showed quality problems.** 73 percent (66 of 90 samples) of the five top-selling imported brands failed international sensory standards for extra virgin olive oil by failing two IOC-accredited taste panels. The report says that samples had objectionable sensory attributes such as rancidity and fustiness. The same five brands failed sensory tests at the same 73 percent rate (11 of 15 samples) in a UC Davis report released in July 2010. Of the samples that failed both sensory panels, 35 percent also failed an IOC standard for ultraviolet absorption. The report states that other common IOC chemical standards were not useful in confirming negative sensory results.
  
- **Some brands did well.** None of the Californian and Australian olive oil samples failed both sensory panels, while just 11 percent of a high-volume premium Italian brand failed both sensory panels. The California and Australian brands passed all of the IOC chemical tests used in the study, while just 11 percent of the premium Italian brand failed one of the IOC chemical tests.

- **Standards could be improved.** Two standards that have not been adopted by the IOC had a strong relationship in confirming negative sensory results. These tests, known as diacylglycerol content and pyropheophytin, have been adopted in Germany and Australia, and confirmed negative sensory results at the rates of 65 percent and 49 percent, respectively. The report says that “IOC and USDA standards would be more effective in assessing and enforcing olive oil quality by including the German/Australian (tests).”

“The best extra virgin oil will smell and taste fresh,” said Flynn. Quality oils often show the most recent harvest year on the bottle, have containers that protect the oil from light, and do not have a dusty or shopworn appearance, according to Flynn.

The report recommends that further research should be conducted to investigate chemical markers for sensory defects and determine the effects of minor olive-oil constituents on the oil’s flavor and stability. They also suggest that chemical profiles of California olive oils should be analyzed.

Funding for the new study was provided by Corto Olive, California Olive Ranch and the California Olive Oil Council. The report notes that all tests were performed “blind” without knowledge of brand name or origin, by research and technical personnel within the California and Australian laboratories and by the sensory panelists.

The full report of the new study’s findings is available online at <http://olivecenter.ucdavis.edu>

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