

Research Brief

UC Davis Olive Center examines consumer olive oil preferences

A majority of Northern California consumers tend to dislike bitter and pungent extra virgin olive oils, with many consumers liking defective attributes such as rancidity. These preferences contrast with those of expert tasters, who prefer defect-free oils that are noticeably bitter and pungent. These are among the key findings of a UC Davis study in the March 2011 edition of *Food Quality and Preference*.

The study "How do consumer hedonic ratings for extra virgin olive oil relate to the quality ratings by experts and descriptive analysis ratings?" is the first to provide a comprehensive method of examining the "drivers of liking" for consumers when compared to the quality of extra virgin olive oil. UC Davis sensory scientists Claudia Delgado and Jean-Xavier Guinard conducted the study of 110 Northern California consumers regarding their preferences and drivers-of-liking for 22 commercial olive oils labeled as extra virgin.

Half of the oils in the study were imported and half were from California. The consumers were more highly educated than the general population, with 83 percent having some college experience. Seventy-four percent of the consumers were female, and 75 percent identified themselves as White/Caucasian. Incomes level were evenly distributed among the group. The study has a 95 percent confidence level (reliability of the test or results) and a power of 90 percent (test sensitivity: how good is the test to detect differences among samples).

Fruitiness, bitterness, pungency are the positive sensory attributes of olive oil as identified by International Olive Council (IOC) standards. Extra virgin olive oils must be free of defects and have some fruitiness under IOC grade standards.

KEY FINDINGS

- ◆ Consumers indicated that oils with fruity attributes identified as nutty, ripe fruit, green tea, butter, green fruit and grassy were positive drivers of liking.
- ◆ Sensory defects such as rancidity and fustiness were positive drivers-of-liking for 44 percent of the consumers in the study. The authors indicate that this preference for defective olive oil may be related to the prevalence of defective extra virgin olive oil available to consumers.
- ◆ A majority of consumers disliked olive oils that were bitter and pungent. The authors indicate that consumers have learned to accept attributes that they initially dislike such as bitterness, in specialty beers and coffee, and that consumers might find bitterness and pungency more acceptable when using olive oil with food and in cooking and by knowing that healthy anti-oxidants in the oil are the causes of bitterness and pungency.
- ◆ The most common reasons that consumers identified as motivations for using olive oil were health benefits (74 percent), for use in a recipe (66 percent), for dipping bread in restaurants (59 percent), the influence of parents' consumption of olive oil (46 percent) and olive flavor (44 percent).
- ◆ Seventy four percent of the consumers did not like what the expert tasters identified as high-quality oil. Expert tasters tended to rate as high quality those oils that were bitter and pungent and free of defects.
- ◆ The study identified three distinct clusters among the consumers that differed in demographic characteristics, olive oil flavor preferences, and buying habits.

Access the journal article [here](#).

February 2011

