

# Olive oil



## A cheap bottle beats a pricier lineup

**What's the difference between a \$4 bottle of olive oil and a \$20 bottle? Often, not much more than \$16 and fancy packaging. In blind taste tests of 18 extra-virgin olive oils—national and store brands plus boutique oils from California—we found that Goya, \$4.15 per 17-fluid-ounce bottle, held its own against the gourmet products and bested oils from big names such as Filippo Berio, Bertolli, and Colavita.**

As promised by its label, Goya also tasted extra virgin—the highest-quality grade. Many of the other oils didn't, according to two experts trained in standards that the International Olive Oil Council in Madrid has established for olive oil's taste.

Labels can confuse in other ways, too. Oils that sound eminently Italian, such as Berio and Bertolli, may include olives grown and picked in Spain, Greece, or elsewhere and only processed in Italy.

Based on IOOC rules, extra-virgin olive oil must meet strict chemical standards, including low levels of acidity and ultraviolet-light absorption (high levels indicate that oil was poorly processed or has deteriorated). It must taste like olives and be free of defects in flavor and aroma. And it cannot be refined by heating (heat removes impurities, but it also removes flavor) or treated with solvents. If acidity

is too high or taste isn't perfect, an oil is designated as virgin or an even lower grade. Refining is allowed in grades lower than virgin. (See CloseUp on page 34 for more on what the labels mean.)

Only five of the oils we tested were free of taste defects. The rest were at least slightly stale, and some tasted "fusty," an insider's term for a fermented characteristic reminiscent of old table olives. Because most people don't sip and slurp

olive oil from a glass, as experts do, those flaws aren't always easy to detect on food. But as with fine wine, once your taste buds become used to the complex, fragrant, and sometimes intense flavor of a flawless olive oil, you may begin to realize what you've been missing.

### WHO'S CHECKING FOR PURITY?

The IOOC, chartered by the United Nations, operates in most countries that produce olive oil. It sets standards for grades and works to ensure that oils labeled extra virgin are indeed flawless.

But the council doesn't operate in the U.S., which produces little olive oil, and it doesn't inspect oil to be shipped here. Nor are importers and distributors that sell products in the U.S. bound by IOOC rules. The U.S. Department of Agriculture does not even recognize the council's grades, choosing instead to classify olive oil as "fancy," "choice," or "standard," terms it adopted when Harry Truman was president. At press time, the California Olive Oil Council, which promotes the industry, had petitioned the USDA to revise its definitions to mirror those adhered to by the international community.

In theory, the lack of oversight gives bottlers carte blanche to slap "extra virgin" on just about any olive oil, and there's no federal authority to stop them—unless

### CR Quick Take

**As with wine, before you grab a bottle off the shelf, know that a name or a label-claim alone is no indication of what to buy. Our taste tests and lab analyses of 18 extra-virgin oils showed:**

- An oil costing 24 cents per ounce was nearly as good as oils costing more than \$1.20 per ounce. And big-name products? Some weren't so hot.
- Terms such as "extra virgin" are not verified by the U.S. government. Expert tasters said some oils didn't live up to that high-quality claim.
- Manufacturers play labeling games: Oils marked "Italian" may include olives harvested in Spain or elsewhere.
- Despite longstanding rumors of adulteration in the olive-oil supply, our lab tests found none.

**AN OLIVE-OIL PRIMER**

For thousands of years, the olive has been treated with a respect that borders on reverence. Thomas Jefferson called it “the richest gift of heaven,” while Homer characterized the oil it yields as “liquid gold.” But not all oils are created equal. Their taste varies with soil and climate, growing region, and the ripeness of the harvested fruit. Equally critical are storage and handling of the picked olives and how quickly they’re processed. Mistakes can cause unfortunate results. In that way, olives are similar to wine grapes. Like wine, olive oil has so many nuances that international experts have devised a wealth of terms to explain the distinctions.

**Bitter, pungent.** In moderation, these are pluses, providing what experts call “bite.” Bitterness (think tea and chocolate) is typical of unripe olives or of certain olive varieties, and it’s a quality many people appreciate. Pungency, or piquancy, is a tingling or peppery sensation in the back of the throat that’s often associated with unripe olives or certain varieties, such as those from Tuscany.

**Finish.** It’s a measure of how long the flavor lingers in the mouth. In some ways, olive oil is more complex than wine because the aromatics extend beyond the tongue and nasal passages, to the back of the throat.

**Fruity.** A high-quality oil may have the flavor and aroma of ripe olives—nutty, buttery, or floral. Or it can have a “green olive” character, with flavors and aromas reminiscent of grass, vegetables, herbs, green banana, green apple, eucalyptus, or mint. Some oils have elements of both green and ripe fruit.

**Fusty.** This refers to a processing defect characteristic of oil obtained from olives stored in piles for a long time, resulting in fermentation and a scent and flavor reminiscent of old or decomposing olives.

**Muddy, horsey.** Before bottling, oil is stored in tanks or vats. If those hold leftover sediment, the oil can take on a flavor that’s a bit suggestive of manure.

**Musty.** This refers to a moldy flavor, usually from olives stored in humid conditions for several days before pressing.

**Oxidized.** This off-flavor, ranging from slight staleness to rancid, indicates a product that has been on a shelf too long or was stored poorly.

the deception goes beyond flavor flaws.

In the food-oil business, instances of economic adulteration—the spiking of food with unlabeled cheaper ingredients—have been rumored for years. Our reporter interviewed olive-oil-company representatives, and most were adamant that trickery is rampant. “Adulteration is an enormous issue,” says Albert Katz, president of the California Olive Oil Council and an olive-oil producer.

We investigated for ourselves. We had a lab analyze multiple samples of each oil in our tests for grade and adulteration. We included one that we spiked with refined olive oil. The lab spotted our fake but found no evidence of adulterated or refined oil in the other samples.

That news is reassuring but doesn’t mean the problem is nonexistent. From time to time, investigators from the Food and Drug Administration, which oversees most food products, have uncovered instances in which olive oils have been cut with a cheaper product, such as canola oil, or those labeled extra virgin have been revealed as inferior. The offenders were little-known brands.

But such discoveries are hit or miss. Unlike Canada’s Food Inspection Agency, which has adopted the IOOC’s standards and randomly tests bottles of oil at stores, warehouses, and ports, the FDA has no ongoing inspection program, says Martin Stutsman, assistant to the director of the agency’s division of plant products safety. “We’ll get a tip that there’s an adulterated product out there, and we’ll look at it,” he says, adding that such problems occur “maybe once every three to five years.”

In the past, there was

greater oversight of adulteration. Until a decade or so ago, the FDA routinely checked products that were susceptible to economic fraud. But limited resources and hazards with more-serious health consequences, such as salmonella, E. coli, and, now, bioterrorism, rendered olive-oil adulteration a low priority.

Stutsman, however, says he trusts the various industry associations to tell the FDA if they’re aware of a problem, and says the FDA will follow up. Every year, one of those groups, the North American Olive Oil Association, in Neptune, N.J., buys about 200 bottles of olive oil—from major and minor brands—off store shelves and ships them to the IOOC for purity testing, says Bob Bauer, the association’s president. Of that total, he told us, “a small number” appear problematic. But he says the offending brands have such a small share of the market that most people have never heard of them. “That’s why consumers can be confident that they’re getting what’s on the label,” he says. “We don’t see problems with the brands they’re used to seeing.”

**THE HEALTH ANGLE**

Since the mid-1980s, when studies began to suggest that it could lower LDL (“bad”) cholesterol, olive oil has become a favorite fat. It’s used in almost half of all American homes, with consumption nearly doubling since 1993 to 62 million gallons a year.

Despite the benefits, it’s important to realize that no fat is exactly health food. A tablespoon of olive oil has about 120 calories and 14 grams of fat, about the same as other oils. That said, it is undoubtedly better for you than butter, beef fat, palm-kernel oil, coconut oil, and margarines that contain trans fats, which raise levels of LDL cholesterol in the blood.

Extra-virgin olive oil has another advantage over refined oils, including canola, peanut, and corn: antioxidants called phenols that research suggests may protect against heart disease, as well as certain cancers. There is some epidemiological evidence that people who consume a lot of olive oil may have a lower risk of developing breast and colon cancer and a lower risk of heart attack. Although the research is scant, extra-virgin olive oil



**QUALITY CONTROL**

The U.S. has no legal definition for extra-virgin olive oil, but the California Olive Oil Council has a voluntary “Seal of Quality” program to ensure that what’s on the label is in the bottle. To earn the seal, producers submit oil samples to an independent lab for chemical analysis. The oils are also judged in blind taste tests by experts certified by the International Olive Oil Council in Spain.

should contain more phenols than the lowest grades: Heat used during refining has been shown to destroy some phenols.

### HOW TO CHOOSE

You can use olive oil in many recipes that call for fat. Fry or sauté with it, add it to sauces, dip bread in it, or drizzle it atop salads, vegetables, or entrées. If you use it in a variety of ways, you may want to buy two different bottles.

**Consider how you cook.** If you're

using olive oil to cook strong-tasting foods, buy it by price. Even grades lower than extra virgin should be fine, and they should be cheaper. (At our local grocery store, plain olive oil cost about 25 to 45 percent less than its extra-virgin counterpart.) But for oil you'll drizzle in small amounts and want to savor, choose a high-rated extra-virgin product.

**Consider what you eat.** When you're using oil that you'll taste—on salad or

bread—it's important to pair it with the food. A strong oil can stand up to peppery greens like arugula or a spicy pasta sauce. A milder oil may work better with a subtly flavored bread.

**Try your own test.** No two oils taste identical. Among those in the Ratings, there are hints of everything from apple and roasted nuts to freshly mowed grass and eucalyptus. You may have to sample a few oils to determine which you prefer.

## closeup

### DECODING LABELS: WHAT'S EXTRA VIRGIN, ANYWAY?

Olive-oil labels can be confusing. Aside from the Food and Drug Administration's mandatory Nutrition Facts, no two labels provide exactly the same information. Here's a guide to what you'll see and what it means:

#### 1 GRADE

**Extra virgin.** According to standards that prevail in Europe, this indicates first-rate flavor. Acidity and UV-absorption levels must be low. Heat or chemicals cannot be used to extract oil from the paste produced when olives are mashed.

**Virgin.** As with extra-virgin oil, heat or chemicals can't be used. But virgin has sensory flaws and can have higher acidity than extra-virgin oil.

**Pure (or plain)** olive oil has been refined and made more flavorful with a dollop of better-tasting oil.

**Light (or extra light)** refers to an oil's flavor and color, not fat or calories. It's a refined oil that is almost completely devoid of flavor.

**Pomace** is the lowest-grade oil. It's highly processed, using heat, solvents, and hot water to extract oil from leftover paste.

#### 2 DATE CODING

If stored properly, an unopened bottle of olive oil has a shelf life of up to two years from the time it's packed. Once opened, keep it in an airtight glass bottle away from heat and direct sunlight. More than half of the oils we tested tasted at least somewhat stale, suggesting that they sat too long on shelves or weren't stored correctly. Most lack date codes, so you can't tell how old they are.

#### 3 COLOR

It's an unreliable indicator of quality. Light-colored oils, such as B.R. Cohn, are often thought to have subdued flavor, yet that oil proved intense. Professional tasters sip oils from dark-colored cups to eliminate bias. Color depends largely on the ripeness of the olives at harvest: Gold usually indicates ripe olives; green signals fruit that's not fully mature (the latter can have a sharp, bitter taste). Chlorophyll or leaves may be included during pressing to intensify greenness.

#### 4 COUNTRY OF ORIGIN

You'd think an oil named Bertolli, with "Lucca" (a Tuscan city) on the label, would be made from olives grown in the land most closely linked with olive oil. Guess again. The words "imported from Italy," used by Bertolli and others, are a giveaway. The oils

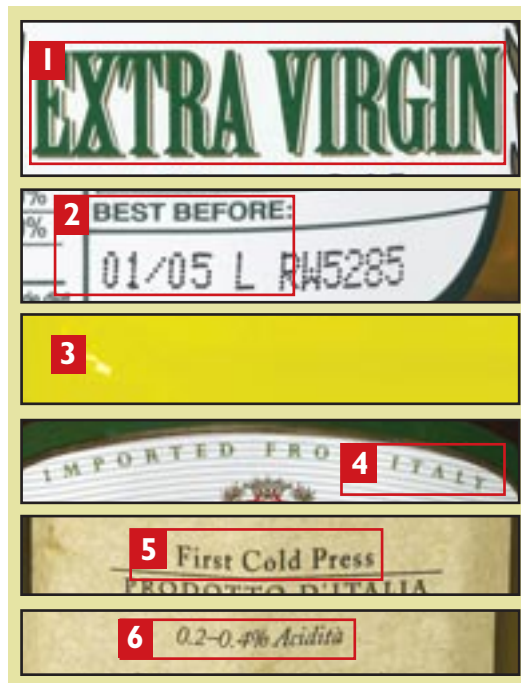
may be bottled in Italy, but the fruit can be a blend of olives from elsewhere. The country where the olives were grown often doesn't appear on the label. Oil made only from Italian olives will say "100% Italian olives." Our tests show that decent olive oil knows no borders. The best in the Ratings were from California. California produces less than 1 percent of the olive oil consumed in the U.S., but the state's growers are aiming to compete, eventually, with those from other olive-growing countries.

#### 5 FIRST COLD PRESS

This largely outdated term harks back to the days when olives were crushed under a huge stone wheel, and the paste was spread over mats and pressed to squeeze out the oil. Today, higher-tech, more-hygienic techniques are the rule. In truth, all extra-virgin oil comes from the first pressing of the paste and is produced solely through cold or mechanical means without the use of heat or chemicals. Brands that make this claim are not necessarily superior to those that don't.

#### 6 ACIDITY

Low is best. The oils we tested met the low-acidity extra-virgin standard. Poorer-quality oil can be chemically altered to lower the acidity level by adding cheaper refined oils. That's why extra-virgin oil must have impeccable taste as well.





# Ratings extra-virgin olive oil



1 McEvoy



2 B.R. Cohn



3 Goya



4 Lucini

Listed in order of quality.

Key number	Brand name	Cost/oz.	Attributes			
			Fruity/ripe	Fruity/green	Pungent/peppery	Long finish
<b>EXCELLENT</b> Intense, complex flavors. Pair carefully with foods, as flavors may overwhelm or clash. Drizzle on foods to add flavor.						
1	McEvoy Ranch [organic]	\$1.54		•	•	•
2	B.R. Cohn Organic California	1.21		•	•	•
<b>VERY GOOD</b> Complex oils that complement many foods.						
<b>CR BEST BUY</b> 3	Goya	0.24	•	•	•	•
4	Lucini Premium Select	0.71		•	•	•
5	California Olive Ranch Arbequina	0.76		•	•	
<b>GOOD</b> The top five oils have slight defects that may not be noticeable with foods. The rest have more or stronger flaws.						
6	Tassos	0.44	•	•	•	•
7	Filippo Berio	0.26	•		•	•
8	Bertolli	0.29	•		•	•
9	Kirkland (Costco)	0.12	•			
10	Monini Originale	0.43	•			
11	365 Organic (Whole Foods)	0.41	•		•	
12	Pompeian	0.30	•			•
13	Colavita	0.41	•			
14	Albertson's	0.21	•			•
<b>FAIR</b> Flaws and/or slightly old-oil flavor. Few positive attributes.						
15	Carapelli	0.34	•			
16	Private Selection (Kroger)	0.21	•			
17	Great Value (Wal-Mart)	0.16	•			
18	DaVinci	0.32	•			

## Guide to the Ratings

Ratings are based on flavor and aroma of extra-virgin olive oils, the most widely sold grade, as judged by two experts in blind taste tests. **Cost per ounce** is calculated from a container of about 17 fluid ounces, except for McEvoy Ranch (12.7 oz.), Pompeian (32 oz.), Bertolli (34 oz.), and Kirkland (67.6 oz.). Most of the oils are sold in supermarkets nationwide. Both McEvoy Ranch and B.R. Cohn are at specialty stores. McEvoy Ranch is also sold online at [www.mcevoyranch.com](http://www.mcevoyranch.com); B.R. Cohn at 800-330-4064. California Olive Ranch oil is sold at specialty stores in northern California or by phone at 530-846-8000. **Fruity/ripe** describes oil whose flavor is mostly ripe olive, sometimes with a hint of roasted nuts, melted butter, or fresh flowers. **Fruity/green** describes oil that tastes mostly of unripe olives, and can be reminiscent of a freshly mowed lawn, green banana, tart apple, mint, eucalyptus, or other herbs and vegetables. **Pungent/peppery** describes oil with a sharp, piquant quality that imparts a tingling or slight burning impression in the back of the throat. **Long finish** indicates that the oil lingers on the palate.

## CR Quick Recommendations

Neither a big name nor “extra virgin” on the label guarantees an outstanding olive oil. All but the top five suffered from flavor imperfections.

Flavor intensity varies widely. The excellent oils are more robust and nuanced, while lower-rated ones tend to be somewhat bland and are more likely to be stale. If you’ve grown up with the mild oils found in most supermarkets, the excellent oils from California will likely seem aggressive in flavor. Their intensity, and their cost, dictate that they be used sparingly.

The **Ratings** rank oils by overall score. The **Quick Picks** will help steer you to the oil that’s best for your purposes.

## QUICK PICKS

### Best all-purpose choices:

- 3 Goya 24 cents per oz., CR Best Buy
- 4 Lucini 71 cents per oz.
- 5 California Olive Ranch 76 cents per oz.

If you’re buying just one olive oil, try one of these. Our experts considered them the best complement to everything from chicken and salads to fish and vegetables. Goya in particular has an interesting combination of ripe fruit, green, or grassy notes; bitterness; and pungency. None have flavor that comes on too strong.

### Best used for cooking:

- 3 Goya 24 cents per oz., CR Best Buy
- 6 Tassos 44 cents per oz.
- 7 Filippo Berio 26 cents per oz.
- 8 Bertolli 29 cents per oz.
- 9 Kirkland (Costco), 12 cents per oz.
- 10 Monini Originale 43 cents per oz.

Goya is a very good oil that is inexpensive enough to be used liberally in cooking. The others are relatively low-priced (the cheapest, Kirkland, is sold only in large containers), and they rated good. Their slight defects may not be noticeable in cooking. Most have a predominantly ripe-fruit flavor.

### Best used for drizzling:

- 1 McEvoy Ranch \$1.54 per oz.
- 2 B.R. Cohn, \$1.21 per oz.

Both of these excellent oils have strong, complex flavors with a peppery note and are quite bitter. Drizzle them on foods that will benefit from their strength, such as spicy pasta sauces and salads.