

## Canola oil nutrition facts

Canola oil obtained from pressing canola seeds and *oil rapeseeds*. Both canola seeds and rapeseeds belong to the exactly same Brassica genus; however, the name **canola** (**Canadian oilseed- low acid**) coined for modified plant developed by Canadian scientists. The scientists applied traditional plant breeding methods to get rid of rapeseed's undesirable qualities – erucic acid and glucosinolates. Both rapeseed and canola plants are, therefore, belongs to the same genus of the crucifer family called Brassica; the large family of plants which also includes turnip (<http://www.nutrition-and-you.com/turnips.html>), mustard (<http://www.nutrition-and-you.com/mustard-seeds.html>), Brussels sprouts (<http://www.nutrition-and-you.com/brussel-sprouts.html>), cabbage (<http://www.nutrition-and-you.com/cabbage.html>), kale (<http://www.nutrition-and-you.com/kale.html>), cauliflower (<http://www.nutrition-and-you.com/cauliflower.html>), broccoli (<http://www.nutrition-and-you.com/broccoli.html>) ...etc.

### Facts quote

Like olive oil, canola also has very low saturated fats. It contains **linoleic (omega-6)** and **a-linolenic acid (omega-3)** essential fatty acids at 2:1 ratio, marking it as one of the healthiest cooking oils.

Canada, USA and European Union are chief produces rapeseeds. In general, edible oil pressed from seeds of rapeseed plant referred by different names as **canola oil, rapeseed oil, low-erucic acid rapeseed oil, LEAR oil, and rapeseed canola-equivalent oil**...etc. Present day edible rapeseed oil is limited by government regulations to a maximum of 2% erucic acid by weight in the USA and 5% in the EU.

*Brassica napus* or rapeseed plant is a cool season small annual flowering herb with deep taproots. It grows to about 4-6 feet in height and bears golden-beautiful yellow flowers, which eventually develop into seedpods measuring about 5 cm in length. Each seedpod holds 20 to 35 tiny, round mustard-like seeds. The seeds carry about 40% of oil.

## Physical characteristics of canola oil

Canola oil is light yellow and has neutral taste of brassica plants. In general, canola seeds pressed either employing traditional cold-pressing methods or in large scale, by hexane extraction method. Color, taste, and odor of cold-pressed oil indeed more pronounced than that of refined oil.

Its specific gravity @ 25 °C is 0.916-0.921. Iodine value-110–120; and saponification values-188-198.

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Being a fat, canola oil is high in energy; 100 g of oil provides 884 calories. However, its high ratio of mono-unsaturated fatty acids to saturated fatty acids makes it one of the healthy oil for consumption.

It is one of the cooking oils with a high smoke point; 450 °F. This property can be exploited in setting oil temperature high while deep-frying food items. Canola oil has very good lipid profile. It has good distribution of saturated, monounsaturated and polyunsaturated (SFA: MUFA: PUFA= 8: 61: 31) fats in healthy proportions. Cold-pressed oil is one of the stable cooking oils possessing very long shelf life.

## Health benefits of canola oil

Canola oil possesses unique health benefits than many other vegetable oils and fast emerging as one of the healthiest oils in tandem with olive oil (<http://www.nutrition-and-you.com/olive-oil.html>).

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It has highest levels of plant sterols, especially **β-sitosterol** and **campesterols**. The US FDA has approved the following claim for phytosterols: "Foods containing at least 0.4 gram per serving of plant sterols, eaten twice a

day with meals for a daily total intake of at least 0.8 gram, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease." Phyto-sterols competitively inhibit cholesterol absorption in the gut and thereby can reduce cholesterol levels by 10% to 15%.

- Canola oil is high in calories. However, its high-calorie content comes from better fats. It is especially rich in mono-unsaturated fatty acids (MUFA) like oleic acid (18:1), which constitutes about 61% of total fats. MUFA helps in lowering LDL or "bad cholesterol" and increase HDL or "good cholesterol" in the blood. Research studies suggest that Mediterranean diet that is very rich in monounsaturated fatty acids help to prevent coronary artery disease and strokes by favoring healthy blood lipid profile.
- It contains valuable amounts of anti-oxidant **vitamin E**, particularly gamma-tocopherol. 100 g fresh oil has 27.34 µg of α-tocopherol and 17.46 µg of alpha-tocopherol. Vitamin E is a powerful lipid soluble antioxidant, required for maintaining the integrity of cell membrane of mucus membranes and skin by protecting it from harmful oxygen-free radicals.
- Being a vegetable source, it has very high levels of plant sterols, especially **β-sitosterol**. The FDA has observed the following claim for phytosterols: "Foods containing at least 0.4 gram per serving of plant sterols, eaten twice a day with meals for a daily total intake of at least 0.8 gram, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease." Phyto-sterols competitively inhibit cholesterol absorption in the gut and thereby can reduce cholesterol levels by 10% to 15%.
- Canola oil has the highest smoke point oil is also an ideal choice for deep-frying because it can be heated to a higher temperature (smoke point -450 °F). This results in lower oil retention in the fried foods.

### Selection and storage

Canola oil sold in the markets with different names, labels and specifications like, for example, as rapeseed 00 oil, low-erucic acid rapeseed oil, LEAR oil, and rapeseed canola-equivalent oil...etc. Look carefully for the manufacture date and buy fresh pressed oil from authentic brands.

Cold-pressed oil has good level of antioxidants and has a longer shelf life. Its price tends to be slightly higher because of the lower recovery of oil from the pressed seeds.

Like any other vegetable oils canola can undergo rancid if kept exposed to heat, moisture and sunlight. Always store oil in tightly sealed containers and place in a cool, dark place away from heat or light.

### Culinary use

Besides being used commercially as cooking oil, canola is one of the preferred oil in salad dressings, margarines, shortening, deep-frying, baking, spreads, and creamers.

Canola oil features clear light yellow color with neutral flavor. It blends with added herbs and spices and allows the flavor of herbs and spices to dominate.

Here are some serving tips

- Traditional *Burgundian fondue* where in canola oil used to deep fry meat, chicken or seafood and enjoyed with sauces like sour cream mustard sauce, Béarnaise sauce, and hollandaise sauce.
- Like peanut oil (<http://www.nutrition-and-you.com/peanut-oil.html>), canola is also preferred oil used to deep fry turkey.

### Safety profile

Several research studies have shown that canola oil can be used safely as edible oil. However, look carefully for the label to make sure that it is free from erucic acid and glycosinolates. Erucic acid is an omega-9 fatty acid which occurs in other Brassica family of plants such as rapeseed, mustard, kale... etc., as well.

Unrefined rapeseed oil contains up to 45% erucic acid. However, genetically modified canola plant is genetically free of erucic-acid and glycosinolate producing proteins. It is therefore; food-grade canola oil (also known as rapeseed 00 oil, low erucic acid rapeseed oil (LEAR oil) and rapeseed canola-equivalent oils) is free from these toxins and safe for human consumption

Principle	Nutrient Value	Percentage of RDA
Energy	884 Kcal	44%
Carbohydrates	0 g	0%
Protein	0 g	0%
Total Fat	100 g	500%
Cholesterol	0 mg	0%
Dietary Fiber	0 g	0%
<b>Vitamins</b>		
Folates	0 µg	0%
Niacin	0 mg	0%
Pantothenic acid	0 mg	0%
Pyridoxine	0 mg	0%
Riboflavin	0 mg	0%
Thiamin	0 mg	0%
Vitamin A	0 IU	0%
Vitamin C	0	0%
Vitamin E-gamma	27.34 mg	182%
Vitamin K	71.3 µg	59%
<b>Electrolytes</b>		
Sodium	0 mg	0%
Potassium	0 mg	0%
<b>Minerals</b>		
Calcium	0 mg	0%
Copper	0 mg	0%
Iron	0 mg	7 %
Magnesium	0 mg	0%
Manganese	0 mg	0%
Phosphorus	0 mg	0%
Selenium	0 µg	0%
Zinc	0 mg	<1%
<b>Phyto-nutrients</b>		
Carotene-β	0 µg	--
Crypto-xanthin-β	0 µg	--
Lutein-zeaxanthin	0 µg	--
β-Sitosterol	413 mg	--

