Edible oil
Palm fruit oil, generally known as palm oil, is one of the edible oils cited by the Codex Alimentarius Commission of the joint FAO/WHO Food Standards Programme.¹

Palm fruits
The oil is pressed from the orange pulp of palm fruits. Palm fruits are about the size of large olives and grow in bunches on the tropical palm oil tree. Each bunch contains a thousand or more palm fruits that are harvested throughout the year.

Indonesia and Malaysia
 Originally found in West Africa, the oil palm tree is now mostly cultivated in Indonesia and Malaysia, the world’s largest palm oil-producing nations.

¹ Codex Alimentarius Commission, 2001
Refined palm oil
In Europe, palm oil is used in its refined (or Refined, Bleached, Deodorised) form. Refined palm oil is odourless and pale yellow, making it a valuable ingredient providing texture and taste in a wide range of foods, such as margarine, confectionery, chocolate, ice cream and bakery products.

Palm oil fractions
Fractionating refined palm oil involves separating the oil into fractions with different melting properties: a liquid (olein) and a solid (stearin) fraction. Palm olein is sold as cooking oil or used in food manufacturing such as instant noodles and fried food products. Palm stearin is used to make the hard components (“hard stock”) of margarines and shortenings*. Palm olein can be further fractionated to produce super olein, hard stearin and palm mid fraction. Super olein is a more liquid fraction and withstands a lower temperature than palm olein before it solidifies. The palm-mid fraction is a key component of cocoa butter alternatives.

* a type of (semi-) solid fat that is used in cooking and baking
Various functions of fat

Like all fats and oils, palm oil is a concentrated source of energy for our body. One gram of fat provides 9 kcal, while carbohydrates and proteins provide 4 kcal per gram. Fat is the main storage form of excess energy in the body. Fats also cushion organs during movement, insulate the body and help to maintain a normal body temperature. Fats are structural components of cell membranes and hormones. Some types of vitamins (A, D, E and K) rely on fat for absorption and storage.

Recommended fat intake

The World Health Organization recommends that in a healthy diet between 15 and 35% of the daily calories should be obtained from fat.²

Unique and balanced fat composition
Palm oil contains an equal proportion of saturated and unsaturated fatty acids. Of these fatty acids, approximately 40% is monounsaturated oleic acid, 10% is polyunsaturated linoleic acid, 44% is saturated palmitic acid and 5% is saturated stearic acid.

Compared to coconut oil, butter and cocoa butter
The proportion of saturated fats in palm oil is lower than the saturated fat content of other fats of similar application: coconut oil, butter and cocoa butter.
Less than 2% trans fatty acids
Trans fatty acids have been proven to have detrimental effects on health. Like all refined oils and fats, palm oil contains less than 2% trans fatty acids.

No partial hydrogenation
Having a unique and balanced composition of saturated and unsaturated fatty acids, palm oil generally does not require partial hydrogenation (‘hardening’) in applications where solid fat is desirable, thus avoiding the formation of trans fatty acids.

Reducing trans fats in foods
Using palm oil instead of partially hydrogenated vegetable oils reduces the content of trans fats in foods made with these oils. No other vegetable fat with a semi-solid texture at room temperature and providing the same features exist in sufficient quantity.
Rich in vitamin E
Crude or unrefined palm oil contains 60 to 100 mg vitamin E per 100 gram. An average of 50 to 65% of the vitamin E content remains after refining.

Tocotrienols
70% of the vitamin E in palm oil occurs as tocotrienols. In contrast, other vegetable oils such as corn, olive, soybean, and sunflower, are good sources of tocopherols but contain no tocotrienols.

Unique biological properties
Current research suggests unique biological properties of tocotrienols and warrants further investigation.3,4

3 Imoisi OB. et al, JASEM, 2015.
Carotenoid pigments
Carotenoids are natural pigments responsible for the red-orange colour of crude palm oil. 100 Gram of crude palm oil contains 50 to 70 mg carotenoids. These are mainly beta carotene (56%) and alpha carotene (35%) and are the same compounds that give the orange colour to carrots, pumpkin and sweet potatoes.

Pro vitamin A
Carotenoids act as precursors of vitamin A, which plays an important role in good vision, a healthy immune system and cell growth. The pro vitamin A (retinol) equivalent content of crude palm oil has been estimated at 15 times that of carrots.

Red palm oil
Standard oil refining removes all carotenoids, but about 80% of these valuable components are retained in a product called “red palm oil”, resulting from a modified refining procedure. Red palm oil is used for the treatment and prevention of vitamin A deficiency in many countries worldwide.5

Rising global consumption
Global production of palm oil rose from 14.6 million tons in 1995 to 61.1 million tons in 2015 with about half destined to food. Palm oil is currently the most consumed vegetable oil in the world. The main palm oil consuming markets are China, India, Indonesia and the European Union.

Daily intake in France
Palm oil consumption levels were estimated by CREDOC in France in 2013. On average, the French (≥3 years of age) consume 2.8 gram of palm oil per day, which corresponds to approximately 4% of the overall saturated fat intake in adults.6

Ancient tropical plant
The oil palm is an ancient tropical plant from the West African tropical rainforest region. The use of palm oil in human nutrition dates back thousands of years. In the late 1800s, archeologists discovered a substance that they concluded was palm oil in a tomb at Abydos dating back to 3000 BCE.

Traditional use
Palm oil is traditionally used as a cooking ingredient in the tropical belt of West Africa, South East Asia and Brazil.
Healthy diet and lifestyle

Healthy eating involves focusing on the total diet and the overall food pattern. All foods can fit within a healthy diet when consumed in moderation. Simply put, a healthy diet and lifestyle is based on three elements: variation in foods and meals, a balanced energy intake and enough physical activity to prevent weight gain. A healthy diet includes lots of fruits and vegetables, a balanced carbohydrate, fat and protein intake, and avoiding a high intake of salt, refined carbohydrates, saturated fats and trans fats.

Role among the fats we consume

Palm oil has a role to play among the fats we consume because of its specific composition, and particularly to meet technological requirements of some of the foods we consume. It has contributed to the almost total disappearance of industrial trans fats, specifically in the Western European food market.


