

WHAT IS PALM OIL

Palm oil production

Palm oil consumption

Palm oil uses

FAQ

SUSTAINABILITY

Certified sustainable palm oil

Traceability

European initiatives for

sustainable palm oil

FAQ

FUNCTIONALITY

Fatty acid composition

Fat functionality in food

Benefits of using palm oil

FAQ

NUTRITION

Saturated fatty acids (SAFA)

Palm oil and health

Healthy lifestyle

FAQ

FATTY ACID COMPOSITION

Culinary oils and fats, irrespective of their origin, contain both saturated and unsaturated fatty acids. The ratio depends on the type of oil or fat. The term saturated fatty acid is often written in shorthand as SAFA. In a saturated fatty acid the carbon atoms are connected with only single bonds, which enables the fatty acids to pack closely together. Oils and fats which are rich in saturated fatty acids will have a higher melting point and a denser structure and thus will be more solid at room temperature.

Unsaturated fatty acids can be either mono-unsaturated (MUFA) or poly-unsaturated (PUFA). Unsaturated fatty acids contain one or more double bonds in their hydrocarbon chain. The double bond introduces a kink in the hydrocarbon chain, which makes it more difficult for the fatty acids to pack tightly. Oils which are rich in mono- or poly-unsaturated fatty acids are therefore often liquid at room temperature, like cooking oils.

Trans fatty acids (or TFA) are unsaturated fatty acids in which the carbon chain extends from opposite sides of the double bond. This results in a straight molecular structure with similar functional properties as SAFA.

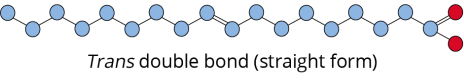
On average, palm oil has almost equal amounts of saturated and unsaturated fatty acids. The proportion of saturated fatty acids compares favourably to the saturated fatty acids content of other fats of similar application, such as coconut oil, butter and cocoa butter. Palm oil only contains very little amounts of trans fatty acids (<1 per cent of the total fat content). Because of its plant origin, variability in fatty acid composition may occur due to geographical factors, for example soil, weather and the type of oil palm tree.

Molecule structure fatty acids

Unsaturated fat (≥ 1 double bond)

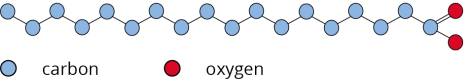


Cis double bond (bent form)



Trans double bond (straight form)

Saturated fat (no double bond)



carbon oxygen

Fatty acid content in different fats and oils



FAQ

