



LAURIFORTE™

Lauriforte™ is a lauric acid enriched, non-greasy fraction of coconut oil, versatile applications in cosmetics and foods.



Medium chain triglycerides (MCTs) in general, are known for their healthful topical and nutritional benefits.

The kernels of coconuts (*Cocos nucifera*) are an important source of a vegetable oil.

Coconut oil is colourless to pale brownish yellow oil. It is classified among the 'solid seed fats' or saturated fatty acid consisting mainly of glycerides of lauric, myristic and palmitic.

Coconut oil has the highest saponification value (253) and lowest Iodine value due to which it is classified as a non-drying oil, with a Glycerol content of 13.84%.²

Fatty acid composition of Coconut oil

Lauric acid	3.18%
Myristic acid	1.75%
Palmitic acid	7.39%
Linolenic acid	0.6%
Oleic acid	1.44%
Eicosanoic	0.4%
Cis 11 - Eicosenoic	0.1%
Docosanoic	0.2%
Cis 9 - Hexadecanoic	1%
Octanoic	7.6%
Decanoic	7.3%

Lauric acid

Lauric acid is Dodecanoic Acid represented as: $\text{CH}_3(\text{CH}_2)_{10}\text{COOH}$

It is the major medium chain fatty acid from the oil of coconut which has been recognized for the unique emollient properties that it lends to soaps and cosmetics.

However, due to poor drying and greasy nature of the coconut oil as such, it finds poor acceptability in the cosmetic industry.

High vacuum distillation of coconut oil yields various fractions based on the boiling ranges of the components. The composition of Lauriforte™ is indicated below :

	Coconut oil %	Lauriforte %
Lauric acid	41.54	66.66
Ratio of C12/C14	2.41	3.78
Ratio of C12/C16	3.51	5.46
Ratio of C12/C18	6.94	24.02

Cosmeceutical applications of Lauriforte™

Solubilizer for Cosmeceuticals

Lauriforte of coconut oil is unique in solubility characteristics of certain selective cosmeceuticals. Galanga ester (98%) and Boswellin CG which are insoluble at room temperature in coconut oil, showed improved solubility in **Lauriforte™**. With Tetrahydrocurcuminoids, the solubility improved by 150%, with Glabridin 40%, the improvement was by 25%, with Sesamin complex the improvement was by 51%, and with Lupeol 80%, the improvement was by 51.5%.

Antibacterial/Antiviral activity:

Lauric acid is converted to monolaurin in the human or animal body. Monolaurin is a monoglyceride used by human or animal to destroy lipid coated viruses.

Hair-care activity:

Lauriforte™ **prevents combing damage** to various hair types. It is a **conditioner** providing **nourishment** to the hair. It has **excellent penetration** to the hair shaft and follicles. Lauric acid triglycerides have high affinity towards hair protein. Lauric acid esters in Lauriforte™ **provide protection against hygral fatigue** of the hair. Lauric acid esters in Lauriforte™ prevent premature fall of hair through inhibition of 5-alpha reductase (alopecia androgenetica).

LAURIFORTE®

➤ **Lauric acid ester enriched** fraction (60%) of Coconut oil. Coconut oil contains only about 30-35% of Lauric acid triglycerides.

➤ **Non-greasy** fraction of Coconut oil.