

VCO Processing Technologies

Fresh-Dry Process

- A general term when VCO is obtained directly from fresh coconut meat.
- Drying of fresh comminuted kernels (ground, grated, milled) is required before extracting the VCO.

Fresh-Wet Process

- A general term when VCO is obtained from extracted coconut milk.
- Coconut milk is extracted either mechanically or manually, with or without addition of water.

Emerging Uses of VCO

- Body oil or a substitute for moisturizing lotion
- Hair conditioner
- Carrier oil for aromatherapy and massage oil
- Nutraceutical and functional food



Philippine National Standard for VCO

Property Requirements

Properties	Maximum Level
% Moisture content (w/w)	≤ 0.10
% Matter volatile at 120°C (w/w)	0.12-0.20
% Free fatty acids (expressed as lauric acid)	0.20
Peroxide value, meq/kg oil	3.00
Food additive	Not permitted

Fatty Acid Composition

Composition	Range (%)
C6:0 Caproic acid	0.1-0.7
C8:0 Caprylic acid	4.0-10.0
C10:0 Capric acid	4.08-8.0
C12:0 Lauric acid	45.1-56.0
C:14:0 Myristic acid	16.0-21.0
C16:0 Palmitic acid	7.5-10.2
C18:0 Stearic acid	2.0-5.0
C18:1 Oleic acid	5.0-10.0
C18:2 Linoleic acid	1.0-2.5

Allowable levels of contaminants

Heavy metal	Maximum Level,
Iron (Fe)	5.0
Copper (Cu)	0.4
Lead (Pb)	0.1
Arsenic (As)	0.1

FOOD PRODUCT DEVELOPMENT DIVISION

Albay Research Center
 Research Development Branch
 Philippine Coconut Authority
 Banao, Guinobatan, Albay
 E-mails: pca_arc4503@yahoo.com
 fpdd.pca@gmail.com
 0917-558-1447

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**PHILIPPINE
 COCONUT
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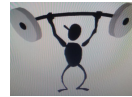
**COCONUT PROCESSING
 TECHNOLOGIES**

**VIRGIN
 COCONUT OIL
 PROCESSING**

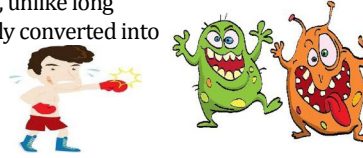


Product Description

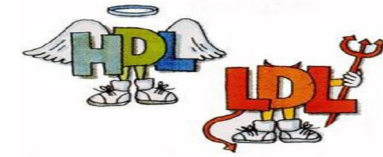
Virgin coconut oil (VCO) is the purest form of coconut oil, water white in color and has not undergone oxidation. It is the oil obtained from the fresh and mature kernel of coconut by mechanical or natural means, with or without the use of heat, without undergoing chemical refining, bleaching or deodorizing, and which does not lead to the alteration of the nature of



VCO is considered a saturated fat similar to animal sources, however, it has a unique composition of high percentage of medium chain triglycerides (MCTs). MCTs, unlike long chain triglycerides, are easily converted into energy by the liver and have been proven to increase the metabolic rate of an individual.



Fatty acid composition of VCO is predominantly lauric acid (48%). Monolaurin, derived from the lauric acid, has been known to have antimicrobial, antiviral and antifungal effects in the body.



Effect of VCO on Cholesterol

A PCA-funded study on the effects of VCO on cholesterol, conducted by UST-RCNAS in 2011, showed that High Density Lipoproteins (good cholesterol) increased in individuals taking VCO, making them less prone to having a heart attack or stroke.

Processing Technologies

