

Virgin coconut oil - the mother of all oils

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The coconut palms belong to the family Arecaceae (palm family). It is the only accepted spices in the genus coco. The term coconut can refer to the entire coconut palm, the seed or the fruit which botanically is a drupe not a nut. Coconut has been the part of people's diet and livelihoods mainly in the tropical countries of Asia, the Pacific, South and Central America and Africa for thousands of years. Every part of coconut tree and it's fruit can be either consumed by human or animals or converted into other valuable products. Fresh unopened coconuts can be stored at room temperature for up to four months depending on it's origin, freshness when purchased etc. The hexane fractions of coconut peal may contain novel anticancer compounds. Coconut water has a high level of sugar and other salts that makes it's possible to the rise in the blood stream or dextrose water. Coconut is one of the few foods that can be classified as a "superfood". It is a unique combination of fatty acids which can have profound positive effects on health. Coconut oil is prepared from coconuts by cooking the decorticated Granulated coconuts having good oil content are preferred for this purpose. Coconut oil is nature's richest source of lauric acid.

Health Benefits of Virgin Coconut Oil

Thyroid-stimulating : Research shows that coconut oil contains a medium-chain fatty acid accelerate that stimulates metabolism and gives more energy.

Lowers cholesterol : It is rich in lauric acid which protects heart by reducing total cholesterol and increase good cholesterol.

Helps with weight loss : Even though it is a fat, virgin coconut oil actually helps with weight loss! Healthy medium chain fatty acids do not circulate in the bloodstream like other fats. They are sent directly to the liver and are converted into energy. Thus the body does not store the fat in coconut oil as fat; it uses it to produce energy instead.

Helps keep diabetes in check : Virgin coconut oil does not produce an insulin spike in your bloodstream, instead it helps control blood sugar by improving the secretion of insulin.

Reduces heart disease : Studies on people in



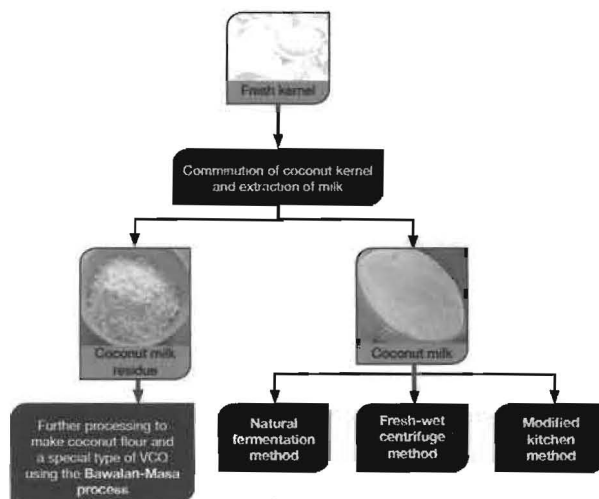
the Pacific Islands found that their total caloric intake included thirty to sixty percent from fully saturated coconut oil. These Pacific Islanders have nearly non-existent rates of cardiovascular diseases.

Gastrointestinal mal-absorption diseases: Combining Vitamin E supplements with coconut oil through the skin is a good alternative for those with gastrointestinal malabsorption diseases.

Supports the immune system : Virgin coconut oil is rich in lauric acid, a nutrient that supports the body's immune system. **Good for the skin** :

When applied externally virgin coconut oil forms a protective antibacterial layer protecting the infected body part. Coconut oil also speeds up the healing process of bruises by helping to repair damaged tissue.

Nourishing for the brain : Studies show that virgin coconut oil improves cognitive function and stalls, or even reverses, neurodegenerative diseases in their early stages.



Speeds Recovery : People in Panama drink coconut oil to protect themselves from illness as it is believed to speed recovery from sickness.

Preparation of virgin coconut oil

Virgin coconut oil is directly extracted from fresh coconut flesh and it is different between coconut oil in term of nutrient composition and method of production. The conventional ways of breaking emulsions using heat was disadvantageous from both economic and environmental perspectives. In this study, the production of virgin coconut oil from coconut milk was investigated. Boiling method was used for separation of oil. The optimum temperature required to maintain the nutrients in the oil was about 60°C. Coconut milk was extract first by pressing from both aged coconuts and also from the fresh coconuts. Then milk was boiled in order to separate the oil from coconut milk. Coconuts were broken and the meat of coconuts were grated Muslin cloth was placed over a bowl. The grated coconut was kept over the cloth so that the coconut milk dripped into the bowl. A spatula was used to push the pulp and squeeze out as much liquid as possible. Place it in a saucepan on a burner and turn the heat from medium to high. Stirr constantly, until the water is evaporated and the cream is separated from the oil. The process of boiling the liquid is continued until it reach the right state. Stirr constantly. Filter the oil from the pan by using the funnel. Transfer it to a sterilized bottle. Store it in the normal temperature.

Processing steps

Virgin Coconut oil can be prepared from both fresh and aged coconuts and their appearance is as follows;

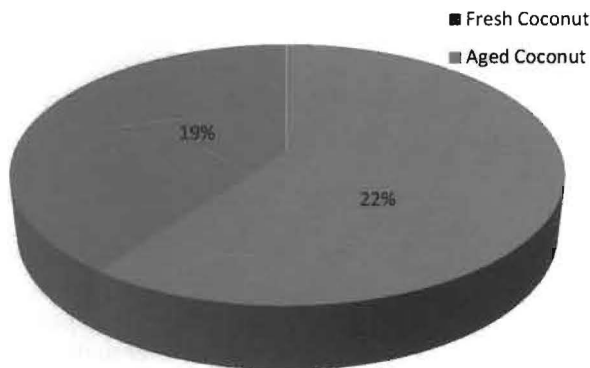
Coconut oil extraction is done by the addition of water to coconut meat and extracting the coconut milk by squeezing it in muslin cloth. This process is repeated for 2 – 3 times and the final coconut milk is used for extraction of oil.

The ratio of milk and water and its composition were listed in the table given below;

Results of Milking Coconut

Trail	Amount (g)	Milking Number	Coconut Milk Ex-tracted (ml)	Oil Ex-tracted (ml)	% Milk Increase when milked Twice
Fresh Coconut	200	1 st	116	33	19
		2 nd	24		
Aged Coconut	200	1 st	132	45	22
		2 nd	25		

Increase in milk (Twice %)



From the table and figure, it is found that, first time milking yields more compared to the second time milking and aged coconut provide more amount of milk than the fresh white coconut.

The organoleptic evaluation of virgin coconut oil was done by comparing with the fresh coconut oil available in the market in which additives were added. In order to evaluate the taste, colour, flavor etc. of these oils, tapioca chips were made by using this oil. Organoleptic evaluation of the tapioca chips were also done and it concluded that there was not much difference between these oils. Regarding flavor, the product from virgin oil based, brought optimum acceptability among the evaluators. These evaluations were done among the students by using the score card which was given to each student.

Future recommendations

Awareness creation among the women to prepare virgin coconut oil easily in a short period of time under low cost method is most essential. Awareness creation also need to be done on the uses and nutritional levels of VCO in the community. Virgin Coconut Oil is very much useful and so it can be produced as a home scale product by adopting simple method by using simple equipments available at house hold level. ■