



African Journal of Food Science and Technology (ISSN: 2141-5455)  
Vol. 12(3) pp.01, April, 2021 Available online  
@<https://www.interestjournals.org/food-science-technology.html>  
DOI: 10.14303/ajfst.2021.016  
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### *Short Communication*

# Coconut milk and oil: Protein functionality

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Coconut palm tree is an economic plant tamed in equatorial countries, primarily in the Asian part. Well-known productions of coconut palm include coconut oil, coconut milk, coconut water and coconut meat. Coconut milk is normally manufactured from framework coconut meat (kernel). Coconut milk is used as a main ingredient for various cookery such desserts and curries. Basically, coconut milk is an oil-in-water emulsion, stabilized by some proteins existent in the liquid phase. Additionally, some stabilizers have been mixed to guarantee the coconut milk stability. However, virgin coconut oil (VCO) can be obtained when the destabilization of emulsion in coconut milk brings about the collapse of the emulsion Patil and Benjakul (2019). VCO is treated to be structural oil and is rich in medium chain fatty an acid with health asset. VCO is very different from the other vegetable oils because of its high medium chain fatty acids content.

### **Coconut proteins**

Aside from oil, coconuts also carry proteins with reasonably well-balanced amino acid profile in term of nutritive value. To extract coconut proteins, protein separated from coconut skim milk were processed by isoelectric precipitation, and heat coagulation, ultrafiltration, salt precipitation.

### **Coconut milk**

Coconut milk can be made at home from frame meat by compressing with hand, whereas industrial employs the screw press or hydraulic to pull out the milk. Basically, coconut milk is an oil-in-water emulsion, in which constant phase is water and oil is distributed phase. The mixture of coconut milk is mostly depending on that of the coconut meat used for extraction Ariyaprakai et al. (2013). The ratio of extraction and mixture of coconut milk from coconut meat are governed by procedure parameters such as the temperature of added water and the pressing condition. Coconut milk extraction from a fresh-cut coconut is the most essential step in wet or liquid processing. The wet process is a likely secondary method to the traditional mechanical pressing of copra to

manufacture the oil. In this case, the collapse of emulsion is important for the effective improvement of both proteins.

### **Virgin coconut oil**

VCO has the natural characteristics like coconut smell and taste, So it is the purest form of the coconut oil. VCO gets solidify at low temperature when it turns into liquid phase it becomes colorless like water. VCO shows good digestibleness mainly due to medium chain fatty acids. Medium chain fatty acids are burnt up instantly after consumption and therefore the body uses it immediately to make energy, instead of storing it as body fat. Lauric acid is changed into a very precious compound known as monolaurin, which has antibacterial and antiviral properties Arunima and Rajamohan (2014). VCO is quickly increasing popularity because of high stability and several health advantages. VCO also have an antioxidant property that helps the immune system.

Therefore, intake of VCO may help defend the body from ill health. VCO does not go through any hydrolytic and atmospheric oxidation as confirmed by its low peroxide value and also low free fatty acid content.

### **REFERENCES**

- Ariyaprakai S, Limpachoti T, Pradipasena, P (2013). Interfacial and emulsifying properties of sucrose ester in coconut milk emulsions in comparison with Tween. *Food Hydrocolloids* 30(1): 358–67.
- Arunima S, Rajamohan T (2014). Influence of virgin coconut oil-enriched diet on the transcriptional regulation of fatty acid synthesis and oxidation in rats- a comparative study. *British Journal of Nutrition* 111(10): 1782–90.
- Patil U, Benjakul S (2019). Coconut Milk and Coconut Oil: Their Manufacture Associated with Protein Functionality. *J Food Sci.* 83(8): 2019-2027.