

1. Scope

This Standard applies for Virgin Coconut Oil (VCO).

2. References

- SNI (Indonesia National Standard) 7381:2008
- PNS (Philippine National Standard)/BAFPS 22:2007: ICS 67.200.10
- MS (Malaysian Standard) 2043:2007
- TCS (Thailand Coconut Community Standard) 670-2004
- APCC Standard for Virgin Coconut Oil

3. Definition

3.1. Virgin Coconut Oil

Virgin coconut oil (VCO) is obtained from fresh and mature kernel (12 months old from pollination) of the coconut (*Cocos nucifera* L.) by mechanical or natural means with or without the application of heat, which does not lead to alteration of the nature of the oil. VCO has not undergone chemical refining, bleaching or deodorizing. It



can be consumed in its natural state without the need for further processing. Virgin coconut oil consists mainly of medium chain tryglycerides, which are resistant to peroxidation. The fatty acids in virgin coconut oil are distinct from animal fats which contain mainly of long chain saturated fatty acids. Virgin coconut oil is colorless, free of sediment with natural fresh coconut scent. It is free from rancid odor or taste.

4. Essential Composition and Quality Factors of Virgin Coconut Oil

| Parameter | |
|---------------------------------------|-----------------|
| Moisture (%) | Max 0.1 |
| Matters Volatile at 1200 C (%) | Max 0.2 |
| Free Fatty Acid (%) | Max 0.2 |
| Peroxide Value meq/kg | Max 3 |
| Relative density | 0.915 – 0.920 |
| Refractive index at 400 C | 1.4480 – 1.4492 |
| Insoluble impurities per cent by mass | Max 0.05 |
| Saponification Value | 250 – 260 min |
| Iodine Value | 4.1 -11 |
| Unsaponifiable matter % by mass, max | 0.2 - 0.5 |
| Specific gravity at 30 deg./30 deg. C | 0.915 – 0.920 |
| Polenske Value, min | 13 |
| Total Plate Count | < 0.5 |
| Color | Water clean |

| | |
|----------------|--|
| Odor and Taste | Natural fresh coconut scent, free of sediment, free from rancid odor and taste |
|----------------|--|

5. Food Additives

None permitted

6. Contaminants

| Parameter | Mg/kg |
|--------------|---------|
| Iron (Fe) | Max 5 |
| Copper (Cu) | Max 0.4 |
| Lead (Pb) | Max 0.1 |
| Arsenic (As) | Max 0.1 |

7. Gas Liquid Chromatography (GLC) ranges of Fatty Acid Component

| Common name | Composition | (%) |
|---------------|-------------|-------------|
| Caproic acid | C 6:0 | 0.10 – 0.95 |
| Caprylic acid | C 8:0 | 4 – 10 |



| | | |
|---------------|--------|------------|
| Capric acid | C 10:0 | 4 – 8 |
| Lauric acid | C 12:0 | 45 – 56 |
| Myristic acid | C 14:0 | 16 – 21 |
| Palmitic acid | C 16:0 | 7.5 – 10.2 |
| Stearic acid | C 18:0 | 2 – 4 |
| Oleic acid | C 18:1 | 4.5 - 10 |
| Linoleic acid | C 18:2 | 0.7 – 2.5 |

8. Hygiene

It is recommended that the product covered by the provisions of this standard shall be in accordance with the appropriate sections of the General Principles of Food Hygiene recommended by the CODEX Alimentarius Commission (CAC/RCP 1-1969, Rev. 4 - 2003).

9. Labelling and Packaging

The name of the food on the label shall be “Virgin Coconut Oil”. The provisions of the General Standard for the labelling of Prepackaged Foods (CODEX STAN 1 – 1985, Rev. 6 - 2008) shall apply.

10. Methods of Analysis and Sampling

Based on Codex Alimentarius (Volume 13).



For more information contact: Ministry of Agriculture, Private Mail, Raiwaqa.
 Phone: (+679) 338 4233 Fax (+679) 338 7157 / Website: www.agriculture.gov.fj
 Facebook: Ministry of Agriculture Fiji Twitter: Fiji Agriculture
 Email: agrihelp@govnet.gov.fj



Ministry of Agriculture

STANDARD FOR VIRGIN COCONUT OIL



Farmers Leaflet 2015