



Airport & Switi Road Junction  
Tagabe.  
Port Vila, Vanuatu  
Phone: 25978  
Web: [www.vbs.gov.vu](http://www.vbs.gov.vu)



# OIL QUALITY TEST

Phone: 25978  
Email: [vbs@vanuatu.gov.vu](mailto:vbs@vanuatu.gov.vu)

# Oil Quality Test

## 1. Moisture Test

This test measures the amount of water in coconut oil. Oil with a high water content may be contaminated or have a limited shelf life. After extracting coconut oil, store it in a tightly sealed container to avoid contact with water.

## 2. Refractive Index

The test is an indicator for the purity of the oil. This is because when oil is left in the open air for an extended period of time, it can age and the test results may vary. After extracting coconut oil, it must not be left in open air.

- Standard refractive index for VCO is 1.447 - 1.459.



## 3. Acid Value

- To test for the oxidation in coconut oil. It also measures the amount of fatty acid present in the oil.
- Standard value is 4.

## 4. Free Fatty Acid (FFA)

- Test for unknown materials that can reduce the quality by producing off-flavor.
- Standard for FFA
  - Oleic Acid: 450 - 6.00%

## 5. Peroxide Value Test

- To measure the amount of oxygen that can be bonded to oil as peroxide, which are formed when unsaturated fatty acid reacts with oxygen and measure how fresh the oil.
- Standard for Virgin Coconut Oil is < 3 meq/kg.

## 6. Specific Gravity

This measures the density of coconut oil and compares it with the density of water. In other words, it portrays whether something is floating or sinking in water.

## 7. Microbial Test

Test is done to measure the number of microorganisms which can be found in food and cause food-borne illness. Make sure to practice simple hygiene in preparation production areas.

Acceptance level for microbiological contaminants for VCO must be < 10cfu/ml.

## 8. pH Test

This measures the level of acidity / basicity in the oil.

