

# Quality control and product R&D of virgin coconut oil

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**Abstract:** Virgin coconut oil (VCO) is a special functional edible oil which receives much attention recent years. VCO has been known as the "pharmacy in a bottle" abroad, and also has known as the "Internet celebrity product" in China. As the market has grown very quickly, there are many concerns about the quality and also the innovative products of VCO. The main production approach of coconut oil is the drying method, which produce crude coconut oil or refined coconut oil. VCO has been developed rapidly in the past 30 years, and has various processing methods, including dry and wet processing. During the wet process, the demulsification of coconut milk is a key factor for the preparation of high quality VCO. We have researched the effects of different pre-treatment, different technique, the moisture content of VCO, and the coconut seed coat content on the quality and storage stability of VCO. Critical quality control points of wet processing method include the following aspects: keep the raw material fresh, coconut testa should be cut clean, blanching of white coconut meat, the control of filtration or clarification process and water content, *et al.* The volatile components are also an important index to identify the quality of VCO, and VCO mainly contains  $\delta$ -octalactone, ethyl octanoate,  $\delta$ -hexalactone, DL-limonene, ethyl decanoate, dodecanoic acid, tetradecanoic acid, and  $\delta$ -decanolide, *etc.* In this work, the industrial process of VCO using high speed centrifugation and other novel methods for the processing and applications of VCO were introduced in detail, and their future development prospect were proposed.