DETERMINATION OF CONTAMINATION PATHWAYS OF VIRGIN COCONUT OIL

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ABSTRACT

Virgin Coconut oil (VCO) is a value added edible grade product of coconut. Due to the auspicious demand in market for the VCO, organizations like Asian Pacific Coconut Community, Codex Alimentarius has designed quality control parameters in physical, chemical and microbiological aspects. If the packaging is made from inappropriate materials there is potential for it to make food unsafe or unsuitable. According to storage facilities, external environmental factors such as moisture content, personnel hygiene their sanitation may be change. Microbiological and aseptic testing play a significant role in such quality assurance. It is important to identify contamination pathways of virgin coconut oil and packaging food grade glass bottles.

For achieve these objective required microbial analysis done for both VCO and packaging material. Required microbial tests for VCO are total plate count, *Yeast* and mould count, *Salmonella count, Escherichia coli* count and testing for *Staphylococcus aureus.* Three treatments done for both VCO and packaging material. Treatments for VCO were just after expelling VCO, from storage tanks and after filtration. Data was analyzed by using minitab 16 statistical software. According to one way ANOVA technique realized that there is no effect from treatment to microbial growth in VCO. Required microbial tests for packaging materials are total plate count, testing for *Coliform* and testing for *Escherichia coli.*Treatments for packaging materials(food grade glass bottles) were just after takeout from sealing, before washing and after washing. According to one way ANOVA technique realized that there is no effect from treatment to microbial growth in packaging materials and there are minimum growth of microorganism in containers.

Key words: Contamination, Microbial analysis, Packaging material, Quality, Virgin Coconut Oil