COMPARATIVE EFFECT ON YIELD, FREE FATTY ACID AND PHYTOCHEMICAL CONSTITUENTS OF VIRGIN COCONUT OIL PRODUCED USING CULTURES OF FRUCTOPHILIC STRAINS OF LACTIC ACID BACTERIA

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The demand for virgin coconut oil is increasing as consumers are gaining knowledge of its nutritional, health and cosmetic benefits ,but food processors are faced with challenges of producing wholesome product at a reduced cost with little or no additives. In this study, coconut milk from edible coconut meats was fermented within 48 hours with cultures of *Lactobacillus plantarum*, *Leuconosotoc mesenteroides* and *Enterococcus* species respectively; the oil yield, quantitative and qualitative estimation of free fatty acid and phytochemicals was carried out using standard analytical methods. The result obtained indicate that 30-45% oil yield was observed compared to the control, the composition of free fatty acid was significantly(P>0-05) lower compared to the control, alkaloids, flavonoids, saponins and tannins were absent in all the coconut oil produced including the control while anthraquinones, terpenoids and steroids were present in all the oil produced, the level of steroids in the control was higher than the LAB fermented coconut oil .This study shows that coconut oil produced using LAB cultures has profound health benefits and can be used as a functional food compared to the control and equally reduces the cost of production.