ABSTRACT

Virgin coconut oil (VCO), prepared by two methods viz. hot and cold extraction process, was analysed for various quality parameters. There was a marginal difference in iodine value, saponification value, refractive index, fatty acid profile, specific gravity and moisture content among hot extracted virgin coconut oil (HEVCO), cold extracted virgin coconut oil (CEVCO) and commercial coconut oil (CCO) samples. Further total polyphenol, antioxidant activity, tocopherol, phytosterol, monoglycerides and diglyceride content in both HEVCO and CEVCO samples are significantly higher than CCO samples. VCO obtained from hot extraction process was found to be better in comparison to CEVCO and CCO samples in terms of bioactive components. In addition to this, invivo studies on Wistar albino rats proved HEVCO samples at the level of 10% better in reducing hyperlipidemia as well as diabetes. The blends of virgin coconut oil-refined safflower oil (VCO-RSAFF) and virgin coconut oil-refined soybean oil (VCO-RSOY) was found to be stable upto 12 months of storage in different flexible [Linear Low Density Polyethylene (LLDPE), Low Density Polyethylene (LDPE), Metallised polyester (MP)] and rigid packaging systems [Polyethylene tetrathalate (PET), High Density Polyethylene (HDPE) and Amber High Density Polyethylene (amber HDPE bottle)] at room temperature (15˚C-35˚C) and accelerated condition (37˚C). VCO had shown good thermal stability after 8hrs of continuous frying with soaked bengal gram dhal, oil remained stable and acceptable. Virgin coconut meal (VCM), the residue which remains after extraction of oil from coconut, was utilized for making different traditional Indian sweets as well as bakery products. In the present study, VCM was used to prepare ladoo and burfi at the level of 23% and 20%, respectively. These traditional Indian sweets were found to be stable upto 4 months of storage in Metallised polyester (MP) pouches. Two bakery products viz biscuits and cake were also developed incorporating VCM. Both the products were highly liked by sensory panelists and remain stable and acceptable for 6 months and 10 days, respectively, at ambient temperature.