



DEVELOPMENT OF “SPICY OIL” WITH ENHANCED HEALTH BENEFITS, TO SUIT SRI LANKAN CUISINE

Fernando H.N., Amarasinghe A.E., Nimalsiri H.K.V.S., Galappaththi S.P.L.*, Dahanayake U.M.W.,

Wijesooriya H.G.E., Piyumal K.A.A., Rajapaksa K.D.S.C.N. and Shashikala P.M.S.

Department of Food Science and Technology, Faculty of Applied Sciences University of Sri Jayewardenepura,

sapthalapl@gmail.com

Sri Lanka is a tropical country where almost all the spices are grown rich and naturally. Coconut oil is another commodity which could not be neglected in cooking. Spicy oil is an edible oil product which incorporates flavor and aroma compounds of commonly used six spices (Chillie, Garlic, Onion, Clove, Cinnamon and Cardamom) in Sri Lanka, to the Refined, Bleached, and Deodorized coconut oil or Virgin coconut oil. Solvent extraction method was used in extracting flavor and aroma compounds. The extracted compounds from the six different spices and the coconut oil were mixed together to the most preferred and accepted ratio by 32 members of Semi –trained sensory panel in order to make a composite spice and cooking oil mixture. The shelf life of the product was determined by the tests of Moisture Content (MC - %) at 105 0C, Peroxide Value (PV - meq/kg), Free Fatty Acid (FFA - mg/g 0.1N KOH), and Microbial tests E.coli; MPN/ml, Coliform Count (MPN/ml), Yeast and Mould Count; (CFU/ml). Saponification Value (SV mg/g 0.1N KOH), Iodine value (IV), Specific gravity (SG) at 300C/300C, Refractive index (RI) at 40 0C and Relative percentages of fatty acids profile (Gas Chromatography method) were determined to confirm whether the specifications of the spicy oil complies with SLS 32:2002 standard (specifications for coconut oil). Parameter values were MC 0.24, PV 0.9221, FFA 0.2799, SV 263, IV 11.7981, SG 0.918, RI 1.4554. E. coli & Coliform were not detected. Yeast and Mould count increased up to <4 within 4 months of time period. Relative percentages of fatty acids profile; C6:0 - 4.249 %, C8:0 - 1.791 %, C10:0 - 4.793 %, C12:0 - 49.793 %, C14:0 - 19.006 %, C16:0 - 8.192 %, C18:2 - 0.911 %, C18:1 - 6.656%, C18:0 - 4.606 % .Laboratory experimented shelf life of spicy oil was about 6 months according to the determined physical, chemical and sensory properties. The Spicy oil was highly preferred by a semi trained sensory panel.

Keywords: *Cooking oil, Spices, Solvent Extraction, Sri Lankan Cuisine, Shelf Life*