

Determination of the fatty acid composition of the liver oil from sting ray fish (*Dasyatis sephen*) captured from west coast of Jaffna peninsula in Sri Lanka

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Liver of cartilaginous chondrichthian fish comprises of poly-unsaturated fatty acids. The extraction of oil from liver of such fish remains affordable. The current study was conducted to analyse the proximate lipid profile and the chemistry of the *Dasyatis sephen* liver oil. Gas-Liquid Chromatography (GLC) was utilized to determine the fatty acid profiles. The lipid level of *Dasyatis sephen* liver oil was found to be 69.54 % (w/w) which was higher than the same from the *Dasyatis pastinaca* (58.27%) and *Dasyatis violacea* (57.33%). The total saturated fatty acid percentage was 44.2 among which palmitic acid (C16) was predominant (35.0%). Notably, unsaturated fatty acid levels of eicosapentaenoic acid (20:5n-3) and docosahexaenoic acid (22:6n-3) were at 0.5 % and 0.6 % respectively. Physio-chemical properties like moisture content, colour, specific gravity, peroxide value, and carboxylic acid composition were below the tolerable commonplace. Results show that *Dasyatis sephen* liver which is locally-available and currently wasted resource, has the potential to be used in pharmaceutical and nutraceutical industries.

Keywords: fish liver oil, saturated fatty acids, unsaturated fatty acids