USING COLD PRESSING TO PRODUCE HIGH QUALITY FISH OIL FROM INDUSTRIAL SALMON WASTE COMPONENTS

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Abstract
The main objective of this research was to determine the amount of oil fish were extracted from fish west resulted from butchering, cutting and splitting processes before salmon smoking by using cold pressing `methods. The amount and the characteristics of extracted of oil were tested at Regional Centre for food and feed the USDA Agricultural Research Center laboratory. The samples were used from fresh Salmon waste about 1000g from each of the (head, skin, viscera, backbone, frames and cuts off). This waste recorded more than 22% of the total mass from salmon fish with used modern extract machine. in this experiment the results revealed the fresh salmon waste have more than 16 % of oil fish per one kg of salmon waste. The oil weight from Salmon waste for (head, skin, viscera, backbone, frames and cuts off). was increased with pressing time increase as well as oil productivity increased. The optimum conditions at pressing time was 200 min, for all salmon waste components . Oil productivity fluctuated according to waste sources was 190, 210, 86, 188, 178 and 90 g.oil/1000 g. by head, skin, off cuts , terming, , viscera , and backbone frames, Salmon by-products, oil productivity was ranged between 8.60 to 21.00% at constant pressure. High contents of functional EPA (20:5 ω 3) and DHA (22:6 ω 3) for oil fish

Key words: salmon, waste extract, efficiency, yield, smoking, fish oil, cold pressing, wet rendering.



Biography

Tarek FOUDA has completed his B.Sc 1986, M.Sc 1994 PhD 1998 and full professor from 2009 . He is a head of Agricultural Engineering Department, Faculty of Agriculture Tanta, Egypt. He has published more than 78 papers in reputed journals. Worked in developing machine, food industries process, using sound and image analyses in agricultural, environmental control and waste mangment, minimize cost and energy. Consultant and member for a lot of projectes and peer reviewer in National Authority for Quality Assurance and Accreditation of Education NAQAAE. Addition to Vice President of the TUEF2016 Third International Environmental Forum, Tanta University, Egypt, July 12-14, 2016 and President of the International 17th Conference of Misr Society of Agricultural Engineering. 27-28 Oct. 2010. Visiting Scientist, as guest research in Kyoto university, Japan also visiting professor to University of Sterling, United Kingdom

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