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Effect of variable pulse light treatment on Yellowfin tuna (Thunnus albacares) steaks

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E' valuation of the effectiveness of pulsed light on yellow fin tuna steaks packed in different packing materials viz. 12µ polyester I_{300} gauge low-density polyethylene laminate, 300 gauge polyethylene and 300 gauge cast polypropylene pouches of size 14 x 18 cm were carried out using a Xenon pulse light preservation machine RC-847. Pulse treatment was done for 12 sec with energy of 23.35, 22.34 and 22.76 J/cm² in yellow fin tuna steaks packed in 12µ polyester / 300 gauge low-density polyethylene and 300 gauge cast polypropylene respectively. Total plate count got reduced to 45, 54 and 71 % respectively in the above packaging materials when compared with the control samples without pulse treatment. Cast polypropylene was found to give maximum bacterial reduction and was selected for treating tuna steaks. Further time variations were standardized in yellow fin tuna steaks packed in cast polypropylene and it was seen that the energy output was 5.64, 9.32, 11.5, 15.12 and 20.24 J/cm² for 2, 4, 6, 8 and 10 sec of pulse treatment respectively. The corresponding bacterial reduction was found to be 0.85, 1.6, 1.83, 2.33, 2.51 log cfu/g. Pulse treatment for 6 sec with an energy output of 11.5 J/cm² was found to be acceptable microbiologically and with regard to sensory attributes.

Biography

T.R. Ananthanarayanan has completed his M.Sc. in Food Science and Technology from University of Calicut. Presently working as Senior Research Fellow and pursuing Ph.D. in Pulsed light technology under the guidance of Dr. T.K. Srinivasa Gopal, Director, Central Institute of Fisheries Technology, Cochin 29.

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Studies on preparation of oat and wheat flour composite cookies, its effect on physicochemical and sensory parameters

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O at is rich source of dietary fiber after barley. More importantly oats are highly soluble fiber specifically β -glucan, which reduces blood cholesterol level by increasing the excretion of bile in the body. The studies were designed with the objective of standardizing the process of preparation of cookies using different levels of oat flour and its effect on physicochemical and sensory parameters. Oat flour cookies were prepared using blends of wheat flour containing graded levels (0-100%) of oat flour and baked at 1750C for 15min. The cookies were analyzed for their physico-chemical and sensory parameters. The results showed that the replacement of oat flour upto 80 and 100% found to be most acceptable to obtain the cookies with improved nutritional and sensory qualities as compare to control sample. The physical properties such as top grain (most) and spread factor (57.23 and 58.53) were most desirable in oat cookies moreover weight and thickness of cookies decreased progressively from (10.83gm-10.73gm and 0.76-0.75cm respectively) with increasing level of oat flour. The chemical properties moisture, ash, carbohydrate decreased and protein, fat and fiber content increased with the addition of with the addition of oat flour. The oat flour can be used successfully in preparation of soluble fiber rich cookies at the replacement of levels of 20 and 100% wheat flour.

Biography

Asmita Jadhav is research student worked under the guidance of associate professor Dr D M Shere dept of food science and technology MKV Parbhani, he has publish many research article in renowned journals.

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