Table 1. VNutritional composition

Sample	Moisture (%)	Protein (%)	Ash (%)	Fat (%)	Carbohydrate (%)
Meat	95.754	2.189	2.103	0.021	0.0
Body fluid	96.452	1.048	2.432	0.019	0.0

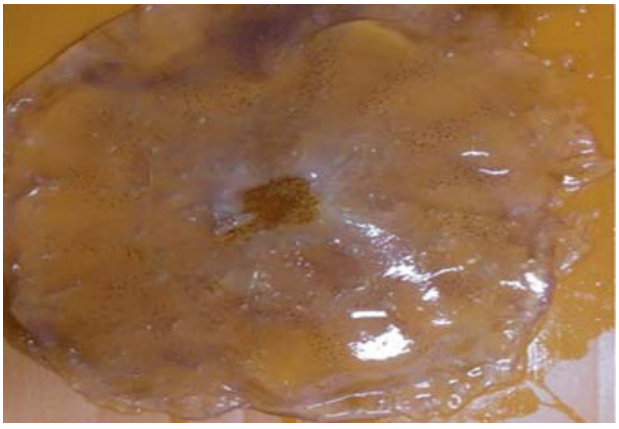

Figure 1. Jellyfish

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Electron Beam Irradiated Tilapia Fish Chunk: Quality and Shelf Life under Chilled Storage

Jeyakumari A.[1]*, Narasimha Murthy L.[1], Visnuvinayagam S.[2], Rawat K.P.[3] and Shaikh Abdul Khader[3]

[1]Mumbai Research Centre of ICAR-CIFT, Vashi, Navi Mumbai – 400 703

[2]ICAR- Central Institute of Fisheries Technology, Matsyapuri-P.O., Kochi-29

[3]Electron beam processing section, IRAD, BARC,BRIT/BARC complex, Navi Mumbai400 703

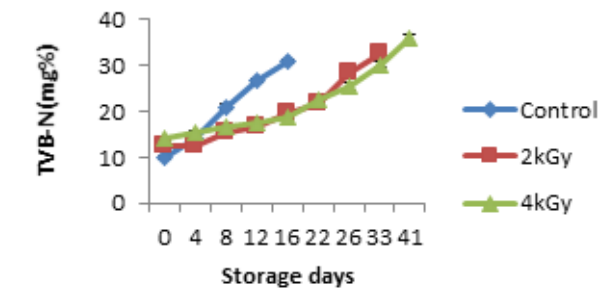
**Corresponding author : jeya131@gmail.com*

Fish is a highly perishable product, and the freshness of fish is an important factor that determines its commercial value and potential for export.Nowadays, consumers look for high quality and convenient food products with natural flavor, fresh appearance and nutrient's richness which stimulate a major research issue to develop and implement alternative technology such as minimal processing. Hence, a minimal processing involving heat and ionizing radiations has gained attention as an ideal technique to improve the shelf-life and preserve the food's nutrient value. Electron Beam Irradiation (EBI) is a non thermal processing technique, recently gaining much attention by food processor.The advan-

tage is that the electronbeam irradiation can be applied in a bidirectional manner in which the irradiation can come into contact with the food product from both top and bottom of the sample which results in reduction of microorganisms on food product. Further, the time required for the EBI treatment is very short.

Freshwater aquaculture sector has been found to have are markable growth in the past few years with more and more emerging freshwater species. Among the freshwater fishes, tilapia (*Oreochromis niloticus*) is one of the most traded food fishes in the domestic as well as export market. In the present study, the effects of electron beam irradiation on the quality of tilapia fish chunk were studied. Fresh tilapia (*Oreochromis niloticus*) were purchased from retail fish market at Vashi, Navi Mumbai and brought to laboratory in iced condition. Fish were cleaned with potable water, chunks (3-4cm thickness) were made and vacuum packed. Samples were divided for 3 treatments viz, first as control, second and third lot was given treatment of 2.0 kGy, 4.0 kGy dose of electron beam irradiation, respectively. Electron beam irradiation of fish chunks were done by a linear EB RF accelerator (Energy 5 MeV, beam power 40kW, EB tech., BRIT, Mumbai). All the samples were kept in chiller (2°C) for further studies

Biochemical parameters including proximate composition, pH, total volatile base nitrogen (TVB-N), peroxide value (PV) and thiobarbituric acid (TBA) value were analyzed. Results showed an increasing trend in pH, TVB-N, PV, TBA values during storage. TBARS values were within the acceptable limit in all the samples during storage. Peroxide value of control was within limit during storage. However, PV has crossed the acceptable limit on 26th day for 2.0 kGy and 4.0 kGy irradiated fish chunks. It was observed that TVB-N value was lower in irradiated fish chunk than control. TVB-N value of control had 30.8 mg% on 16th day of storage. However, 2.0 kGy and, 4.0 kGy irradiated sample reached the maximum acceptability level on 30th day (32.50 mg%) and, 41st day (35.8 mg%), respectively (Fig.1). Total plate count was lower in irradiated sample than control (Fig.2). There is a significant ($p<0.05$) reduction in pseudomonas and *Brochothrix thermosphacta* count in the irradiated sample. Based on the microbial and sensory analysis, control had a shelf life up to 16thday. However, electron beam irradiated fish chunks had an extended shelf life of 33-41days with respect to dose level .



TEXTURAL AND FUNCTIONAL MODIFICATION OF FISH MINCE USING HIGH PRESSURE PROCESSING

Sarika K.*, Bindu J. and Satyen Kumar Panda

ICAR- Central Institute of Fisheries Technology, Matsyapuri-P.O., Kochi-29

**Corresponding author : sarikacift@gmail.com*

Changing life style and the awareness about the nutritious and healthy diet has led to the necessity of bringing more fresh and natural ready to eat foods in the market. The demand for