

Preparation of chunk from dried shark fish (*Scoliodonlaticaudus*)

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Abstract:

Shark meat increasing popularity in both domestic and international market, sharks are being increasingly captured in marine coast of Gujarat. Preparation of chunk from dried shark for increasing demand of dried fish

Keywords —Dried shark, Chunk, preservation, *Scoliodonlaticaudus*.

I. INTRODUCTION

Drying is least expensive and oldest known method of fish preservation. Drying under controlled condition is called dehydration. They are less costly to produce, needs limited processing equipment and storage area required and its distribution cost are minimum compared to other processing method.

During drying the moisture content and water activity, is reduced and hence microorganism cannot grow and multiply to spoil the fish. This will help in preserving the fish for a long time. Lowering the water activity will also influence the chemical and enzymatic change in food. It can be seen that microbial growth is completely arrested below a water activity level of 0.6. Lipid oxidation in fact increases at very low water activity. Some factor which affected on drying is air velocity, temperature, product surface area, relative humidity, and product thickness.

Global demand for sharks and rays derived products [1].Sharks possess various components in their body which can be useful in processing, out of which shark skin is taken as an important part of its

various properties and its usefulness in various industries [2].

The common method is by utilizing the atmospheric conditions like temperature, humidity, and air flow that is traditional sun drying. Sun drying depends on natural weather condition since the fish is dried by heat from the sun and air current carries the water away. most hygienic method for sun drying is rack drying as it ensures circulation of air from both top and bottom and contamination of the product with sand or dust is almost completely avoided and so, the quality product is assured.

Year	Production (in tonne)
2013	33,982
2016	23,002
2018	21,154

Source: [3]

2. MATERIALS AND METHODS

The raw material was bought from fish landing centre. Fish received for drying were medium size. Whole fish were kept in ice until processed. Then it was washed and cleaned to remove all the debris and dirt material. After weighing, the raw material

was dressed by removing scale, fins, head, and skin. Then it was weighed in digital balance and salt was applied on fillets and kept for 13-15 hours. After that the salted fish were properly washed to remove excess salt and waste and weighed again. The fish were kept in sun for drying on plastic tray for 1 day and then kept in covered basket. The process was repeated for 3 days. After completion of drying, the fish were weighed and packaging was done by using sealing machine and hair dryer. After packaging, labelling was done.

Table.1 Physical parameter and yield

Physical parameter:		
Fish	Length of shark fish	
	Total length	Standard length
1	48cm	36cm
2	44cm	34cm
3	46cm	36cm
4	42cm	33cm
5	45cm	35cm
Yield calculation		
	Fish	Weight (g)
	Whole fish	970
	Dressed fish	455
	Weight after washing of salted fish	385
	Weight after drying (1 day)	236
	Weight after drying (2 day)	215
	Weight after drying (3 day)	182

Table 2. Chemical composition

Component	Before drying (%)	After drying (%)
Moisture	78.2	18

Table 3. Meteorological data for drying:

		9.30 am	10.30 am	11.30 am	12.30 pm	1.30 pm	2.30 pm	3.30 pm	4.30 pm	5.30 pm
First day	Temp. (°C)	30	30.5	31.6	32.2	32.7	32.7	32.2	32.2	31.1
	Humidity (%)	25	25	26	27	27	26	26	35	40
	Wind (mph)	4	5	5	5	5	5	5	6	6
Second day	Temp. (°C)	30.5	31.1	31.6	32.2	32.7	32.7	32.2	32.2	31.1
	Humidity (%)	25	25	26	27	27	26	26	35	40
	Wind (mph)	4	5	5	5	5	5	5	6	6
Third day	Temp. (°C)	30.6	31.1	32.6	32.6	32.7	32.7	32.2	31.2	31.1
	Humidity (%)	25	25	26	27	27	26	26	35	40
	Wind (mph)	4	5	5	5	5	5	5	6	6

3. PROCEDURE:

- Fresh shark fish brought from the veraval fish landing centre.
- It was then washed through fresh water to removed dirt, slime etc.
- After weighing total raw material was marinated by salt for 24 hours.
- After that place shark fish were taken for sun drying on rack for 3 to 4 day
- Collected the dry shark and take a weight and moisture level.
- Prepared 0.9 cm to 1cm of shark chunk from dried shark.

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