



RESEARCH ARTICLE.....

Preparation of dried gold spotted anchovy (*Coilia dussumieri*)

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ABSTRACT..... A method of drying gold spotted anchovy (*Coilia dussumieri*) was developed. The physical characteristics and proximate composition of fresh fish and dried fish has been studied. The environmental parameters during the drying of fish was also been evaluated. It is highly rich in protein, which is very important for human consumption. Good market demand of packaging of dried gold spotted anchovy as compared to local dried product available in market.

KEY WORDS..... *Coilia dussumieri*, Gold spotted anchovy, Drying

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INTRODUCTION.....

Coilia dussumieri (Valenciennes, 1848) commonly called as gold spotted anchovy, constitutes a considerable fishery in the northern part of both the west and east coasts of India (Kathirvelpandian, 2013). *Coilia dussumieri* constitutes an important fishery in the states of Gujarat and Maharashtra on the west coast of India with 37,329 tons, contributing about 3.6 per cent of total clupeid landings and 2.7 per cent of total landings of this region. The species is caught mainly in trawl nets (56%) and bag nets (30%) (CMFRI, 2012). Most of the anchovy is consumed as fresh Fish and the rest is processed into Fishmeal and oil (FAO, 1995). Consumption of Gold spotted anchovy is, therefore, limited to its fishing season because lack of alternative processing methods. Preservation of gold spotted anchovy by freezing in Gujarat is not economical. Locally, drying and salting is used as an alternative way of preservation to allow consumption of anchovy during the off-season.

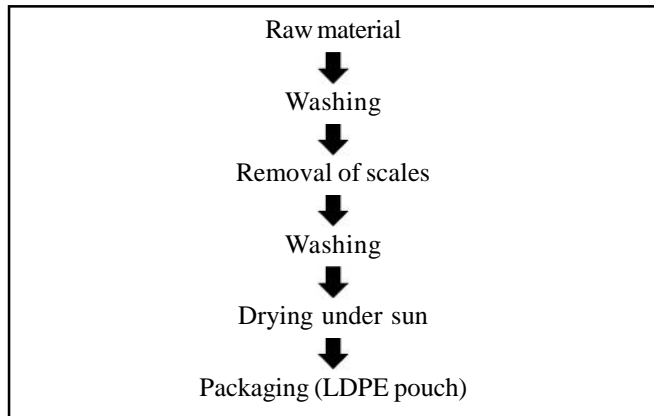
Gold spotted anchovy are rich in protein, vitamins and minerals that help in maintaining good health. It contains calcium, iron, magnesium, phosphorus, potassium, sodium and zinc. Anchovies are a good source of vitamins such as thiamin, riboflavin, niacin, vitamin C, vitamin B12, vitamin B6, vitamin A, vitamin E and vitamin K. It also contains fatty acids and cholesterol (Venugopal, 1995).

RESEARCH METHODS.....

Fresh gold spotted anchovy (*Coilia dussumieri*) was collected from Veraval fish landing Centre and then transported in iced condition to drying yard Bhidiya, Veraval. It was washed thoroughly with potable chilled water to remove all adhering matters. After removing scales fish was washed again with potable chilled water. The fish is then dried under sun dry till 3 days until the moisture becomes less than 15 per cent. Then the dry fish is packed in various size of LDPE pouch as 100 g

and 250 g thenit's sold in market. The proximate composition (protein, fat, moisture and ash) of fresh and dried anchovy was estimated (AOAC, 2006).

Drying of gold spotted anchovy (*Coilia dussumieri*):



RESEARCH FINDINGS AND ANALYSIS.....

The environmental parameters (temperature, humidity, wind velocity) during drying are given in Tables 1 to 3. The physical characteristics of raw material and yield evaluation of gold spotted anchovy is mentioned in Table 4. The proximate composition (protein, fat, moisture and ash) of fresh raw material and dried anchovy was estimated and its shown in Tables 5 and 6.

Conclusion:

The study reveals the drying of gold spotted anchovy and its hygienic packaging. Environment parameter explained drying condition of environment. Dried spotted anchovy contain good market demand among fisherman community. Dried gold spotted anchovy contain high nutritious value.



Raw material



Cleaned raw material



Drying



Final product

Table 1: The environmental parameters during drying (1st day)

Time	Air temperature (°C)	Relative humidity	Wind velocity
12:30	30.2	41 %	3 KT
13:30	33.4	47 %	4 KT
14:30	32.2	56 %	3 KT
15:30	31.3	68 %	1 KT
16:30	30.2	70 %	2 KT
17:30	29.0	72 %	1 KT

Table 2 : The environmental parameters during drying (2nd day)

Time	Air temperature (°C)	Relative humidity	Wind velocity
10:30	30.0	42 %	3 KT
11:30	31.6	46 %	3 KT
12:30	31.1	49 %	4 KT
13:30	30.9	50 %	3 KT
14:30	31.8	53 %	5 KT
15:30	30.0	61 %	3 KT
16:30	30.0	61 %	2 KT

Table 3: The environmental parameters during drying (3rd day)

Time	Air temperature (°C)	Relative humidity	Wind velocity
10:30	30.0	46 %	2 KT
11:30	30.0	46 %	2 KT
12:30	32.1	47 %	4 KT
13:30	31.0	50 %	3 KT
14:30	29.3	51 %	5 KT
15:30	29.0	58 %	5 KT
16:30	28.0	60 %	2 KT

Table 4: Physical characteristics of fresh Gold spotted anchovy

Characteristics	Mean value ± SD
Total length (cm)	19.31 ± 2.51
Standard length (cm)	17.2 ± 3.2
	Yield
Weight of fresh fish	100 kg
Weight of dried fish	23.5 kg

Table 5: Proximate composition of fresh gold spotted anchovy

Parameters	Mean value (%) ± SD
Protein	17.24 ± 0.60
Fat	2.57 ± 0.78
Moisture	76.56 ± 0.05
Ash	1.4 ± 0.14

Table 6 : Proximate composition of dried gold spotted anchovy

Parameters	Mean value (%) ± SD
Protein	68.82 ± 0.10
Fat	7.84 ± 0.87
Moisture	12.45 ± 0.24
Ash	7.98 ± 0.53

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