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# FUSINUS NICOBARICUS – AN EXCELLENT NEOGASTROPOD FOR PREPARATION OF GOOD RECIPES

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## ABSTRACT

*Sea food is an excellent source of protein of high biological value. Like other aquatic organisms, the gastropods meat are also consumed as food, due to its high nutritional and medicinal value. The gastropod meat is not only tasty but also nutritious and free of cholesterol. In the present study, the precooked meat of foot and mantle of a gastropod Fusinus nicobaricus is used for the preparation of good and tasty recipes such as soup, curry and cutlets. It can be taken as fresh or in the frozen form.*

**KEY WORDS**

*Fusinus nicobaricus, recipes, sea food*

## INTRODUCTION

Seafood is an excellent source of protein of high biological value and is one of the thrust sectors for augmenting country's export earnings. Fish, shell fish and other aquatic organisms suitable for food and feed are of worldwide importance. They are excellent sources of high quality proteins, superior to those in meat and poultry. Approximately 14 % of the animal protein consumed by human beings comes from marine fisheries (Pigott and Tucker, 1990). As the world population is growing, the per capita consumption of seafood is also increasing rapidly.

Shell fishes are suitable for food and are of worldwide importance. The demand for these types of fishery products becomes increasing day by day among the non-vegetarian population throughout the world. The gastropod meat is not only tasty but also a nourishing food. The meat of gastropod *Strombus canarium* is used for the preparation of good recipes such as soup, noodles, curry, cutlet and chilli (Arularasan et *al*., 2010). Some of the earlier works on the preparations of recipes in gastropods include those of *Chicoreus ramosus* and *Faciolaria trapezium* (Ragunathan *et al*., 1992; Ramesh and Ayyakannu, 1992; Hylleberg, 1992; Patterson Edward and Ayyakannu, 1992; Ayyakannu, 1994; Patterson *et al*., 1994; Gopakumar, 1996).

Generally meat of molluscs considered to be highly nutritious, owing to its content of essential aminoacid, proteins, rich vitamins and minerals (Thanonkaew *et al*., 2006). Giese (1969) reported that the protein is the dominant organic constituent in molluscs than any other biochemical constituents. The biochemical composition of marine gastropod is a nutritional assurance of millions of malnourished people. The gastropod meat is free of cholesterol but contains high nutritive substances. It is used for the preparation of good recipes such as stews,

soups, salads, appetizers and hotpot mixed with other seafood in high end restaurants.

*Fusinus nicobaricus* is one of the commercially important sources of sea food, their utilization is not popular like other sea food due to lack of perception combined with the conservative food habits of the people in India. Hence, the gastropod *Fusinus nicobaricus* meat was used for the preparation of good recipes such as soup, curry and cutlet. They have the potential to become a regular food item in the household diet, with consumer acceptance.

## MATERIALS AND METHOD

**Pre-cooking process:**

*Fusinus nicobaricus* were collected from Gulf of Mannar Coastal region with the help of divers. The animals were brought to the laboratory, cleaned and boiled in water for 30 minutes and the soft parts were removed from the shell. The edible portions such as foot and mantle were cut into small pieces according to each dish. After thorough washing the pieces of the meat were pressure-cooked until the meat becomes soft. The pre-cooked meat was used for preparing all dishes.

The following dishes were prepared from the meat of *Fusinus nicobaricus*. The ingredients used and methods of preparations are given below:

**Soup**

**Ingredients:**

Foot meat - 500g
Large onion (Finely chopped) - 200g
Ghee - 50g
Garlic Paste - 25g
Ginger paste - small piece
Cumin seeds - 25g
Spices - 2g
4 slices of dry bread toasted
¾ cup of tomato sauce
¼ cup of sweet chilli sauce
¼ cup of soya sauce
1 ½ teaspoons of salt
All spices -required amount

**Method:**

The meat was boiled and the juice was extracted. The spices and ajinomotto were added at required levels. The tomato, chilli and soya sauce were added in required quantities. The cooked soup was filtered well and at last the toasted dry bread was added and served hot.

**Cutlet**

**Ingredients:**

Potato - 2
Carrot - 2
Beans - 5
Onions - 2 (finely chopped)
Coriander leaf - half bunch
Ginger garlic paste - 1 spoon
Chilli powder - 1 ½ spoon
Garam masala - 1 ½ spoon
Green chillies - 2
Meat - 1 cup
Salt - required amount

**Method:**

Boiled potatoes were smashed well. After frying the meat was added. Finely chopped and boiled carrot, beans and onion were added to the smashed potatoes. Ginger garlic paste, garam masala, shopped green chillies, pepper powder and chilli powder were added to the smashed potatoes. Meat was added and smashed well. Then the mixture was made into cutlet shape and fried in oil. The cooked cutlets were served along with chatni.

**Curry**

**Ingredients:**

Meat - 5 nos.
Onion - 2 (chopped)
Chillies - 2 (chopped)
Ginger garlic paste - 1 cup
Curd - 1 cup

All spices - 1 teaspoon
Chilli powder - 1 teaspoon
Turmeric powder - 1 teaspoon
Salt- required amount
Coconut paste - 1 cup
Coriander and mint leaf- required amount

**Method:**

Oil was taken in a pan. Spices, chopped onion, chilli and tomatoes, ginger, garlic paste and curd were added one by one till it turned brown. Then the meat was added to it by adding chilli powder, turmeric powder and salt at the required amount, water for boiling if necessary was added. Coconut paste was added to the curry as per the required taste. It was boiled well and coriander leaves were added. At last garnishing was done using mint and coriander leaves.

The sensory evaluations of the dishes were carried out by serving the sample to the investigators. The organoleptic scores of dishes include color, appearance, flavor, texture, taste and overall acceptance was determined by using hedonic scale of 1 to 9 (Amerine *et al*., 1965). The evaluated average organoleptic scores of all the recipes for the study animal *Fusinus nicobaricus* were shown in **Table 1**. The prepared dishes were displayed in **plates 1– 3**.

**Table 1. Average organoleptic scores of the dishes prepared from *Fusinus nicobaricus***

| S. No. | Dishes | Color | Appearance | Flavor | Texture | Taste |
|---|---|---|---|---|---|---|
| 1. | Soup | 4 | 5 | 5 | 4 | 4 |
| 2. | Curry | 4 | 5 | 5 | 4 | 4 |
| 3. | Cutlet | 4 | 4 | 5 | 5 | 4 |

Excellent -5; Good-4; Fair-3

**Recipes of *Fusinus nicobaricus***

*Plate 1. Soup*

*Plate 2. Curry*

*Plate 3. Cutlet*

## RESULTS AND DISCUSSION

Next to fishes, molluscs form a good source of animal protein and have become highly esteemed delicious seafood. Seafood and its recognized important lipid components are attaining unpredicted popularity as important contribution to man's diet. Although seafood in the diets has long been considered to provide health benefits, only in the past decades has emphasis moved from "low fat, low calories and high protein" to other positive effects such as prevention from blood cells less rigid.

In the present study, *Fusinus nicobaricus* is an important food source to supply daily nutritional needs. This is motivated us to prepare the tastiest recipes as soup, curry and cutlet. The

preparation of recipes in gastropods includes *Chicoreus ramosus* and *Fasciolaria trapezium* by Ragunathan *et al*., (1992). Gopakumar (1996) prepared different molluscan products. Arularasan *et al*., (2010) prepared various dishes from the meat of *Strombus canarium* and it may also be marketed as fresh, frozen, cooked (completely) or as pickled meat. The pickled gastropod meat is also marketed in canned form. The sensory evaluation of the soup, curry and cutlet was carried out by serving the sample to the evaluators. All the evaluators accepted the taste, consistency, appearance, color, texture, flavor are excellent, good and fair. Dishes with average organoleptic scores are recorded.

Food security is an essential feature of country's independence and sustenance. The food availability in a country has to commensurate with population size and nutritional requirements of its people. The first appraisal of food is by sight and the colour. The shape, size, and surface all register impressions. Part of the acceptance of a food depends on how it looked. Thus the appearance of food plays an important factor in its evaluation. The colour must be neither too pale nor too intense. It should have a uniform natural colour.

It is concluded that the present study reveals that the preparation of soup, curry and cutlet from the foot and mantle of *Fusinus nicobricus* provides a way for the use of marine resources. To meet the protein requirements and malnutrition of the ever increasing population, the non-conventional sources like gastropods can be used.

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