

Dried shark in vacuum packaging with Neem leaves (*Azadirachta indica*) for preservation

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ABSTRACT

Dried neem leaves (*Azadirachta indica*) used in vacuum packed dried shark for long term preservation. Neem leaves are natural preservative, which are used for dried *Scoliodon laticaudus* (Indian dog shark) in vacuum packed for long term. Fungi growth not produced in four months storage of product.

Key words: Dried shark, storage, neem leaves, vacuum packaging.

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INTRODUCTION

Dried fish is a traditional part of the diet of a large section of the world's population (Huda *et al.*, 2010; Ahmed *et al.*, 2013). Dried fish is nutritious food containing highly unsaturated fatty acids, fat soluble vitamins, essential minerals as well as proteins containing essential amino acids (Bilgin *et al.* 2008; Ahmed *et al.* 2013). Global demand for shark and ray derived products like shark meat & oil (Johri *et al.*, 2019). Shark skin is consumed as food in several countries including the Maldives, Japan, Taiwan and the Solomon Islands (Vannuccini, 1999).

Material and Methods:

Fresh shark (*Scoliodon laticaudus*) measuring 48.52 ± 1.04 cm in length & 36.33 ± 0.95 cm in standard length caught by trawl net along the coast off Veraval, India were used for the study. Immediately after harvest, fishes were washed in fresh water and iced in the ratio of 1:1 (fish: ice) and transported to the fish curing yard of Veraval for processing. Moisture and TFC (Total fungal count) recommended by AOAC (2006).

Table1. Yields at different processing stages

Sr. no.	Particulars	Total (kg)
01.	Raw material weight	12.500 kg
02.	Weight after removal of head skin gut from yield was obtain. And Weight after washing	6.802 kg
03	Weight after salting (weight of salt added 10%)	7.359 kg
04	Weight after washing	6.057 kg
05	Weight after 1 st day	4.467 kg
06	Weight after 2 nd day	3.501 kg
07	Weight after 3 rd day	3.121 kg
08	Weight after 4 th day	2.863 kg

Table2. Moisture percentage

Fresh shark fish 76.037%
Dried shark fish 28.91%

The neem leaves was a bitter tonic herb that reduces inflammation and clears toxins, while promoting healing and improving all body functions of human. Apart from this, it has parasitic, insecticidal spermicidal properties and hence destroys a wide range of organisms (Dixit *et al.*, 1986). Razzaghi-Abyaneh *et al.* (2005) reported that extracts of plants such as neem have been found to effectively inhibit the growth of fungi. Ipinmoroti and Taiwo (2015) explained that the effectiveness of neem leaves (*Azadirachta indica*) in slow down fungi growth on smoked dried *C. nigrodigitatus*.

Observation:

Dried shark packed in vacuum packaging with dried neem leaves remain good quality after 4 months of storage. No white spot or fungi found in storage sample. No TFC (Total fungal count) found in dried shark product in vacuum packaging.



Conclusion:

The results from the present study suggests that traditionally dried shark (*Scoliodon laticaudus*) performed well in terms of quality and safety as stored products when packed with dried neem leaves in vacuum packaging. It was observed that the vacuum packaging with neem leaves may assure an effective packaging for dried fish quality for long term storage.

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