

Removal of Fungus and Prevention of Fungal Reinfestation in Stored Dry Salted Fish

Infestation with fungus and red halophilic bacteria in dry salted fish during storage is a serious problem faced by the fish traders. A sizeable quantity of dry fish has to be discarded on account of this, causing loss of several thousand rupees to the industry. There have been attempts to develop harmless chemical preservatives for dry fish in different parts of the world. In our country Valsan (1963) had shown that sodium propionate effectively prevent the attack of both fungus and red halophiles.

All preservative treatments are to be carried out during or immediately after processing. But very often, this is quite difficult as many of the fish curers are illiterate and backward, and the traders have no control over them. Consequently, the products on storage in the godowns of the traders especially exporters, develop fungus and red halophiles making the lot unacceptable to the buyers. The product has to remain in the godown for weeks awaiting shipment and the problem was referred to the Central Institute of Fisheries Technology by the dry fish exporters of Tuticorin. The present paper describes a simple and effective method of converting dry fish products infested with fungus and red halophilic bacteria to acceptable ones, and preventing their reoccurrence for a reasonable period.

Commercial samples of dry cured cat fish infested by fungus and red halophiles were procured from the dry fish market in Calicut. The whole lot was washed individually well in potable water using a soft nylon brush and removed all the fungus and red halophilic bacteria on the surface of the fish.

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The dry fish were divided into four portions and subjected to:

- (a) Washing and then drying
- (b) Washing and then dipping in saturated brine for 5 min. and drying
- (c) Washing and dipping in saturated brine containing 1% sodium propionate for five minutes and then drying
- (d) Washing, drying and then smearing with a mixture of 3% sodium propionate in dry, refined salt in the ratio, 1 part of the mixture to 10 parts of dry fish.

All the samples were dried to 35% moisture and kept under similar storage conditions. Physical and organoleptic analysis of the samples were carried out periodically.

The sample (d) treated with the preservative mixture of 3% sodium propionate in dry, refined salt remained in good condition for more than six months and the sample (c) treated with saturated brine containing 1% sodium propionate and dried had a shelf life of 5 months. The fish preserved by the other treatments (a & b) had shelf life of only one and two weeks respectively.

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References

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