
Preservation and Value Addition of Fishery Products using Natural Resins and Gums

Salient features

- Edible coating of fresh fish using natural gum Arabic.
- Incorporation of gum acacia in fish nugget formulations as binding and texturizing agent.
- Edible coating of dried fish using natural resin shellac
- Use of natural gums, especially gum Arabic, as shelf stable fish oil encapsulates having controlled release properties.
- Gum acacia as an active ingredient for reducing fat content in fish nuggets.
- Efficacy of natural resin shellac against the dominant pest dermestes and fungal incidence in dried fish

Advantages

- ✓ Improved functional properties of spray dried fish roe powder
- ✓ Oxidative stability of spray dried fish roe powder.
- ✓ No effect on texture and sensory attributes of the processed fish nuggets.
- ✓ Significant protection against microbiological deterioration, pest attack and moisture absorption making shellac a functional edible packaging material for dried fish.



<p><i>Process Technology / Product developed by</i></p>	<p>Dr. Binsi P.K., ICAR-Central Institute of Fisheries Technology (CIFT) Matsyapuri, P.O, Willington Island, Cochin. binsipk@yahoo.com Dr. Sarkar P.C., ICAR-Indian Institute of Natural Resins & Gums (IINRG), Namkum, Ranchi 834010, Jharkhand</p>
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<p><i>More information</i></p>	<p>Status of commercialization / Patent / Publication Binsi, P. K., Natasha, N., Sarkar, P.C., Ashraf, P.M., George, N. And Ravishankar, C.N. 2017. Structural, functional and in vitro digestion characteristics of spray dried fish roe powder stabilised with gum Arabic. Food Chemistry, 221: 1698-1708. Binsi, P.K., Nayak, N., Sarkar, P.C., Jeyakumari, A., Ashraf, P.M., Ninan, G. and Ravishankar, C.N. 2017. Structural and oxidative stabilization of spray dried fish oil microencapsulates with gum arabic and sage polyphenols: Characterization and release kinetics. Food Chemistry, 219: 158-168. Binsi, P.K., Nayak, N., Sarkar, P.C., Sahu, U., Ninan, G. and Ravishankar, C.N. 2016. Comparative evaluation of gum arabic coating and vacuum packaging on chilled storage characteristics of Indian mackerel (<i>Rastrelliger kanagurta</i>). Journal of Food Science and Technology, 53(4): 1889-1898. Binsi, P.K., Nayak, N., Sarkar, P.C., Joshy, C.G., Ninan, G. and Ravishankar, C.N. 2017. Gelation and thermal characteristics of microwave extracted fish gelatin–natural gum composite gels. Journal of Food Science and Technology, 54(2): 518-530. Sarkar, P.C., Sahu, U., Binsi, P.K. and Nayak, N. 2016. Effect of vegetable gums on proximate, functional, optical and sensory attributes of catfish nuggets during chilled storage. Asian Journal of Dairy and Food Research, 35(2): 130-136. Sarkar, P.C., Sahu, U., Binsi, P.K., Nayak, N., Ninan, G. and Ravishanker, C.N. Studies on engineering properties including functional and flow characteristics of some natural Indian gums. Asian Journal of Dairy and Food Research (Accepted for publication)</p>