



RESEARCH

IN SERVICE LABORATORIES

April 1949

Boston, Mass.

Packaged fillets from fish frozen in the round at sea are, after six months' storage, of better quality than the fillets from the control fish iced at sea.

College Park, Md.

After five months of storage, the striped bass fillets held at a constant temperature of -10° F. received a relatively high score, with the fillets held at temperatures fluctuating between -10° F. and 0° F. running a close second. The next highest score obtained was for those held at a constant temperature of 0° F. The scores for the fillets held at 15° F. and at temperatures fluctuating between 0° F. and 15° F. were considerably lower with the latter receiving the higher score of the two. No particular trend is apparent in the quantity of drip which occurs upon thawing.

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After two months of storage at 0° F., the fillets coated with a plastic dip showed a weight loss approximately the same as for those with the ice glaze; the appearance was about the same in both cases, the surface being quite desiccated. According to the results of these test, this plastic material has no apparent advantage over an ordinary ice glaze.

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At the end of one month of storage at 0° F., the pan-dressed fish which were given combinations of various wraps and protective glazes, showed no changes in quality determined organoleptically. No losses in weight had occurred.

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A new series of frozen fillets was started during the month. These fillets were coated with a low methoxyl pectinate film which it is claimed produces a more evenly distributed glaze on the fish than is accomplished by ice alone. The film is further claimed to impart no flavor or odor to the fish and to be entirely edible. This series is being held at 0° F. and will be examined at regular intervals.

Seattle, Wash.

Samples of hatchery feed ingredients which were prepared by various methods were analyzed for riboflavin and niacin. The results indicated that lyophilization

did substantially alter the riboflavin or niacin content of the various meals, but acetone extraction of the raw material lowered these values, particularly the niacin content. The riboflavin and niacin content of the meals from beef liver were markedly higher than the content of the meals prepared from either tuna livers or salmon viscera. The amount of these two vitamins in the meal from crab scrap was lower than in the meals from salmon viscera.



STUFFED HALIBUT STEAKS



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| 2 STEAKS, ABOUT 1 LB. EACH | 1 TEASPOON SALT |
| 4 TABLESPOONS BUTTER OR OTHER | BREAD STUFFING |
| FAT, MELTED | 1/8 TEASPOON PEPPER |
| 3 SLICES BACON (OPTIONAL) | |

Sprinkle both sides of steaks with salt and pepper. Place one steak in a well greased baking pan. Place stuffing on the steak and cover with the remaining steak. Fasten together with toothpicks or skewers. Brush top with melted fat and lay slices of bacon on top. Bake in a moderate oven 350° F. for 30 to 40 minutes or until fish flakes easily when tested with a fork. Remove carefully to a hot platter and take out fasteners, garnish and serve hot, with a sauce. Serves 6.

Other steaks or fillets may be used in the above recipe.

BREAD STUFFING

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| 2 tablespoons onions, chopped | Dash pepper |
| 1/4 cup celery, chopped | 1/2 teaspoon thyme, sage or |
| 3 tablespoons butter or other | savory seasoning |
| fat, melted | 1/2 tablespoon lemon juice |
| 1/2 teaspoon salt | 2 cups day old bread crumbs |

Cook the onions and celery in the melted fat for about 10 minutes. Add the cooked vegetables and seasonings to the bread crumbs, and mix thoroughly. If stuffing seems too dry, add a little water, milk or fish stock.