


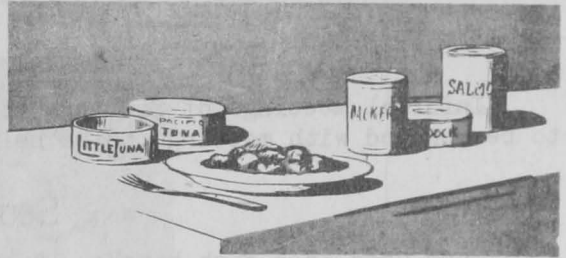
RESEARCH

IN SERVICE LABORATORIES



October 1948
College Park, Md.

An experimental pack of canned Atlantic "little tuna" indicates that the pieces of flesh were smaller in size, running 6 to 10 per can as compared with 3 for the Pacific tuna. This is probably due to the smaller fish. The color was also deeper—best described as mahogany pink—than is common to packs of Pacific tuna.



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The results of a periodic storage test show that sandwich spreads made from chum salmon, cod, haddock, Atlantic mackerel, and tuna gave the higher taste-testing scores and have the better possibilities for commercial production. Thirty different species of fish, both marine and fresh-water, principally under-utilized varieties, have been packed in this experimental series.

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Twenty-nine samples of fishery dishes as prepared for the table by the Home Economists have been analyzed during the past month for proximate composition. The data are being calculated to give information on the quantity of different nutrients per serving portion of food.

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Three hundred pounds of Boston mackerel were filleted, packaged, and frozen. These are being stored at various temperatures, both stable and fluctuating, to determine effect of temperature on storage life. The first lot which has now been stored for two months shows no difference due to temperature.

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Bacterial cultures which had been isolated from clams and water in Massachusetts were studied to determine the identity of a certain species of bacteria of unknown pollution significance which usually interfere with tests for enterococci.

Boston, Mass.

Additional samples were obtained during a second trip of the Albatross III for further studies of quality and flavor of fillets produced from fish frozen in the round shortly after being caught, with subsequent thawing, filleting, and refreezing of fillets. Pollock, cod, and hake, both frozen and iced, after being held for an average of 10 days to bring the time to a simulated long trawler trip, were filleted in a commercial plant, packaged in 5-pound cartons, refrozen, and stored for periodic tests. One sample each of haddock and rosefish frozen in the round were glazed and placed in commercial storage for a 2-month period after which time the lot will be thawed, filleted, and refrozen for examination of subsequent storage life.

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Isolation of cultures was begun for identification of the bacteria in the slime, gills, abdominal cavities, and viscera of iced haddock, both gutted and in the round, and frozen ungutted rosefish and haddock.

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Informal meetings of fishery technologists in the area began last fall, were to be renewed with meetings to be held the first Thursday of each month.

Seattle, Wash.

When used as a fish hatchery food, viscera from Columbia River chinook salmon appears to have better nutritive value than that from Alaskan pink salmon. Viscera dried at a temperature of 100° F. as compared to 145° F. had more nutritive value. Dried fish viscera in a standard diet is much more valuable to fish living in warmer water. Thus, at the beginning and end of the season when water temperatures are lowest, the dried fish viscera did not materially affect growth. During the summer, it aided considerably in promoting a higher rate of growth of the fish.

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It was found that powdered pumice is a better dispersing agent than anhydrous sodium sulfate when extracting oil from fish livers for analytical determination of vitamin A. The use of the former leads to a higher oil recovery. Petroleum ether was used as the solvent.

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Mixed king crab body and leg meat packaged in tin or cellophane, showed little difference in quality after 20 weeks of storage at 0° F. Crab meat prepared and packaged originally from frozen crab legs was of good quality but was slightly tough and tended to show a slight off-flavor as compared to meat frozen from fresh crab. There was little difference in the quality of crab meat frozen with and without a weak sodium chloride brine to cover the meat.

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A sample of Korean or horse crab (Erimacrus isenbeckii) found in numbers in the Bering Sea by the Pacific Explorer and the Washington was cooked and the meat found to be tender, highly-flavored, and quite edible.

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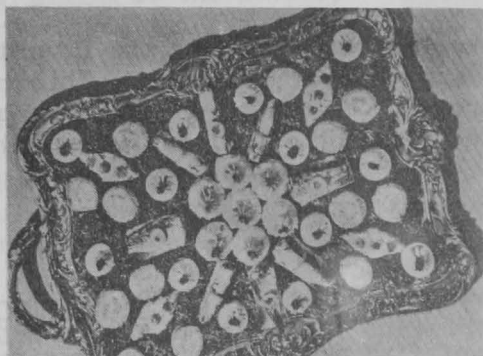
It was found that neither the size or shape of the extraction thimble, or the height to which the thimble is filled with meal are important variables affecting the precision of the AOAC method for determination of oil in fish meal.



SARDINE CANAPES

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| $\frac{1}{2}$ cup mashed sardines | $\frac{1}{8}$ teaspoon worchestershire sauce |
| $\frac{1}{2}$ cup grated egg yolk | 4 tablespoons mayonnaise or salad dressing |
| 1 tablespoon lemon juice | |

Blend ingredients together forming a paste. Spread on bread cut in desired shapes. Garnish with grated egg yolk, strips of pimiento and parsley. This spread will cover 36 small canapes.



TUNA FISH A LA KING IN PUFF SHELLS

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|---------------------------------------|-------------------------------|
| 1 13-ounce can tuna fish | 1 cup milk |
| $\frac{1}{4}$ cup green pepper, diced | 2 tablespoons pimiento, diced |
| $\frac{3}{4}$ tablespoons fat | $\frac{1}{2}$ teaspoon salt |
| 3 tablespoons flour | |

Drain tuna and flake. Cook pepper in melted fat until tender. Add flour and stir until blended; add milk gradually and cook until thick and smooth, stirring constantly. Add flaked fish, pimiento and salt. Heat thoroughly.

Cut the tops off the puff shells and fill with the creamed fish mixture. Sprinkle with paprika or chopped parsley. Fills 36 puff shells. Any creamed fish or shellfish mixture may be used in place of the Tuna A La King.

Puff Shells

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|-----------------------------|---|
| $\frac{1}{2}$ cup flour | $\frac{1}{2}$ cup boiling water |
| $\frac{1}{8}$ teaspoon salt | $\frac{1}{4}$ cup butter or fortified margarine |
| 2 eggs | |

Sift flour and measure. Add salt and sift again. Combine butter and boiling water in saucepan; melt over low heat. Add flour all at one time and stir vigorously until mixture forms a ball and leaves the sides of the pan. Remove from heat. Add unbeaten eggs one at a time, beating thoroughly after each addition; continue beating until a thick dough is formed. Drop by teaspoonfuls onto a greased baking sheet. Bake 20 to 30 minutes. Makes approximately 36 one-inch shells.