



RESEARCH

IN SERVICE LABORATORIES

March 1949

Beaufort, N. C.

Tests on various twines attached to wooden frames and exposed to sea water showed, after four months' exposure, that the acetylated cotton twine and other types of net material were in good condition while the tarred samples had lost much of their tensile strength.

Boston, Mass.

After five months' storage, the fillets cut from fish frozen in the round at sea were still superior on the basis of organoleptic and chemical tests to fillets from fish dressed and iced at sea. All the samples showed the effects of prolonged storage through dessication and a gradual color loss. The samples varied considerably in the amount of drip.

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The storage tests on the rosefish fillets series were completed after the fifth month's examination. The fillets from rosefish frozen in the round at sea were considered superior when judged from the standpoint of quality, flavor, and drip, to fillets from fish iced at sea.

College Park, Md.

Studies to determine the precision of the vitamin A bio-assay so far indicate that one U.S.P. unit per day per rat is too little and three units per day is too much. This is in accordance with previous experience when standard cod liver oil was used instead of vitamin A acetate.

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After 5 months of storage, the tightly-wrapped mackerel fillets held at -10° F. reached the limit of their storage life. Although no "rusting" was apparent, the fillets darkened considerably in some instances; also, a strong fishy odor developed, rather than a pronounced rancid odor. The fillets held at 0° F. were definitely unacceptable, having more of a rancid odor but also a strong fishy odor; no "rusting" was apparent. This, in general, was true also for the fillets undergoing one-day and three-day fluctuations in temperature between -10° F. and 0° F.

On the basis of palatability scores, the scores for the fillets undergoing fluctuating temperatures between -10° F. and 0° F. fall between those for fillets held at a constant temperature of -10° F. and a constant temperature of 0° F. Likewise, the scores for those fillets undergoing temperature fluctuations between

0° F. and 15° F. fall between the scores for fillets held at constant temperatures of 0° F. and 15° F. Volatile acid numbers (for showing relative freshness) have followed, in general, this same trend.

It appears that fluctuating temperatures, in themselves, do not have an appreciable effect on the quality of frozen fillets. Instead, the average storage temperature encountered during the fluctuations would seem more likely to be the determining factor.

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A series of fillets placed in zero storage to determine the suitability of a plastic dip for retarding moisture-vapor loss have shown, after one month of storage, that the weight loss from the plastic-dipped was substantially the same as the ice-glazed fillets.

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A new series of wrapped fish have been placed in frozen storage. Pan-dressed striped bass were first wrapped in vegetable parchment, then dipped in water, followed by an overwrap of locker paper or cellophane before freezing. Another lot was frozen first without wrapping, then glazed and wrapped with locker paper or cellophane. Much time was saved in handling and wrapping by using the former method. Periodic tests on quality will be made over an extended storage period. This method of wrapping is being tried for use primarily in the locker plant or in home freezing, though it may have other applications.

Ketchikan, Alaska

The Alaska Territorial Legislature appropriated the sum of \$50,000 to the Fisheries Experimental Commission for the biennium, 1949-1951. These funds will be used to continue the present work and for research on other important problems connected with the utilization of Alaskan fish. The work at the Ketchikan Fishery Products Laboratory is carried on jointly by the Alaska Fisheries Experimental Commission and the U. S. Fish and Wildlife Service.

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Results of preliminary tests at the Experimental Fur Station on the utilization of salmon cannery waste indicated that the feeding of canned processed waste to fur-bearing animals produces a better pelt than fresh frozen waste. These tests, however, must be continued for several more seasons before specific findings can be reported.

Seattle, Wash.

The annual Open House was held for three consecutive nights, March 14-16. On the first evening, there was a special showing for the members of the Puget Sound Section of the Institute of Food Technologists. The other two nights were open to the general public. Altogether, nearly 400 visitors were registered.

