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Some Preliminary Notes on the Canning of Scallop

By Ernest Ross

Shrinkage

If packed fresh, the muscles will shrink about 38% in weight during the canning process. This gives the can appearance of having been only partially filled.

When the fresh muscles are steamed or plunged in boiling water for 3 minutes, an initial shrinkage of about 7% in weight takes place, and a correspondingly larger weight of partially shrunk muscle can be packed into the cans, which will not shrink as much during the processing as the fresh muscle, i.e. only about 28%, the total shrinkage, however, in both cases being approximately the same. The can packed with the steamed muscle will appear more fully packed, as it contains more scallop muscles, than if they were packed fresh.

Firmness of the meat

The breaking apart of the canned muscles of scallop into their fibres is mainly due to the handling and shaking of the cans after processing. Canned scallop muscles that were stored without handling and left resting on a shelf for several weeks, were found to be whole, but on subsequent shaking of the cans fell readily apart into their fibres.

To determine the effect of different factors upon the firmness of the muscles, they were treated in different ways, (by immersion in brine, or in a weak formaldehyde solution, or in a weak solution of acetic acid for different lengths of time) and canned subsequently. The results are not available as yet,

as no appropriate apparatus for measuring the firmness of the muscles has been prepared (mechanical shaking apparatus?)

Colour of Meat

The slight darkening of the white fresh muscle meat during processing may be due to the high temperature (240°F.) which is usually used in retorting. The use of the open water bath for a longer period may be advantage in processing canned scallop muscles.

Utilization of the remaining edible material of the scallop

At present only the large muscle of the scallop is used as food, and the remainder of the organs are discarded. This part of the scallop weighs from 25 to 50% more than the muscle, thus indicating the large amount of waste, under present canning methods. As in oysters and clams, these organs of the scallop are very edible.

As a test these different organs (mantle, liver, gonads etc.) were ground up and canned as a paste. They have to be thoroughly washed to remove all sand. The paste was of dark green appearance (similar to ground up cooked spinach), and with the addition of some salt had a very nice flavour, not much unlike that of lobster paste.