CANNING OF CRAB MEAT

Aim: To study canning of crab meat (Dry pack)

Introduction: The crabmeat is a valuable material for caning. In Japan the large king crab is fished almost solely for producing canned food, and a large portion of the canned crab is exported to U.S.

Crabmeat is considered as delicacy, canned crabmeat often develops blue discolouration during heat processing and storage. The blue discoloration is due to the formation of copper Sulphide, copper present in the claw of crab and sulphide produced from the meat during heat processing. Therefore, a method of preventing blue discolouration consists in thorough bleeding of the meat so that the level of copper in the crab is reduced below the critical level at which it can cause discolouration. Maintaining adequate acidity in the brine (2%) with 0.1% citric acid use of chelating agents like EDTA (0.5%) use of a parchment lining in the can etc. are other preventive measures.

Another method of preventing the appearance of the blue meat of the canned crabmeat by low temperature and fractional heating of the carcasses from which carapace had been removed. According to this method, the coagulating temperature of blood protein of crab is from 69°C to 70°C, and that of meat protein of crab is from 59°C to 60°C, the meat coagulates, but the uncoagulated blood will run out. After removing the meat from the carapace in a half-heated condition, the blood will run out leaving the meat alone. When the meat from which the blood has been removed is boiled for a few minutes and packed in can as the usual manner, the blue meat did not appear in the finished product.

From the thermal processing point of view, the following crabs have much importance.

1) Portunus pelagicus

2) P. Sanguinolentus

3) Scylla Serrata

4) S. Tranquebarica

5) Charybdis Cruciata

Product Code

: CBN

Can Used

: 8-Oz. can, S-R lacquered.

Std. Net Weight : 210 grams

Materials and Equipments:

Live Crabs, salt, ice, meat picking knives, cans, citric acid, parchment paper, trays, tubs, can seaming machine, retorts, etc.

Procedure:

Raw Material : Fresh live crabs (all the dead and weak crabs should be

discarded)

Washing : In running water to free from dirt, etc.

Weighing :

Dressing : Remove the back shell, viscera, gills, etc. with the help of a

pointed knife, ensure proper bleeding.

Washing : Wash thoroughly in running water.

Blanching : Steam the crabs for 10-15 minutes for easier picking of meat

from the shell and also to reduce the initial bacterial

load in the crab meat. Blanching may be done instead of

steaming, in 5% salt solution for 10-15 minutes.

Cooling : Cool the steamed crabs in ice water for 5 minutes (Mechanical

refrigeration or cool air circulation may also be employed).

Meat Picking : Pick the meat with picking knives manually or by mechanical

means; Body and leg meat should be preserved separately till

packing.

Washing : Wash the meat in ice cold water spray to remove shell fragments

Dip Treatment : The washed meat is then weighed and dipped in to a weak acetic

acid (0.3%) solution for 15 seconds.

Packing : The crab meat is packed into parchment lined cans to net weight.

Body and claw meat may be canned separately for better price.

Filling : A tea spoonful of concentrated blanching juice may be added for

flavour.

Seaming : By vacuum Seamer

↓

Can washing :

Retorting : At 112^{0} C (8-psi) for 80 minutes

Cooling : Cooling is done immediately in ice cold water for 2 to 3 minutes.

Drying :

Labeling :

Storage :

Observations:

Weight of raw material :

Weight of dressed crab :

Weight of raw material after blanching :

Weight of picked crab meat :

Number of cans packed :

Number of persons involved & hours worked :

Size of can used :

Calculations:

Calculate the dressing yield, blanching loss, picked meat yield, canning yield, yield rate and efficiency.

Note:

- 1) Over cooking results on grayish colouration of meat
- 2) Dipping of crabmeat in chelating agent reduces bluish discoloration