STUDIES ON THE MANUFACTURE OF CANNED CRAB

PART. I ON THE MANUFACTURE OF CANNED CRAB FROM *Erimacrus isenbeckii* (*BRANDT*)

REPORT 2. THE DIFFERENCE OF QUALITY OF CANNED CRAB MADE FROM DIFFERENT PARTS OF CRAB BODY

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Erimacrus isenbeckii is smaller than *Paralithodes camtschatica*, consequently the quantity of the meat of the former is less than that of the latter.

In crab canning, meat from shoulder and first ambulatory leg only is used, even in this case the joint part is not packed. Since the quantity of second and third ambulatory leg and cheliped meat is small, the profit is too small to make it worth while to take time to remove the meat for processing. Shoulder meat is taken out from the crust and picked to minced meat. This minced meat is called white mince. The broken first ambulatory leg meat is also picked to minced meat. That meat is called red mince. The canned crab made from *Erimacrus isenbeckii* more frequently has "Blue Meat" than that from *Paralithodes camtschatica*. The reason is that the blood vessels of *Erimacrus isenbeckii* are very fine, so that blood-removing can not be made as perfectly as in *Paralithodes camtschatica*.

The authors packed first ambulatory leg meat, white mince, red mince and cheliped meat separately in separat cans and compared their quality with that of commercial canned crab (*Erimacrus isenbeckii*).

1. Experimental Method.

Raw meat of *Erimacrus isenbeckii* was treated and divided into four categorees. One group was shoulder meat and first ambulatory leg meat packed just as commercial canned crab. Other groups packed separately were white minced meat (shoulder minced meat only), red minced meat (leg minced meat only) and cheliped meat; each was processed respectively as usual. Each sample of canned crab was stored at 22°C (room temperature) for three weeks. At the opening of those samples, vacuum (inches), juice, value of pH, the amount of volatile base nitrogen and amino acid nitrogen were estimated and organoleptic tests such as upon the color, taste, smell, blue meat, and blackened meat were made.

2. Results

Experimental results were in Table 1 as follows.

As seen in Table 1, canned crab made from the white mince or red mince is almost the same as commercial canned crab in respect to good quality.

Table 1. The difference of the quality of canned crab made from the different classifications of meat of *Erimacrus isenbeckii*.

Items. / Can	Vacuum (inch)	Liquid pH	Colour, taste, smell of meat	Volatile base-N (mg %)	Amino acid-N (mg %)	Blue meat	Blackening	Result
Commercial canned crab	13.0	5.8	Normal Good	13	32	++	Can body 3 Cover 1	+++
Canned crab made from the white mince	10.3	6.6	〃	—	72	+	Bottom 2	+++
Canned crab made from the red mince	12.1	6.5	〃	8	49	+	Bottom 1	+++
Canned crab made from cheliped meat only	12.9	7.1	Liquid turbid Softening the meat	20	140	+++	Bottom 1	++

On the other hand, in the canned crab made from cheliped meat only, the amounts of volatile base nitrogen and amino acid nitrogen were more than in the other samples of canned crab, the meat became soft, and blue meat formed in a large quantity.

As a consequence, it may be started that the cheliped meat should not be used as raw material of canned crab of *Erimacrus isenbeckii*; as this is in accord with practice hitherto.

3. Summary

To compare the quality of canned crab made of meat from the different parts of *Erimacrus isenbeckii*, white mince (shoulder meat), red mince (leg meat) and cheliped meat were separately packed. The processed products after three weeks storage were compared with commercial canned crab of *Erimacrus isenbeckii* (shoulder and leg meat). The results of comparison were as follows:

(1) The canned crab made from white mince or red mince was almost same as the commercial canned crab.

(2) In the case of the canned crab made from cheliped meat only, the meat became soft, taste was bad, blue meat was formed. As a conclusion, it may be said that it is better cheliped meat be not used.

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REPORT 3. STUDIES ON THE INFLUENCES UPON THE QUALITY OF CANNED CRAB OF THE KINDS OF WATER USED AND NUMBER OF TIMES OF CHANGE OF WATER FOR BOILING CRAB REMOVED FROM CARAPACE

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In the canning of crab, as the boiling water, sea-water or fresh water with salt (sodium chloride) added is generally used. However, there are factories which use fresh water only. KANEKO[1] has made an experiment in which the difference of the quality of canned crab was considered in respect to breaking of shape of meat, falling off of surface skin of leg