HOKKAIDO UNIVERSITY

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INFORMATION

The Hokkaido University has granted the degree of Master of Veterinary Medicine to eight graduates on March 25, 1964. The authors' summaries of the theses excepting one are as follows:

FOOD HYGINE STUDIES ON PSYCHROPHILIC BACTERIA

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(Summary of Master's thesis written under direction of Dr. S. HAMADA)

Ninety samples of raw milk taken shortly after the milk arrived at 3 different milk plants, 66 bottles of pasteurized milk preserved at 5 and 20°C after bottling, 26 samples of pork and 14 samples of beef refrigerated at −7∼−10°C for some days, and 17 groups of oysters collected directly from oyster beds, were used to examine the frequency of detection of psychrophilic bacteria. Nine hundred and sixteen strains of psychrophiles were isolated from these 213 samples by culturing at 5°C for 14 days. These strains were then examined as to growth, proteolytic and lipolytic activity, fluorescence and pigment production at 5, 20 and 35°C. The heat-resistance and the sensitivity to penicillin of all of the strains were also tested.

Among the 916 strains of several genera of psychrophilic bacteria isolated, the most common was Pseudomonas which was isolated primarily from the refrigerated beef and pork, and secondly from raw and pasteurized milk. Most strains of Pseudomonas grew well in cultures at 5 and 20°C, and were insensitive to 2.5 I.U. of penicillin. More than half of the Pseudomonas strains were active in gelatin liquefaction and in casein digestion, and some strains showed lipolytic activity, fluorescence and pigment production. It should be noted that 4 strains originating from refrigerated beef and pork were tolerant to heating at 60°C for 15 minutes.