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Food Science and Technology Notes

Extension Division Department of Food Science and Technology Virginia Polytechnic Institute Blacksburg, Virginia

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STAPHYLOCOCCI IN FOOD SUMMARY SHEET

Food and Drug Administration

WHAT ARE STAPHYLOCOCCI?

Staphylococci are small sphere-shaped bacteria occurring as single individuals, in pairs and frequently, in irregular grape-like clusters. While growing in food, certain types of these bacteria can produce a toxin or poison which is hazardous to man and animals. Appreciable numbers of the organism in a food product can result in illness.

WHY ARE STAPHYLOCOCCI IMPORTANT?

Staphylococcal food poisoning is the most common type of food poisoning in this country. Staphylococci are often called "opportunists," because they wait for suitable conditions to invade the body. Man carries these organisms on his hands and arms, in his nose, and on the hairy regions of his body. Staphylococci can cause boils and abscesses, and often cause infection in wounds. Their toxin is heat resistant and capable of causing illness even though the bacteria have been killed by heat. A frequent source of staphylococci in food is infected persons who have prepared or handled the food.

WHAT ARE THE SYMPTOMS OF STAPHYLOCOCCI INFECTION?

The usual symptoms are vomiting, diarrhea, prostration, and abdominal cramps occurring within three to eight hours after eating food contaminated with staphylococci toxin.

CAN STAPHYLOCOCCI ORGANISMS BE DESTROYED?

Yes, they can be destroyed by proper heat treatment. Chemicals also can destroy the organisms. However, the use of a chemical in each food product must conform with FDA regulations. Living bacteria on equipment can be destroyed by using sanitizing compounds after hot water and detergent scrubbing and rinsing.

Since staphylococci toxins are very heat-stable, and because many foods contain small numbers of staphylococci, every precaution must be taken to prevent additional contamination or growth.

This information on microbiology has been published as reference material. For further information, contact George J. Flick, State Technical Services, Food Science Department, Virginia Polytechnic Institute.