



State of Wisconsin
Department of Agriculture, Trade and Consumer Protection
Division of Food Safety

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FACT SHEET FOR FOOD PROCESSORS

Staphylococcus aureus

Background

Staphylococcus aureus is a Gram-positive cocci that exists in air, dust, sewage, water, milk, environmental surfaces, humans and animals.

Humans and animals are the primary reservoirs. Staphylococci are present in the nasal passages, throats, hair or skin of 50% or more of healthy individuals. This incidence is even higher for those who are in contact with sick individuals and hospital environments.

Some strains of *Staph aureus* are capable of producing a highly heat-stable toxin that causes illness in humans.

Significance

The *Staph aureus* organism is highly vulnerable to heat treatment and sanitizing agents. Therefore, its presence in processed foods or on food processing equipment is generally an indication of poor sanitation or handling.

Food handlers are usually the main source of food contamination in outbreak situations, but equipment and environmental surfaces can also be sources of contamination with *Staph aureus*.

Foods that require considerable handling during preparation and that are kept at slightly elevated temperatures after preparation are frequently involved in staphylococcal food poisoning.

Foods most frequently implicated include meat and meat products; poultry and egg products; salads such as egg, tuna, chicken, potato and macaroni; cream-filled pastries, cream pies and chocolate eclairs; sandwich fillings; and milk and dairy products.

Human illness is caused by ingesting the toxins formed in the food by some strains of *Staph aureus*, usually because the food has not been kept hot enough (>140° F) or cold enough (<41° F).

Symptoms are usually quite rapid (2-6 hours after ingestion) and include nausea, vomiting, abdominal cramping and prostration.

Testing

Testing of foods is performed to determine whether a food is a potential source of staphylococcal food poisoning and to demonstrate post-processing contamination, which is generally due to human contact or contaminated food-contact surfaces.

The presence of large numbers of *Staph aureus* organisms in a food may indicate poor handling or sanitation, but does not necessarily mean the food is capable of causing illness.

In foods suspected of cause staphylococcal illness, the isolated *S. aureus* must be shown to produce the necessary toxins.

Conversely, small numbers of *Staph aureus* populations at the time of outbreak testing may be remnants of large populations that produced toxins in sufficient quantity to have caused the food poisoning.

Prevention

Proper sanitation procedures to limit post-production contamination.

Proper food handling practices to limit contamination by handlers.

Proper post-production storage temperatures.