

FOOD POISONING OUTBREAK

Cheese Production Plant Salmonella javiana

What Happened?

In May, 1989 several confirmed cases of Salmonella javiana infection were identified in the mid-western U.S.A. Initial interviews with patients suggested the outbreak was associated with the consumption of a mozzarella cheese manufactured in a local cheese plant.

Laboratory test results of unopened packages of cheese produced in April from this cheese plant revealed the same strain of S. javiana as that found in patient samples. A recall of the cheese was initiated.

Some Background on this Cheese Plant

The implicated cheese plant was a large manufacturing facility licenced by state and federal regulatory agencies. All products were HTST pasteurized. A large portion of the cheese produced at this facility was routinely distributed to four other processing plants for cutting and shredding.

The Investigation at the Cheese Plant

During the investigation, no deficiencies in pasteurization were identified. However, several sanitary deficiencies were found, most notably excessive and unsanitary product handling by employees. As well, the cheese manufacturing equipment, because of poor equipment and plant design, was found to be highly susceptible to contamination by environmental sources. Interviews with production employees revealed that a large number had experienced gastrointestinal illnesses prior to the onset of the outbreak. Production employees also reported that in the weeks prior to the outbreak, increased emphasis on production had led to inadequate plant sanitation. Of note, after further **microbiological testing, it was found that cheese** cut or shredded at the other four plants had been cross-contaminated by contaminated cheese manufactured at the initial cheese plant.

Conclusion

The investigation at the cheese plant was never fully completed due to bankruptcy proceedings. The sporadic nature of the cheese contamination suggests the contamination occurred after pasteurization. While it was never confirmed, the likely causes of contamination were:

- 1) Unsanitary handling of the cheese by infected employees.
- 2) Contamination from the plant environment.

For the dairy plant manager, this incident highlights the importance of adequate plant sanitation and that poor operational practices can lead to contaminated finished product.

**For further information contact the Dairy Plant Specialist at Food Protection Services
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