

Multi-Use Tanks

A Food Poisoning Outbreak - Ice Cream

What Happened?

In September 1994, the Minnesota Department of Health began observing a rapid increase in the number of reported Salmonella enteritidis infections. Similar increases of these infections were also being reported from neighbouring states. Interviews with infected individuals showed a very high correlation of illness with consumption of ice cream manufactured in Minnesota. Samples of this ice cream from households of ill persons tested positive for Salmonella enteritidis. On October 9, 1994 the manufacturer issued a recall of all flavours, types and codes of ice cream produced at its Minnesota plant.

Some Background On This Ice Cream Plant.

The implicated product was Schwann's ice cream produced in Marshall, Minnesota. The plant is a large, modern manufacturing facility licenced by state and federal regulatory agencies. The plant produces a complete line of ice cream products and novelties with distribution across the U.S.A.

Cause of Contamination at the Ice Cream Plant.

During the investigation, it was found that some of the ice cream mix used in the Marshall plant was actually produced and pasteurized at another plant. The pasteurized mix was then transported to the Marshall plant using tanker trucks. However, this ice cream mix was not repasteurized after delivery by the tanker. The same tanker trucks used to carry the pasteurized mix were also used to carry raw, unpasteurized eggs. Raw eggs are a well-documented source of Salmonella. While the tanks were washed and sanitized between the raw eggs and the ice cream mix, some contaminated raw egg residue was left in the

tanker prior to loading the ice cream mix. In this way, the ice cream mix became contaminated by Salmonella enteritidis.

Could this Happen to You?

Using the same tankers or containers for transporting both raw and pasteurized product (without further processing) provided they are washed and sanitized between products is an acceptable practice in the U.S. BC Ministry of Health policy requires that product transported in a reusable tank, container, or tote must be pasteurized after receipt and prior to final packaging. Because reusable containers are used to carry a variety of products, both raw and pasteurized, they may contain pathogenic bacteria. As this outbreak demonstrates, cleaning and sanitizing cannot be relied upon to remove all traces of a contaminant in a container.

Conclusion

The financial implications of this outbreak are still unknown. Over 1000 cases in 28 states were confirmed and investigations involved several thousand more cases. Epidemiologists estimate this may have been the largest foodborne outbreak of salmonella ever in the U.S.A. involving about 224,000 people.

This outbreak illustrates the sensitivity of dairy products to even minute traces of bacterial contamination. Continuing vigilance by industry is necessary in ensuring the safety of dairy products.

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