
Targeted Food Surveillance on *Enterobacter Sakazakii* in Powdered Infant Formula

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Introduction

- *Enterobacter sakazakii* (*E. sakazakii*) is a pathogen that generally causes disease only in people with weakened immune systems. The bacterium can cause invasive infections (e.g., sepsis or meningitis) in infant. Neonates (≤ 28 days old) and infants less than 2 months of age, in particular pre-term infants, low-birth-weight infants (< 2.5 kg) and immunocompromised infants, are at greatest risk.
- As this bacterium can cause rare but fatal infections in infants, it has aroused concerns in many countries.
- Despite the source of *E. sakazakii* is not known in many cases of infant infection, increasing number of reports have suggested that powdered infant formula (PIF) is a vehicle for the infection.
- In view of this, the Centre for Food Safety (CFS) has conducted a targeted food surveillance project to assess the situation of *E. sakazakii* in PIF.

Types of sample

- The CFS has collected 100 samples of PIF from the local market for testing of *E. sakazakii*.
- Samples include PIF of 17 different brands.
- The sampled products are from different countries including:
 - Australia, Germany, Holland, Indonesia, Ireland, Japan, Korea, New Zealand, Spain and USA

Test results

- All results were satisfactory.

Advice for consumers

- The WHO recommends that infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health.
- For mothers who are not breastfeeding, the caregivers should:
 - ❑ Be alerted that PIF is not a sterile product and can be contaminated with pathogens that can cause serious illness.
 - ❑ Reconstitute PIF with water that is no less than 70°C (water left for no more than 30 minutes after boiling) and minimize the time from preparation to consumption.
 - ❑ Feeds prepared in advance should be cooled immediately after preparation and stored in a refrigerator. Reconstituted feed should be used within 24 hours of preparation and re-warmed immediately before feeding.
 - ❑ Re-warm reconstituted feed for no more than 15 minutes by placing in a container of warm water with occasional shake or swirl; the level of the water should be below the top of the bottle.
 - ❑ Wherever possible, commercially sterile ready-to-feed liquid formula should be used for infants at greater risk.

Advice for trade

- Controlling intrinsic contamination (i.e. contamination in PIF before opening) would help to decrease the risk for the bacterium
- The manufacturer should:
 - Implement preventive measures (such as Good Manufacturing Practice / Good Hygiene Practice and Hazard Analysis & Critical Control Point) as well as monitoring and environmental management programmes which cover all relevant elements including the processing environment, product contact surfaces and finished product.
 - Strengthen measures that further minimize the entry of microorganisms and avoid their multiplication, such as exclusion of water from the processing environment to the extent possible and feasible.
 - Communicate the risk reduction measures that the caregiver should follow for the safe preparation, handling and use of powdered formula on product label.