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

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# Background

- *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 ( $\leq 28$  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 *E. sakazakii* 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, a targeted food surveillance project conducted by the Centre for Food Safety (CFS) is continued this year to assess the situation of *E. sakazakii* in PIF.

# Types of samples

- The CFS has collected 100 samples of PIF from the local market for testing of *E. sakazakii*.
- Samples include PIF of 18 different brands.
- The sampled products are from different countries including:
  - Australia, Germany, Holland, Indonesia, Ireland, Japan, Korea, New Zealand and USA

# Test results

- All results were satisfactory. \*

\* According to the standard of Codex Alimentarius Commission, *E. sakazakii* should not be detected in PIF.

# Advice for caregivers

- 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 breastfed, they 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.

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# Advice for manufacturers

- Controlling intrinsic contamination (i.e. contamination in PIF before opening) would help to decrease the risk for the bacterium:
  - Implement preventive measures (e.g. 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.