## Enterobacteriaceae in Dehydrated Powdered Infant Formula Manufactured in Indonesia and Malaysia

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**Source:** <u>Journal of Food Protection®</u>, Volume 69, Number 12, December 2006, pp. 3013-

3017(5)

**Publisher:** International Association for Food Protection

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## **Abstract**

To determine the occurrence of *Salmonella* and *Shigella* in infant formula from Southeast Asia, 74 packages of dehydrated powdered infant follow-on formula (recommended age, >4 months) from five different manufacturers, four from Indonesia and one from Malaysia, were analyzed. None of the 25-g test portions yielded *Salmonella* or *Shigella*. However, further identification of colonies growing on selective media used for *Salmonella* and *Shigella* detection revealed the frequent occurrence of several other *Enterobacteriaceae* species. A total of 35 samples (47%) were positive for *Enterobacteriaceae*. Ten samples (13.5%) from two Indonesian manufacturers yielded *Enterobacter sakazakii*. Other *Enterobacteriaceae* isolated included Pantoea spp. (n = 12), *Escherichia hermanii* (n = 10), *Enterobacter cloacae* (n = 8), *Klebsiella pneumoniae* subsp. *pneumoniae* (n = 3), *Citrobacter* spp. (n = 2), *Serratia* spp. (n = 2), and *Escherichia coli* (n = 2). To our knowledge, this is the first report to describe the contamination of dehydrated powdered infant formula from Indonesia with *E. sakazakii* and several other *Enterobacteriaceae* that could be opportunistic pathogens. Improper preparation and conservation of these products could result in a health risk for infants in Indonesia.

**Document Type :** Research article

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