
Abstract No. 29

PaperTitle **Isolation of Enterbacter Sakazakii and Other Enterobacteriaceae from Powdered Infant Formula Milk, Powdered Milk and Whey, Manufactured in South Africa**

Main Author **Mofokeng Lucas Mr**

Presentor **Mofokeng Lucas Mr**

Tshwane University of Technology Department of Biotechnology & Food Technology Private Bag X680, Pretoria SOUTH AFRICA joostepj@tut.ac.za

Co-Authors

ABSTRACT

Enterobacter sakazakii is an emerging pathogen associated with neonatal meningitis. Due to neonatal infections, E. sakazakii is perceived as being associated with powdered infant formula (PIF) and milk powder. Furthermore HIV-positive mothers use PIF and powdered full cream milk as a substitute for breastfeeding in order to minimize the risk of transmission of the HI-virus. The aim of this study was therefore, to detect the presence of E. sakazakii and other members of the Enterobacteriaceae family from PIF, powder milk and whey powder in South Africa.

The presence E. sakazakii was tested for using a regime which comprises pre-enrichment (buffered peptone water), enrichment (Enterobacteriaceae enrichment broth), isolation on chromogenic agar and identification using API 20E strips. A total of 182 samples (40 powdered milk, 122 PIF and 20 whey powder) were tested for the presence E. sakazakii. In addition, total plate counts and total Enterobacteriaceae plate counts were conducted.

E. sakazakii was detected in 2/40 powdered milk, 0/122 PIF and 0/20 whey powder samples. The low prevalence of E sakazakii may be expected due to the quality control and processing parameters involved. Other Enterobacteriaceae members isolated included Klebsiella pneumoniae, Escherichia coli, Enterobacter cloacae and Klebsiella oxytoca. The presence of E. sakazakii in powdered milk potentially poses a high health risk to infants, since powdered milk is prepared using cold water. For this reason, sufficiently hot water should also be used when preparing powdered milk for infant feeding, similar to the method used in preparing PIF.