

***Bacillus* and *Paenibacillus* species associated with extended shelf life milk during processing and storage**

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**Abstract**

Characterisation of spore formers associated with extended shelf life milk was performed by analysing the bacteriological quality of milk samples collected at various processing stages and during storage. Isolates were identified with MALDI -TOF -MS . Milk had spore counts  $<2 \log_{10}$  cfu/mL and  $4 \log_{10}$  cfu/mL during processing and storage, respectively. *Bacillus pumilus* dominated the bacterial population. Bacterial species were inoculated into sterile milk for a shelf life study, and the population change was observed over 42 days at 7 °C. Although the extended shelf life milk process was effective in reducing bacterial counts and species diversity, the presence of *Bacillus cereus* shows a potential safety problem in extended shelf life milk.