

## ABSTRACT

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### The Microbial Spoilage of Chocolate Milk

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Chocolate milk production at a local Milk Processing Plant showed signs of spoilage in the form of swelling and blowing of packs during storage of the final product, prior to distribution.

Using the Plate Count Method, the swollen packs showed consistently high bacterial counts, whereas, the non-swollen packs showed negligible bacterial counts. Two different bacterial species, a gram positive coccus and a gram negative rod, were prevalent in the swollen packs but were never found in the non-swollen packs. That these isolates were indeed spoilers was confirmed by the fact that the inoculation of sterile milk packs with either isolate resulted in blown packs, and the rate of pack explosion increased with increased inoculum. Both organisms could spoil other milk based products and although they did not form endospores, were capable of tolerating a temperature of 60° for 30 min. However, they were susceptible to 30% Hydrogen Peroxide which is used to treat the filling machine before the packs are filled.

The temperature tolerance and the public health

significance of the spoilers must be regarded with concern.

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