



CRONOBACTER SAKAZAKII & DAIRY

“Cronobacter sakazakii is a species of Gram-negative rod bacteria that are non-spore forming, yellow-pigmented anaerobes belonging to the family Enterobacteriaceae.”

It's known for surviving in unusually dry conditions and can also thrive at elevated temperatures making it one of the most thermotolerant species of the Enterobacteriaceae family.

Although it has been isolated as a coliform in a variety of foods such as cheese, meat, herbs, spices, dried foods and vegetables, one of the main sources is the dairy industry, particularly powdered infant formula (PIF) and reconstituted powdered infant formula (RIF).

Cronobacter sakazakii can survive in dry environments such as those found in PIF for over 2 years and is capable of rapidly reproducing when reconstituted with water. Contamination of PIF occurs when there has been a breach in sanitation procedures within the manufacturing process. Any such breach is likely to result in a major issue for any NZ producer exporting to China.

Cronobacter sakazakii cells are mostly present as biofilms which makes their elimination difficult. Some strains have been identified as biofilm on stainless steel, glass, polyvinyl chloride, polycarbonate, silicone and feeding tubes.

Good manufacturing process (GMP) using nitric acid and caustic soda within clean CIP systems is one of the most common control methods, but other disinfection procedures need to be utilised with the relevant chemical compounds in areas not covered by these procedures.

AWS Group has a wide range of sanitisers that can be used to control Cronobacter sakazakii including Q-Bond Plus. This amino-silane is a bonded non-leaching sanitiser and has been independently tested at AUT School of Science. A modified version of JIS Z2801 was utilized and demonstrated that stainless steel treated with Q-Bond Plus gave a >log₆ reduction in viable cells compared to non-treated samples.



Pictured above: AWS Group's Q Bond Plus



Pictured above: Stock imagery of dairy beverage production line

