



## PREMIUM LOW-SPORE PRODUCTS MADE CONSISTENTLY

A Solution Story

Quality Enhancement Program by Ecolab helped powdered milk customer consistently achieve export-quality requirements

### CHALLENGES

- Only able to meet **low-spore infant formula export requirements** of <1000 cfu/g during the first 2-3 hours of production
- **Daily inconsistent quality results** put contractual agreements at risk
- Typically achieved about 50% of their monthly goal of 4 million lbs./1.8 million kg. of low-spore powdered milk, **reducing their ability to capture the market premium**, enter new markets and expand distribution channels

### SOLUTION

The plant conducted a five-day trial of the new Quality Enhancement Program by Ecolab on various heat-treated equipment with overall clean-in-place time unchanged.

### RESULTS


Extended low-spore production


**150%**   
over the **five-day trial**

Produced consistently higher-quality, low-spore powdered milk for export infant formula **\$15M<sup>USD</sup>** approximate incremental sales 

Achieved low-spore quality target of **<1000 cfu/g** for the **entire 20 hour run** 



**Increased production time** through reduced need for visual inspections and manual cleaning of harborage areas 

**Created cleaner, shinier surfaces** 

by **removing** cooked-on fats, carbohydrates and protein soils



SOLUTION

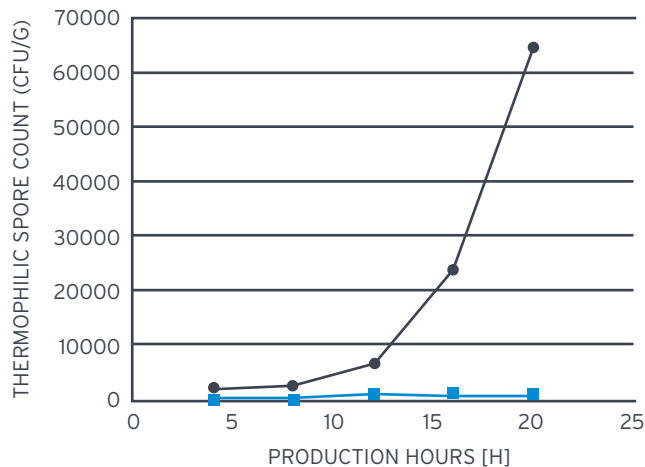
Technology  
+  
People  
=  
EXPONENTIAL  
OUTCOMES

Quality Enhancement Program by Ecolab is a proprietary offering that combines advanced surface cleaning and sanitizing supported by application expertise to help customers consistently produce higher-quality low-spore products that demand premium pricing, while optimizing production.

This **proprietary program offers an enhanced clean-in-place process** that is...

- 1) Achieved with a **pre-treatment** step that helps remove tough dairy soils and biofilm from heated surface process equipment, resulting in cleaner, shinier surfaces that can be more easily sanitized
- 2) Enhanced with a fast-acting **sanitizing step** that helps kill spores and vegetative cells of bacteria, yeast and molds (sporicidal label claims pending)
- 3) Delivered with **World Class Service** and **expertise**

Quality Enhancement Program by Ecolab is for use on dairy and food processing stainless steel surfaces that may impact finished product quality. The unique program was developed to help reduce spore regeneration and growth associated with heat-treated equipment, and is proven to enhance quality in many applications, including milk protein concentrate, whole and skim milk powders, whey powders and cheese manufacturing.



Proven in field and lab tests as more effective than traditional cleaning and sanitizing offerings at 1) reducing spore counts and 2) extending production time of high-quality products while remaining within the range of acceptable performance metrics.

● BASE LINE  
■ QUALITY ENHANCEMENT PROGRAM BY ECOLAB

**ECOLAB**<sup>®</sup>  
Everywhere It Matters.<sup>™</sup>

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