Cleaner Systems, Safer Employees, Enhanced Wastewater: The Power of Exelerate Enzymatic CIP at a Large Cream Cheese Plant

CASE STUDY

BACKGROUND

In the heart of Texas, a major cream cheese production facility faced a challenge familiar to many in the dairy industry. Their operation, focused primarily on cream cheese, depended on a complex network of culture tanks and mix tanks to keep production running smoothly. Their reliance on chlorinated-alkaline cleaning products was creating more than just sparkling tanks—it was generating wastewater challenges due to high pH, sodium, chlorine, and total dissolved solids (TDS). This impacted their ability to land spread treated water for field irrigation, requiring additional treatment and posing compliance risks. The situation was further complicated by persistent film build-up inside tanks, which required rewashing or additional manual cleaning in some cases, and the ever-present risk of handling hazardous chemicals that demanded extensive PPE and constant vigilance.

SOLUTION

Recognizing the need for a safer and more effective solution, Ecolab introduced Exelerate Enzymatic CIP 100 to the facility. This innovation marked a departure from traditional cleaning chemistry, offering the first enzymatic cleaner designed for reuse CIP systems. The product's unique formulation combined enzymes with high-powered additives to specifically target dairy proteins, mineral scale, and to tackle fatty soils. With a near-neutral pH and a chlorine- and caustic-free profile, Exelerate Enzymatic CIP 100 not only reduced safety risks, but also offered a streamlined conversion process through conductivity-based dosing, making the transition seamless for operators. Remarkably, within just the first few washes, the team observed a clear difference: the stubborn white film that had plagued their tanks was gone, and cleaning performance was visibly improved.

RESULTS

The impact of the innovation quickly became evident. Across all trial systems, the enzymatic cleaner eliminated the residual soil film, delivering a level of cleanliness that had previously required manual intervention or additional washes. Chemical usage dropped by 21%, allowing the plant to maintain high cleaning standards while reducing costs and environmental load. Operational efficiency soared as post-rinse times were cut, generating 22% savings that, when annualized, translated to 167 hours less spent on CIP and a staggering 606,000 gallons of water saved each year. Wastewater quality improved dramatically, with yearly estimates of up to 61% less sodium and a 82% reduction in TDS, relative to the effluent effect from chlorinated-alkaline chemistry.

eROI℠ by Ecolab

ANNUAL VALUE

ASSET PROTECTION

$34,000

Saved on gasket replacements

PRODUCTIVITY

167 hours

CIP time reduced by 22%

WATER

606,000 gallons

Conserved annually

COMPLIANCE

82% TDS reduction

Total Dissolved Solids (TDS) reduction
Annual estimate vs prior chemistry

TOTAL VALUE DELIVERED

200%

Annual ROI

eROI℠ by Ecolab

RESULTS CONT.

Reductions were also noticeable in chlorine and phosphorus, making compliance with irrigation standards far easier. Perhaps most importantly, the shift to a safer, less hazardous cleaning process meant operators could work with greater confidence and less PPE, fostering a more positive and productive environment on the plant floor.

CONCLUSION

Exelerate Enzymatic CIP 100 didn't just clean tanks; it transformed operations. By delivering superior cleaning, operational savings, and a safer workplace, the innovation proved its value not only for this cheese-making facility, but for any dairy or food processing facility seeking to balance performance, safety and sustainability. The story of this trial is a testament to how targeted innovation can solve complex challenges and open new possibilities for the dairy industry.

Wastewater Impact: Annual Estimates vs. Prior Chemistry

SODIUM

↓ 69%

≈ 15,000 lb/yr removed

CHLORATE

↓ 100%

≈ 3,560 lb/yr removed

PHOSPHORUS

↓ 100%

≈ 277 lb/yr removed

Shown as environmental impact; site monetization varies

The results in this case study are based on customer-specific data from 2025. The savings values are estimated by Ecolab based in part on assumptions and limitations intended to reflect typical industry practices and feedback from customers. It is not a guarantee of performance. Actual results will vary for other businesses based on factors and circumstances in their operations.

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