Ecolab’s next-generation cleaning program helped a European dairy customer reduce CIP cleaning time, increase productivity and improve effluent water conditions.

**CHALLENGES**

- Inefficient cleaning of membranes resulting in decreased productivity and throughput of whey
- Extended CIP cleaning cycles that wasted time, water and energy
- High effluent load causing stress on the waste water plant

**SOLUTION**

Ecolab conducted a trial of its new Ultrasil™ MembraneCARE 2.0 during the CIP cycles at two UF sweet whey processing systems. This next-generation cleaning program is designed for dairy manufacturers producing premium-quality products. The program expertly combines newly developed alkaline, acid and patent-pending enzyme cleaners which reduced CIP cycle time, improved cleaning results, effluent profile and productivity, while saving water and energy.

**RESULTS**

- Decrease each CIP cycle by 15 minutes, offering additional capacity worth $140K USD per year for the two systems
- Phosphate by 97% & Nitrate by 93% in effluent water
- Increase production flux by 14%, worth >$656K USD per year for the two systems

Ultrasil™ MembraneCARE 2.0 helped this customer...
Ecolab’s Ultrasil™ MembraneCARE 2.0 is a proprietary CIP membrane cleaning program, designed for dairy manufacturers producing premium-quality products, that expertly combines alkaline, acid and patent-pending enzyme cleaners, all of which are biodegradable as used. These innovative chemistries are formulated without Phosphoric Acid, Nitric Acid, NPE, EDTA and Chlorine, which minimizes environmental impact.

At this customer’s sweet whey processing plants in Europe, Ecolab’s new membrane cleaning program significantly improved productivity almost immediately after changeover. After the first CIP cleaning cycle, the membranes were found to be more effectively cleaned in a shorter amount of time. Enhanced cleaning helped production flux improve by 14% resulting in $656,000 USD annually in incremental profits. In addition, the CIP cycle time was decreased by 15 minutes, offering additional free capacity and flexibility valued at $140,000 USD per year. By optimizing CIP membrane cleaning, Ecolab helped this customer meet the growing demand for high-quality dairy products and their overall growth goals.

Ecolab is the global leader in membrane cleaning and care. A dedicated team of scientists work at the company’s Center of Excellence for Membrane Technology in Monheim, Germany. They collaborate with Ecolab R&D and field technicians globally to ensure successful deployment of new innovations. At this plant, Ecolab’s technical specialists provided personalized service and on-site training to help ensure the safe and proper use of the chemistries and demonstrate how this innovative cleaning program can help achieve productivity goals and extend asset life, while saving time, energy, water and waste.