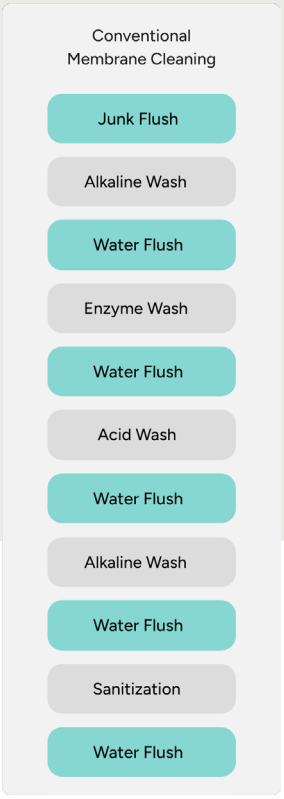
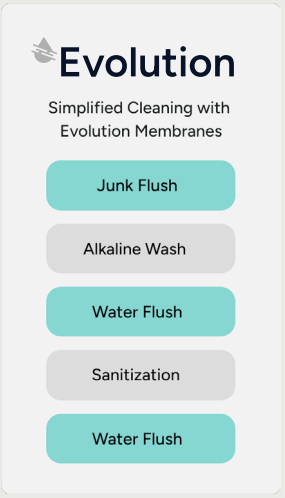
Concentrating protein?
Cut cleaning costs in half.

How many steps in a “four-step” membrane cleaning program?

Seems like a silly question. Or a riddle. But when the flushing steps are counted, **typical membrane cleaning programs become 11 steps or more.**

That’s a lot of water and wastewater to treat, and a prime opportunity to reduce costs.





Anti-fouling technology

ZwitterCo introduced superfiltration (SF) membranes in 2021 for a variety of industrial applications, from bioprocessing to dairy wastewater, and demonstrated the anti-fouling nature of the membranes. Industrial RO membrane elements were introduced next and further proved that the membranes experience full performance recovery, enable shorter cleanings, and save significant operating expenses. Following this success, the company began exploring food and dairy processing applications.

ZwitterCo introduced its first FDA-compliant spiral SF membranes in 2024 and developed a Protein Concentration Membrane (PCM) available in 2025. The company is looking toward food-grade RO and additional regulatory certifications next to expand its dairy capabilities.

Sustainability... at a lower cost

Evolution membranes are a simple direct replacement for conventional membranes and can **cut cleanings costs by >50%** by reducing chemicals, make-up water, wastewater, and energy. And every step removed from the cleaning program will shorten the daily cleaning program by about an hour – time that can be spent on other priorities in the plant.

By switching to ZwitterCo Evolution membranes and simplifying cleaning programs, protein concentration systems can save **over $1,300 per year** per 8038 membrane element.

Save >50% on Cleaning

by switching to ZwitterCo membranes

ZwitterCo can help you reduce:

- Cleaning chemicals
- Make-up water
- Wastewater generated
- Energy
- Cleaning time

Fast Facts:

- Easy direct replacement
- No CAPEX
- No system modifications
- Patented, zwitterionic chemistry

ZwitterCo

The most cleanable membrane

Modeled economic savings

With a faster and simpler cleaning program, Evolution membranes enable savings of **over $1,300 per element per year.**

Your savings will vary depending on system size, tank and hold-up volumes, flush volume, and water, wastewater treatment, and chemical costs.

Cleaning Program	Conventional UF Elements	Evolution Elements
Alkaline + Surfactant + Chlorine Wash	✓	✓
Enzyme Wash	✓	✗
Acid Wash	✓	✗
Alkaline + Surfactant + Chlorine Wash	✓	✗
Sanitization	✓	✓
CIP Operational Costs		
Total Chemical Cost ($/day)	$498.79	$146.48
Total Water Cost ($/day)	$187.35	$93.69
Total Wastewater Treatment Cost ($/day)	$998.48	$437.11
Total CIP Cost ($/day)	**$1,684.62**	**$677.28**
Total CIP Cost ($/year)	**$613,203**	**$246,529**
Net Savings in CIP Costs ($/year)		**$366,674 Total ($1,309 per 8" Spiral)**

Benefits of Evolution membranes

Reduced Operating Costs

- ✓ Lower chemical costs
- ✓ Decreased water usage
- ✓ Less wastewater to treat
- ✓ Lower energy requirements

Sustainability

- ✓ Decreased chemical use
- ✓ Less water and energy usage
- ✓ Less wastewater generation
- ✓ Achieve corporate sustainability targets

More Uptime

- ✓ Shorter cleaning program
- ✓ Increased production
- ✓ Frees operators to work on other priorities

Lowest total cost of ownership

Talk with a ZwitterCo Technical Expert

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