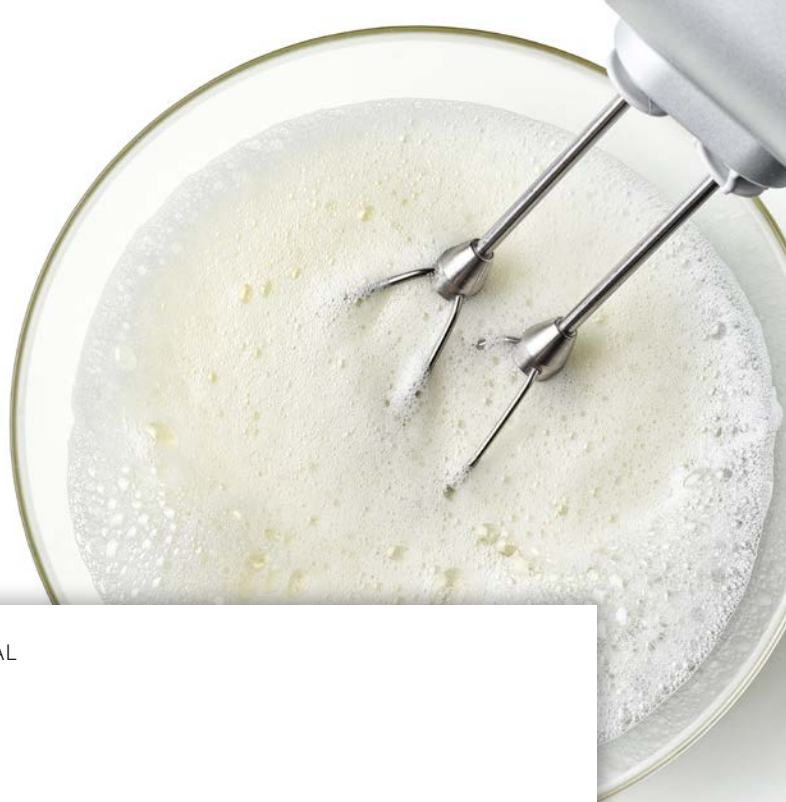




MUNZING TECHNICAL INFORMATION | GLOBAL

Ultrafiltration in Dairy Processing

MAGRABAR® Defoamers

Overview

- Foam is a common issue during dairy processing due to the high protein content found in cheese and whey protein concentrate/isolate products.
- Choosing the right **MAGRABAR®** defoamer will minimize foaming without negatively impacting ultrafiltration membranes.

Evaluating the Impact of Defoamers on Ultrafiltration (UF) Membranes

- Multiple **MAGRABAR®** defoamer types were evaluated in a real-world whey protein concentrate (WPC) Ultrafiltration Process.
- No chemical or physical damage to the UF membrane was observed.
- Membrane fouling was similar or less than no defoamer present.
- The use of a **MAGRABAR®** defoamer may lead to greater liquid throughput thus increasing overall productivity.

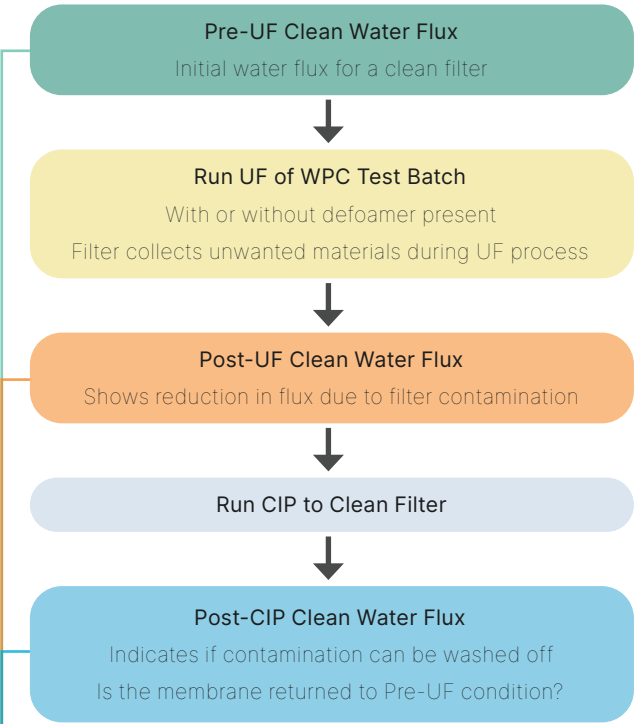


Case study

Performance Comparison

Defoamer Impact on Ultrafiltration Membranes

Ultrafiltration (UF) Evaluation Process



Test Results

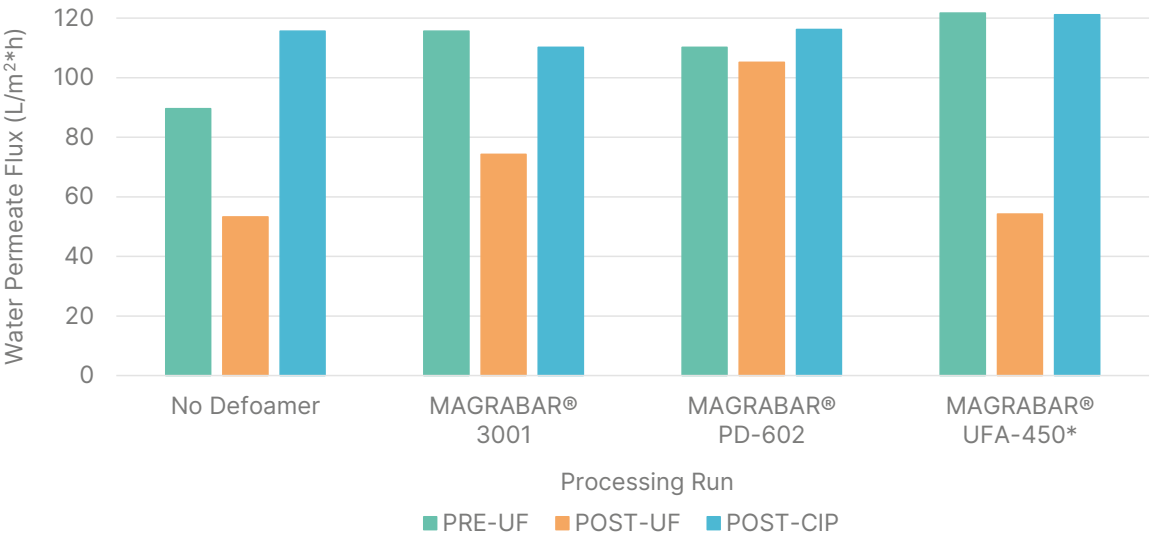
- Whey protein concentrate at 50-60% protein
 - UF Membrane – 10 kDa Polyethersulfone (PES)
 - Defoamers tested at 200ppm
 - 4 hour run time at 60°F
- *Study performed by an independent 3rd party dairy processing test center

Foam Control During WPC UF Processing

MAGRABAR® Defoamer	Average Foam Height (mm)
No Defoamer	7.6
MAGRABAR® 3001	No Foam
MAGRABAR® PD-602	No Foam
MAGRABAR® UFA-450*	No Foam

*Available in North America

Ultrafiltration Normalized Clean Water Flux



Production flux and membrane efficiency was not harmed by MAGRABAR® defoamers
Membranes were reinstated to original working condition following defoamer trials

