Standard Cleaning Guidelines

The following procedure is a general guideline for the cleaning/sanitation of spiral elements for most food and dairy applications. Depending on individual process streams, equipment and process time some variations in cleaning procedures may be required for optimal cleaning results. Please consult a qualified chemical supplier for application specific cleaning regimes.

Improper cleaning sequence, chemical concentration or abdnormal temperatures/pH/ pressure profiles can significantly reduce membrane life and possibly void any warranties offered on the element(s). If you have ANY questions or concerns about your cleaning regime, please contact Synder Filtration immediately.

Concentrate Displacement and Initial Flush

1. Flush the remaining concentrate in the system back to the concentrate tank or to drain.
2. Using clean water heated to 122°F/50°C (or 104°F/40°C for NF), adequately flush the system in non-recirculation mode to remove any remaining build-up. The retentate and permeate should appear to be clean after this step.
3. Perform a complete Clean-In-Place (CIP) immediately after the initial flush per the following.

Caustic Wash

1. Circulate warm clean water (122°F/50°C, or 104°F/40°C for NF) through the system under standard pressure and flow parameters.
2. Add caustic SLOWLY to achieve a pH of 10.8-11.0. DO NOT EXCEED pH 11.0 (pH 10.5 for NFW/NFG/NDX/PZ/PY/PX).
3. Circulate caustic solution for 30 minutes.
4. Flush the system to drain with clean, warm water (same temperature as before).

Acid Wash

1. Circulate warm clean water through the system under standard pressure and flow parameters.
2. Add a sufficient amount of acid SLOWLY to achieve a pH of 2.0-2.2. DO NOT EXCEED pH 2.0 (pH 3.0 for NFW/NFG/NDX/PZ/PY/PX).
3. Circulate acid solution for 30 minutes.
4. Flush the system to drain with clean, warm water (same temperature as before).

Sanitation (Caustic/Chlorine Solution) - FOR UF/MF

1. Circulate warm clean water through the system under standard pressure and flow parameters.
2. Add caustic SLOWLY to achieve a pH of 10.8-11.0. DO NOT EXCEED pH 11.0 (pH 10.5 for NFW/NFG/NDX/PZ/PY/PX).
3. Add chlorine SLOWLY to achieve constant level of 150 ppm. DO NOT EXCEED 180 ppm.
4. Circulate the caustic/chlorine solution for 20 minutes.
5. Periodically check and maintain a chlorine concentration of 150 ppm.
6. Flush the system to drain with clean, warm water (same temperature as before).
   For NF, dechlorination recommended.

Synder Filtration believes the above information and data herein to be accurate. However, said information is offered in good faith, but without guarantee of results since the conditions and methods used are beyond Synder Filtration's control. Synder Filtration assumes no liability as to the application of the previously mentioned data.