

CLEANING FILTER MEMBRANES WITH SCOTTZYME® SPECTRUM

This guide is for beverage producers using crossflow filters or membrane filter cartridges. This guide outlines enzymatic cleaning of membranes during or following difficult filtrations.

When can I clean my membranes with SCOTTZYME® SPECTRUM?

1. **FOLLOWING FILTRATION:** Following a difficult filtration, rinse your membranes in cool water but *do not* yet clean with caustic or do a hot sanitization. Proceed with the enzyme protocol.
2. **DURING FILTRATION:** Should you need to clean your membranes during filtration due to premature pressure building, simply empty the filter and rinse with cool water before continuing with the enzyme protocol.



Why shouldn't I do a sanitization before this protocol?

When you heat up membranes by way of steam or hot water (>160°F), protein and other colloidal material gets baked into the membrane matrix such that the enzyme cannot remove them. Thus, you want to do this protocol before a steam or hot water treatment.

Crossflow Protocol:

1. Ensure you have first rinsed your membranes with cool water only.
2. Start by preparing water at 105 - 120 °F. Do not exceed 130°F as the enzyme will be less effective. Prepare enough water to cycle through your filter.
3. Acidify the solution to pH 4.0-4.5. Typically, a 0.2%-0.3% by weight addition of citric acid should suffice, depending on your starting pH.
4. Add [SCOTTZYME® SPECTRUM](#) to this solution at the dosage of 0.75 – 1 mL/L.
5. Run the solution through the system in a closed loop in either *rinsing* or *cleaning* mode. The speed will increase as the build-up is released. Watch the temperature as this procedure can increase it.
6. At 125 degrees, shut the system off and allow it to sit for 30 minutes.
7. Rinse and continue filtration or complete a sanitization as needed.

Membrane Filter Cartridge Protocol*:

1. Complete steps 1-4 of the crossflow protocol above.
2. Run the enzyme solution through the pre-filter and membrane housing with the cartridges intact. Watch for the differential pressure to decrease.
3. Once full, let the system sit for 30 minutes.
4. Complete a forward flush with tepid water, drain, and continue filtration or complete a sanitization as needed.

*IMPORTANT: Do not exceed the maximum differential pressure as indicated by your cartridge manufacturer, especially at the higher temperatures of this protocol.