

HS LF-1 POOR PRODUCT QUALITY

Be sure to check the calibration of the salinity tester that you are using before proceeding.

Membranes are not an exact science, and two identical systems will have different product quality. World health standards deem water of up to 1000 PPM of total dissolved solids acceptable for drinking consumption. The United States Environmental Protection Agency sets 500 PPM as their recommended level. Factors that could affect water quality are addressed below.

1. **LOW SYSTEM FLOW OR PRESSURE** will equate to lower product quality (higher PPM). Each Spectra watermaker is designed to run at a specified feed flow and pressure. This data is available in Bulletin No. MISC4.
2. **DAMAGE TO THE MEMBRANE** by chlorine contamination. Flushing the system with chlorinated water will irreparably damage the membrane. Charcoal filters are used to absorb any chlorine which might be present in flush water. They must be of proper specification to be suitable. There is no practical test for chlorine damage except the process of elimination of other causes.
3. **DIRTY OR SCALED** membranes. A dirty (foreign material), scaled (mineral deposits), or contaminated (bacterial/fungal growth) membrane can result in poor water quality and abnormal operating pressures. If operating pressures are above normal, cleaning is indicated. If the system pressures are within normal operating range, cleaning may have little result. Cleaning is no better for a membrane than it is for your clothes. Avoid cleaning as a diagnostic tool.
4. **MECHANICAL LEAKAGE** within the membrane pressure vessel or Clark Pump. An unlikely but possible cause of poor water quality is a failed o-ring or physical crack in a pressure vessel end cap. An internal leak in the Clark Pump will cause lower membrane pressures, and therefore higher product salinity and lower product output. Check bulletin "CP-5 Clark Pump Checkout" for more information.

If system flow (product plus brine) is to specification, the membrane is clean, the product flows are consistent with the system flow, and the water quality is still not acceptable then replacement of the membrane is indicated. See "HS-LF2 Flow Check Shur Flo" or "HS-LF7 Flow Test Vane Pump" for instructions on checking flow rates and pressures.

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