

THM Removal With Liqui-Cel® Membrane Contactors

Many water processing systems are designed to reduce the total oxidizable carbon compounds (TOCs) present in the water. Trihalogenated methane compounds (THMs) are common contaminants in water and are often a major component of TOC measurements. THMs often result from the use of chloramines by municipal water treating plants. The presence of these compounds can adversely affect downstream processes that require high purity water. For example semiconductor manufacturing sites can experience reductions in product yields in the presence of THMs. Therefore removal of THMs can increase product yields and thereby increase profits.

Membrana recently conducted THM removal pilot trials at a semiconductor site. These trials confirmed that Liqui-Cel® Membrane Contactors are very effective in removing THM compounds. Based on this data and other operating experience, commercial systems can be designed to remove up to and exceeding 95% of THM compounds (specific results will depend on THM composition and actual operating conditions). Membrana now has several systems in operation that were installed specifically to remove THMs. These systems have been operating successfully for over a year. In addition to THM removal, other volatile compounds can be easily removed using Liqui-Cel® Membrane Contactors.

Treating systems utilizing Liqui-Cel® Membrane Contactors offer several distinct advantages over existing technologies. Some of these advantages are:

- Modularity – Membrane systems are inherently modular. This provides operational flexibility in that the system can be easily and economically adjusted to accommodate process changes.
- Small footprint - Liqui-Cel® Membrane Contactors can be packaged into compact configurations. In addition systems can be custom designed to fit into existing space constraints. Point-of-use systems can also be designed.
- Ease of operation – With almost no instrumentation, Liqui-Cel® Membrane Contactors are very simple to operate. This minimizes manpower requirements.
- Simple and inexpensive testing – Small Liqui-Cel Membrane Contactors can be used to pilot the removal of THMs and determine the final number of contactors needed.

For more information on reduction of TOC levels in water please contact your Membrana representative.

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