Microbial contamination of process equipment can affect biopharmaceutical, pharmaceutical (solid and liquid dose), medical device, dietary supplement, active pharmaceutical ingredient, cosmetic and other regulated and non-regulated industries. Microbial contamination, if not eradicated from the system prior to the next manufacturing batch of product, can impact the production batch as well as subsequent batches.

A Complex Challenge
In nature and in process systems, microorganisms rarely exist as single cells but rather as a community of microbes (single or multiple species) attached to an environmental surface, encased in a protective organic matrix called a biofilm. The matrix of microbially derived biopolymers, referred to as extracellular polymeric substances (EPS), is a key element to the microorganisms’ survival. EPS is a complex mixture and composition can vary greatly. The development and presence of the EPS is very important in increasing the microorganism’s resistance to environmental stresses, biocides and cleaning agents. Therefore the removal of the EPS prior to sanitization or disinfection is critical.

STERIS Can Help
Our formulated detergents, disinfectants, application experience, and technical support can help your company:
- Optimize your cleaning and disinfection program
- Maximize production uptime
- Support validated products and processes

The STERIS Solution
The general recommendation that has been effective in removing and/or controlling microbial contamination is a 3-part process:
- Determine the cleanability of the system.
- Determine the cleaning parameters to remove the process soil, microbial soil and any water scale or rouge on the surface.
- Disinfection/sterilization of the equipment and associated piping using a product with antimicrobial efficacy claims against the target microbe or microbes associated with the contamination event.
STERIS Life Sciences formulated chemistries are designed for your most difficult cleaning and disinfection challenges. Each product is supported by our industry-leading technical support staff as well as an extensive documentation package to help facilitate your applications.

Products and Services

Formulated Detergents
STERIS detergents are designed for your most difficult cleaning challenges. They employ multiple cleaning mechanisms such as wetting, solubility, dispersion, emulsification, hydrolysis and oxidation which work together to penetrate, dissolve, and rinse away product and microbial residues.

Alkaline Detergents
Alkaline Detergents are used to efficiently remove organic residues prior to sanitization or disinfection.

Disinfectants and Liquid Sterilants
Once the protective EPS is removed, quaternary ammonium disinfectants and/or sporicides are applied to provide assurance of a disinfected system.

Application Support
A highly qualified, industry-recognized team of chemists, microbiologists, and engineers is available to offer product and process consultation for biofilm prevention and remediation. In addition to our years of hands-on experience with these applications, we have an extensive library of technical tips, laboratory reports, analytical methods, and other documentation to support your application development and validation needs. For more information about this application, please contact your local Account Manager or visit our website at: www.STERISLifeSciences.com

About STERIS Corporation
STERIS Corporation is a leading provider of infection prevention and surgical products and services, focused primarily on critical healthcare, pharmaceutical and research markets around the world. The Company supplies a broad array of equipment, consumable and service solutions that help assure productivity and quality. The Company is listed on the New York Stock Exchange under the symbol STE. For more information, visit www.steris.com.

STERIS has a comprehensive offering of detergents, disinfectants, skin care products and sterility assurance products that support your needs. We also have world class technical support to design the most effective cleaning program for your facility.

STERIS Corporation
5960 Heisley Road
Mentor, OH 44060
USA
T +1 800 444 9009

STERIS Offices Worldwide

<table>
<thead>
<tr>
<th>Region</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>+65 (0) 68 41 7677</td>
</tr>
<tr>
<td>Canada</td>
<td>+1 800 444 9009</td>
</tr>
<tr>
<td>France</td>
<td>+33 (0) 2 84 85 40</td>
</tr>
<tr>
<td>Germany</td>
<td>+49 (0) 221 466120</td>
</tr>
<tr>
<td>Italy</td>
<td>+39 (0) 2 21303 424</td>
</tr>
<tr>
<td>Latin America</td>
<td>+1 800 444 9009</td>
</tr>
<tr>
<td>Spain</td>
<td>+34 (0) 916 685 920</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>+44 (0) 1256 840400</td>
</tr>
</tbody>
</table>

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