Peracetic acid (PAA) is an ideal antimicrobial agent due to its high oxidizing potential. PAA is used for high level disinfection and sterilization in healthcare facilities. Unfortunately, PAA is commonly used in concentrations harmful to employees if exposed. ChemDAQ is the leader in environmental monitoring of antimicrobial agents and disinfectants like PAA.

Given the known health affects from exposure to PAA, the EPA has established exposure limits based on the toxicity to humans and OSHA / ACGIH have established exposure limits for its’ two ingredients, hydrogen peroxide and acetic acid.

Continuous environmental monitoring protects employees from acute and chronic health affects by recording the toxic concentrations in real time and providing alerts for proactive protection.

A continuous monitoring system coupled with safe work practices and a comprehensive education program are the best ways to assure employee safety and maximize productivity.

At ChemDAQ, we are committed to helping you protect what matters most.

Overview

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Steri-Trac® Area Monitors

The Steri-Trac PAA Area Monitor displays real-time PPM concentrations and annunciates alarms when exposure levels reach pre-set levels.

Large tri-color LED display with 2 user-defined alarm thresholds:
- Low alarm results in a flashing yellow display and pulsing alarm horn.
- High alarm results in a flashing red display and continuous alarm horn.

Our exclusive Sensor Calibration/Exchange Program (SXP®) — part of ChemDAQ’s sensor usage agreement — virtually eliminates maintenance by providing factory calibrated PAA sensors to clients at regular intervals.

DAQ® Central Monitoring System

ChemDAQ’s DAQ® Central Monitoring System is a PC-Based data acquisition and management system. Steri-Trac Area Monitors are complete, stand-alone gas monitoring instruments and the DAQ is an integral part of a multi-point, multi-gas system. The DAQ provides features like real time tracking and display of time weighted averages (TWA) such as the OSHA PEL. The DAQ provides a centralized view of the entire system, including automatic record keeping and advanced reporting capability.

Finally, the Steri-Trac’s modular design makes it easy to custom configure an installation to meet each facility’s specific needs.
## Peracetic Acid
### Summary of Health Hazards

<table>
<thead>
<tr>
<th>Sterilant Gas</th>
<th>Exposure Limits</th>
<th>Health Hazards</th>
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</table>
| Peracetic Acid (PAA)   | **Acute Exposure Guideline Levels (EPA)**<sup>1,3</sup> (page 28)               | **Primary Irritant**<sup>4</sup>  
**Known Tumorigen**<sup>5</sup>  
**Possible Animal Carcinogen**<sup>6</sup> |
|                        | AEGL 1: 0.17 ppm, 10 min to 8 hrs                                               | • Severe irritation and burning of the skin and eyes leading to eye damage, irritation of the nose and throat, irritation of the lungs causing coughing and/or shortness of breath<sup>7</sup>. |
|                        | AEGL 2: 0.5 ppm, 10 min to 8 hrs                                                | • Higher exposures can cause pulmonary edema, liver and kidney affects<sup>8</sup>. |
|                        | AEGL 3: 19.3 ppm, 10 min to 1.3 ppm, 8 hrs                                      | • Epigastric pain which may be associated with nausea and vomiting, gastric hemorrhage, ulceration of membranes and tissues, circulatory collapse with clammy skin, weak and rapid pulse, shallow respiration, and scanty urine<sup>9</sup>. |
|                        | PAA mixture contains PAA, hydrogen peroxide and acetic acid. Although the combination of acetic acid and hydrogen peroxide contribute to the toxicity of the PAA mixture, PAA is the most toxic agent of the three. | • Late esophageal, gastric, and pyloric strictures and stenoses which may not appear until months or years later<sup>10</sup>. |
|                        | **OSHA PELs (8Hr TWA)**<sup>2</sup>                                              | • Permanent scarring of the cornea, skin, and oropharynx<sup>11</sup>. |
|                        | Hydrogen Peroxide: 1ppm                                                          | • Uncorrected circulatory collapse could lead to renal failure and ischemic lesions in liver and heart<sup>12</sup>. |
|                        | Acetic Acid: 10ppm                                                              |                                                                                 |
|                        | **SOLVAY EEIs**<sup>3</sup> (page 29)                                            |                                                                                 |
|                        | EEI 1: 0.15ppm                                                                  |                                                                                 |
|                        | EEI 2: 3ppm                                                                     |                                                                                 |
|                        | EEI 3: 50ppm                                                                    |                                                                                 |

1 Environmental Protection Agency, [http://www.epa.gov/oppt/aegl/pubs/results80.htm](http://www.epa.gov/oppt/aegl/pubs/results80.htm)  
4,5 National Institute for Occupational Safety and Health, [http://www.skcgulfcoast.com/niosh dbs/rtecs/sd8583b0.htm](http://www.skcgulfcoast.com/niosh dbs/rtecs/sd8583b0.htm)  
6,7,8 New Jersey Dept. of Health and Senior Services, [http://nj.gov/health/eoh/rtkweb/documents/fs/1482.pdf](http://nj.gov/health/eoh/rtkweb/documents/fs/1482.pdf)  