Sterilizing Effect of Ozne Water
The chromosomes in bacterial cells are enclosed by a soft cell membrane made of protein and lipids, around which lies a cell wall made of proteins, polysaccharides and lipids. When ozone is discharged into water, the ozone and water molecules react to produce OH radicals, which begin to oxidize and break down the hard cell wall. This process triggers changes in the permeability of the cell, neutralizing enzymes and causing the cell’s nucleic acids to become inert. As a result, the cell dies.

Safety of Ozone Water
Ozone water has an extremely short half-life of 10 to 60 minutes at normal pressure and temperature from 20 to 25°C, and the substance does not persist in the environment since it breaks down upon contact with surrounding organic matter. By contrast, hypochlorous acid suffers from a number of disadvantages, including the persistence of a distinctive chlorine odor following treatment and a tendency for trihalomethane and other carcinogens to form due to reactions between the acid and organic matter found in tap water. The lack of these shortcomings is ozone water’s most notable characteristic.

APPLICATIONS
- Sterilization and washing of PET plastic bottles and other beverage containers
- Sterilization and washing of beverage container caps
- Sterilization and washing of food product manufacturing equipment
- Sterilization and washing of kitchen equipment and walls in kitchens
- Washing of and removal of surface bacteria from vegetables, fruit, and seafood

FEATURES
- High flow rate, high concentration
- Fully automatic operation
- Built-in PSA oxygen generator
- Low running cost
  - The system’s UV lamp must be replaced once a year.
- Multiple PSA and ozonizers
  - The system remains operation even if one unit fails.

SYSTEM SPECIFICATION

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Capacity</th>
<th>Concentration</th>
<th>Power Consumption</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCFOZ-20</td>
<td>2 m3/hr</td>
<td>At least 2 ppm</td>
<td>3-phase, 200V, 2.5kw</td>
<td>1300Wx2000Lx1800H</td>
</tr>
<tr>
<td>MCFOZ-30</td>
<td>3 m3/hr</td>
<td>At least 2 ppm</td>
<td>3-phase, 200V, 3.0kw</td>
<td>1600Wx2200Lx1800H</td>
</tr>
<tr>
<td>MCFOZ-40</td>
<td>4 m3/hr</td>
<td>At least 2 ppm</td>
<td>3-phase, 200V, 3.5kw</td>
<td>1900Wx2500Lx2000H</td>
</tr>
</tbody>
</table>
SYSTEM FLOW

① Ozone gas generator ⑧ Feed pump
② Ejector Box ⑨ Solenoid valve
③ Ozon water circulation pump ⑩ Accumulator
④ Mixing tank ⑪ Check valve
⑤ Exhaust ozone gas treatment unit ⑫ Solenoid valve
⑥ Ozone water tank ⑬ Flow mater
⑦ Level switch

BACTERICIDAL EFFECT WITH OZONE WATER

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Ozone Water Concentration (ppm)</th>
<th>Microorganism Concentration (pcs./ml)</th>
<th>Temp. (℃)</th>
<th>PH</th>
<th>Contact Time (sec.)</th>
<th>Extinction Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli</td>
<td>0.96</td>
<td>10⁴ cells</td>
<td>21.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Staphylococcus</td>
<td>1.08</td>
<td>10⁴ cells</td>
<td>21.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Pseudomonas aeruginosa</td>
<td>1.01</td>
<td>10⁴ cells</td>
<td>21.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Clostridium perfringens</td>
<td>0.96</td>
<td>10⁵ TCID₅₀</td>
<td>21.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Influenzavirus</td>
<td>0.72</td>
<td>10⁵ EID₅₀</td>
<td>20.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Avian encephalomyelitis virus</td>
<td>1.20</td>
<td>10⁵² TCID₅₀</td>
<td>21.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Infectious canine hepatitis virus</td>
<td>0.96</td>
<td>10² EID₅₀</td>
<td>21.0</td>
<td>7.0</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Canine parvovirus</td>
<td>1.92</td>
<td>3 x 10⁵ cells</td>
<td>20.0</td>
<td>7.0</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td>Eimeria tenella</td>
<td>0.3 〜 0.5</td>
<td>10² cells</td>
<td>20.0</td>
<td>6.5</td>
<td>19</td>
<td>99.9</td>
</tr>
<tr>
<td>Yeast</td>
<td>0.3 〜 0.5</td>
<td>10² cells</td>
<td>20.0</td>
<td>6.5</td>
<td>90</td>
<td>99.9</td>
</tr>
<tr>
<td>Bacillus subtilis</td>
<td>0.3 〜 0.5</td>
<td>10² cells</td>
<td>20.0</td>
<td>6.5</td>
<td>90</td>
<td>99.9</td>
</tr>
</tbody>
</table>

We offer a total system from design and manufacturing through to maintenance and contribute to the society.
Please consult TECHNICAL CENTER about the test necessary for the selection of the filter elements.

Technical tie-up with DAICEL CORPORATION

CENTRAL FILTER MFG. CO., LTD.

SINGAPORE BRANCH

Tokyo Head Office
Shinjuku Estate Bldg., 1-34-15, Shinjuku, Shinjuku-ku, Tokyo 160-0022, Japan TEL81-3-3350-0091 FAX81-3-3350-0095

Osaka Branch
MF Nishi- Umeda Bldg., 5-1-26 Fukushima-ku, Osaka-city, 553-0003, Japan TEL81-6-6345-3531 FAX81-6-6345-3500

Technical Center
Shinjuku Estate Bldg., 1-34-15, Shinjuku, Shinjuku-ku, Tokyo 160-0022, Japan TEL81-3-3350-0091 FAX81-3-3350-0095

Singapore Branch
102E Pasir Panjang Rd#02-06 Citilink Warehouse Compalex S'pore 118529 TEL65-6272-1191 FAX65-6272-0170

E-mail: info@central-filter.com.sg
Website: http://www.central-filter.co.jp