Sodium Chlorite

CT Value Ranges for Inactivation of Various Microorganisms

Table 1 is a summary of contact time (CT) value ranges for the inactivation of various microorganisms by different disinfectants. This table is a compilation of reported CT values taken from various published sources.

CT is defined as disinfectant contact time, the mathematical product of C x T, where C is the residual disinfectant concentration measured in mg/L, and T is the corresponding contact time measured in minutes.

Table 1 values are for 99% inactivation at 5°C except for *Giardia lamblia* and *Cryptosporidium parvum*.

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>Disinfectant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Free Chlorine pH 6 to 7</td>
</tr>
<tr>
<td><em>Escherichia Coli</em></td>
<td>0.034 - 0.05</td>
</tr>
<tr>
<td><em>Polio 1</em></td>
<td>1.1 - 2.5</td>
</tr>
<tr>
<td><em>Rotavirus</em></td>
<td>0.01 - 0.05</td>
</tr>
<tr>
<td><em>Giardia lamblia cysts</em></td>
<td>47 &gt; 150</td>
</tr>
<tr>
<td><em>Giardia muris cysts</em></td>
<td>30 - 630</td>
</tr>
<tr>
<td><em>Cryptosporidium parvum</em></td>
<td>7200(b)</td>
</tr>
</tbody>
</table>

(a) Values for 99% inactivation at pH 6-9.
(b) 99% inactivation at pH 7 and 25°C
(c) 90% inactivation at pH 7 and 25°C

Further Information

More detailed information on sodium chlorite is available on request through the OxyChem Technical Service Department. Call or write to:

OxyChem Technical Service Department
6200 S. Ridge Rd.
Wichita, Kansas 67215
800-733-1165 option #1
OxyChem_Tech_Service@oxy.com
Sodium Chlorite
CT Value Ranges for Inactivation of Various Microorganisms

REFERENCES


3. Trihalomethane in Drinking Water, Sampling; Analysis, Monitoring and Compliance, U.S. Environmental Protection Agency, EPA 570/9-83-002, August 1983.

4. Drinking Water; National Primary Drinking Water Regulations; Filtration, Disinfection; Turbidity, Giardia lamblia, Viruses, Legionella, and Heterotrophic Bacteria; Final Rule, Federal Register, June 28, 1989.


