



# Summary of CT Value Ranges for Inactivation of Various Microorganisms by Disinfectants

Table 1 is a summary of 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.

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

### Further Information

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

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**Table 1**

Microorganism	Disinfectant			
	Free Chlorine pH 6 to 7	Preformed Chloramine pH 8 to 9	Chlorine Dioxide pH 6 to 7	Ozone pH 6 to 7
<i>Escherichia Coli</i>	0.034 - 0.05	95 - 180	0.4 - 0.75	0.02
Polio 1	1.1 - 2.5	768 - 3740	0.2 - 6.7	0.1 - 0.2
Rotavirus	0.01 - 0.05	3806 - 6476	0.2 - 2.1	0.006 - 0.06
<i>Giardia lamblia</i> cysts	47 > 150	2200(a)	26(a)	0.5 - 0.6
<i>Giardia muris</i> cysts	30 - 630	1400.00	7.2 - 18.5	1.8 - 2.0
<i>Cryptosporidium parvum</i>	7200(b)	7200(c)	78(c)	5 - 10(b)

(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

### REFERENCES

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10. Code of Federal Regulations, 40 CFR 141.2

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