

Efficacy data on CleanOxide 75

Chlorine dioxide (Clean Oxide™, Natural Water Solutions, Perth, WA) was prepared to achieve the required concentrations according to manufacturer's directions. Free chlorine was measured at the start of the treatments and at the final sampling time using a photometer (ProMinent Fluid Controls Pty Ltd., Australia).

Appropriate quantities of chlorine or chlorine dioxide were added to each propagule suspension to achieve required concentrations in a total volume of 100 mL.

The testing results below were conducted by the NSW Department of Primary Industries and published in the European Journal of Plant Pathology.

Table 3 Calculated minimum application rate and exposure time required to kill 99 % of propagules tested following exposure to chlorine and chlorine dioxide. A '–' indicates that propagules were not killed at the rates tested

Pathogen	Propagule	Chlorine (NaClO)				Chlorine dioxide			
		Deionised water		Dam water		Deionised water		Dam water	
		Rate (ppm)	Time (min)	Rate (ppm)	Time (min)	Rate (ppm)	Time (min)	Rate (ppm)	Time (min)
<i>Clavibacter michiganensis</i>	Bacterial cells	1	10	1	10	1	4	1	4
<i>Alternaria alternata</i>	Conidia	5	20	–	–	5	4	5	4
	Mycelium	5	20	5	30	3	4	5	4
<i>Chalara elegans</i>	Chlamydospores	2	20	5	20	3	4	5	4
	Endoconidia	5	30	–	–	5	4	1	10
	Mycelium	5	30	–	–	5	4	3	8
<i>Colletotrichum gloeosporioides</i>	Conidia	1	10	5	10	1	4	1	4
	Mycelium	5	10	–	–	1	4	3	4
<i>Calnectria pauciramosa</i>	Conidia	2	20	5	30	1	4	3	10
	Chlamydospores	2	20	5	30	3	4	5	10
	Mycelium	1	30	5	30	3	4	3	10
<i>Fusarium oxysporum</i>	Conidia	1	10	5	10	1	4	1	4
	Chlamydospores	5	20	–	–	1	4	5	4
	Mycelium	5	10	–	–	1	4	3	4
<i>Phytophthora cinnamomi</i>	Zoospores	1	10	1	10	1	4	1	4
	Cysts	1	10	1	10	1	4	1	4
	Oospores	2	10	1	30	3	4	3	4
	Sporangia	2	10	1	20	3	4	3	4
	Mycelium	5	10	2	30	3	4	3	4
<i>Pythium aphanidermatum</i>	Zoospores	1	10	5	10	1	4	3	4
	Chlamydospores	5	20	–	–	1	4	3	4
	Mycelium	5	20	–	–	1	4	3	4

For more details or the full report from the European Plant Pathology Journal please visit the link below.

https://www.nwsolutions.com.au/wp-content/uploads/2017/06/CleanOxide-75-DPI_2015_Efficacy-of-disinfectants.pdf