

Disinfestation decision table

Method	Advantages	Disadvantages	Cost
Slow sand filtration	No chemicals	May not control <i>Fusarium</i> sp.	Cheap
Membrane filtration	No chemicals	Maintenance difficulties	Expensive
Heat	No chemicals	Expensive unless cheap gas available	Expensive to run
Ultra violet radiation	No chemicals, environmentally friendly	Suitable for control of <i>Pythium</i> and <i>Phytophthora</i> . Works more efficiently in quality water	Cheap
Hypochlorous acid (chlorination)	Simplicity	Does not work above pH 7.5	Cheap
Chlorine dioxide	Works in poor quality water even with high pH		High capital cost
Chloro-bromine	Has 3 active ingredients	Works better at pH below 7	Cheap capital cost, expensive running costs
Ozone	No residual chemicals	Works better at pH below 7	Expensive, will get cheaper

Source: Beardsell, D., and M. Bankier. "Monitoring and Treatment of Recycled Water for Nursery and Floriculture Production." Horticulture Australia Ltd., Project NY515, 1996.

	CHEMICAL (Residue is left in the water)						PHYSICAL (No residue left in the water)			BIOLOGICAL
	Chlorination	Chlorine Gas	Chlorine Dioxide	<u>Ozonation</u>	Hydrogen Peroxide	Copper Ionization	Reverse Osmosis	Heat Treatment/ Pasteurization	UV Radiation	Slow sand filtration
Installation Cost	Medium	Medium	Generator: medium Solid: low	High	Low	High	High	Medium	High	Medium-high
Operation Cost	Low	Low	Generator: low Solid: high	Low	Medium-High	Low	Low	High	Low	[Very low]
Suitability for recirculation system	CAUTIOUS	CAUTIOUS	YES	YES	YES	CAUTIOUS	YES	YES	YES	YES
Recommended substrate type	ANY	ANY	ANY	ANY	ANY	Not for inert substrates or solution culture	Any	Any	Any	Any

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