

Utilization of sodium dichloroisocyanurate for nodal culture initiation of *Lenwebbia* sp. Main Range – a critically endangered Australian native *Myrtaceae*

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Abstract

In vitro conservation of *Myrtaceae* species threatened by myrtle rust requires the establishment of effective *in vitro* propagation and cryopreservation protocols. Sterile plants from mature or diseased plants are hard to achieve due to heavy microbial contamination. For the endangered *Lenwebbia* sp. Main Range (P.R. Sharpe+ 4877), a protocol incorporating immersion in 5 g L⁻¹ sodium dichloroisocyanurate (NaDCC) for 2 hours was able to effectively surface sterilize nodal segments from two accessions (A2019/0554 Mt Merino and A2019/0550 Border Track 1) without the use of chlorine bleach (sodium hypochlorite; NaOCl). Up to 68% and 86% clean actively growing nodal segments were achieved for accessions 0554 and 0550, respectively. Therefore, NaDCC offers a reliable alternative to sodium hypochlorite for surface sterilization of *Lenwebbia* and possibly for other endangered *Myrtaceae*.

Keywords: surface sterilization, sodium dichloroisocyanurate, NaDCC, *Myrtaceae*, nodal culture, conservation