The induction of submerged conidiation of
Metarhizium anisopliae study

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Abstract

This study was to determine the induction of submerged conidiation of Metarhizium anisopliae var. anisopliae, using an malt extract broth. Polyethylene glycol (PEG) 200 was added at 7.3% and 24% (w/v) to achieve the water potential (Ψ) of the final broth at –2.1 Mpa and –7.0 Mpa, respectively. Also, calcium chloride (CaCl₂) was added at 20 and 40 mM, respectively. Samples of M. anisopliae var. anisopliae incubated at 25°C on a rotary shaker at 150 rpm for 5 days. Conidia yields were at 2.39×10⁵ conidia/ml in unmodified and non-calcium medium after 5 days. Adding calcium chloride at 20 mM to unmodified MEB increased the production of M. anisopliae conidia to 47.6×10⁵ conidia/ml. However, no conidia were produced in –7.0 Mpa broth with or without calcium chloride.

Key words: Metarhizium anisopliae; Calcium chloride; Conidia; Water potential

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