

## **Microesclerotia production of *Purpureocillium lilacinum* in three different media**

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The use of the resistant propagules, termed microsclerotia (MS), produced by the nematophagous fungus *Purpureocillium lilacinum* stands out as an eco-friendly tool for the control of various soil-inhabitant pests. The present study aimed to screen 36 isolates of *P. lilacinum* from the ESALQ collection of microorganisms for maximum MS production. Three culture media were tested varying Carbon:Nitrogen ratio corresponding to 10:1 for medium named J4 and 50:1 for both media J6 and A1. All liquid cultures were cultivated in baffled flasks (250 mL) containing 45 mL of each medium inoculated with 5 mL of spore suspension. The flasks were maintained on a rotary incubator shaker (300 rpm at  $28 \pm 2^\circ\text{C}$ ) for 96h. Concentrations of MS greatly varied among all isolates, where yields reached up to  $6 \times 10^4$  MS.mL<sup>-1</sup> for J6,  $1-2 \times 10^4$  MS.mL<sup>-1</sup> for J4 and A1. Therefore, there is a strong evidence that higher Carbon:Nitrogen ratio promotes greater numbers of MS for isolates of *P. lilacinum*. Media optimization and bioefficacy tests against nematodes and arthropod pest are underway with the bests *P. lilacinum* MS producers.

**Palavras-Chave:** liquid fermentation; biological control

**Apoio Institucional:** Council for Scientific and Technological (CNPq)