Storage of Neurospora spores and cultures in a sucrose solution

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Abstract

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Lewis, R. W. Storage of Neurospora spores and cultures in a sucrose solution.

While using mutants of Neurospora crassa to assay for vitamins in guttation fluids, I discovered that conidia of the mutants would keep for weeks in the refrigerator if suspended in a sucrose solution (40 g sucrose in 60 ml water). This led to a test of the sucrose solution as a preservative for agar slant cultures, as mineral oil has been used for many fungi. Sucrose solution was added to the slant cultures so the upper end of the slant was covered to a depth of about 3 cm., the metal tube-closures were sealed by wrapping with parafilm, and the tubes were stored at ca. 4°C.

After about 15 months, the spore suspensions, which had been stored in screw capped tubes at ca. 4°C, and the cultures were tested for viability by transferring to potato dextrose agar. All grew except 6 conidial suspensions, but duplicates of 5 of these did grow. For the one that did not grow, pyr-2 38502a, there was no duplicate tube.

The strains tested were: wild type 74A; chol-1 34486a, inos 37401a, nic-2 43002A, pab-1 1633A, pan-1 5531a, pdx-1 44602A, pyr-2 38502a, rib-1 K28A, and thi-2 9185A. - - - Department of Natural Science, Michigan State University, East Lansing, Michigan.