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Preservation of Neurospora stock cultures with the silica gel method for extended periods of time

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Abstract
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The silica gel method for preservation of Neurospora stock cultures has now been in use for almost 25 years. Perkins (1962 Can. J. Microbiol. 8: 591-594) reported survival of silica gel cultures for six years. It is of interest to collect information about long term survival to know approximately how long it is safe to keep stocks before transfer to new gels.

At our laboratory we hove preserved 22 cultures with this method since October 1968. The method described by Brockman and de Serres (1962 Neurospora Newsl. 1: 8) was generally followed. Pyrex tubes (12.5 X 1.5 cm) with rubber lined screw cops were used. The caps were tightened soon after the conidial suspension in skim milk hod been added at ice water temperature. The tubes were stored at 2-4° C and each strain was maintained in duplicate.

To test survival, one tube of each strain was sampled after 5, 7 and 10 years. Some of the tubes have also been opened for transfers on other occasions. Upon sampling in November 1978, it was found that all 22 germinated after transfer to Fries' minimal medium with appropriate supplementation.

The 22 cultures represent a rather restricted sample with regard to their genetic composition. All hove wild type morphology with good conidia formation. They are reisolates of the mutants ure-1 (9) and ure-2 (47) from crosses with the standard wild types 74-OR8-1 a and 74-OR23-1 A, as well as combinations of these urease-defective mutants with the closely linked markers am (32213) and his-1 (C91). The wild types and the separate marker stocks were also preserved.

It is reassuring that the silica gel method, besides being very convenient, also allows a satisfactory survival over periods of many years. ■ ■ ■ Department of Genetics and Plant Breeding, 750 07 Uppsala, Sweden.