Preservation of Neurospora conidia with silica gel

B. R. Smith
University of Aberdeen

Follow this and additional works at: https://newprairiepress.org/fgr

This work is licensed under a Creative Commons Attribution-Share Alike 4.0 License.

Recommended Citation

This Methods for Stock Preservation is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Fungal Genetics Reports by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.
Preservation of Neurospora conidia with silica gel

Abstract
Preservation of Neurospora conidia with silica gel

This methods for stock preservation is available in Fungal Genetics Reports: https://newprairiepress.org/fgr/vol26/iss1/25
We use 10 x 100mm test tuber two thirds filled with silica gel, mesh 6-22, plugged with rolled butter muslin. Silica gel tuber are sterilized for 1-1/2 hours at 200°C. Strains to be preserved ore grown for 6 days on 1.5ml agar sloper in 10 x 100mm test tubes. Conidia are suspended in 1.5ml of sterile water and then added to 1.5ml of sterile skim milk solution. Suspensions are kept in a refrigerator for 2-1/2 hours to cool and to allow the conidia to settle to the bottom of the tuber. The upper half of the milk solution is then removed with a pasteur pipette and discarded. The conidia are resuspended in the remaining milk solution and pipetted evenly over the surface of precooled silica gel granules so as just to wet the crystals.

Following inoculation of the silica gel, the tubes are dried for four days in a dessicator over anhydrous calcium chloride under a light vacuum. Tubes ore then sealed with parafilm and stored in plastic bags together with some indicator silica gel at between 5 and 10°C.

Viability of silica gel preparations after 15 years storage:

Our oldest silica gel stocks were prepared in March 1964. In February 1979, 164 of these stocks, a mixture of auxotrophs mostly with amino acid requirements, were tested for viability by inoculating 1.5ml agar slopes with about 5 grains of silica gel. Good growth of all but four of them war established within 48 hours. A second inoculation of three of the four failures proved successful. The fourth, strain, a methionine-3 mutant (36104) could not be revived even when silica gel war added to liquid medium.

Conidia from six day old cultures were tested for reversions to prototrophy on minimal medium. Two of the 163 cultures contained revertant conidia. Both of them (his-5 alleles K350 and K354) were subsequently recovered as auxotrophs from additional inoculates.

Smith, B. R.
Preservation of Neurospora conidio with silica gel.

Viability of silica gel preparations after 15 years storage:

Our oldest silica gel stocks were prepared in March 1964. In February 1979, 164 of these stocks, a mixture of auxotrophs mostly with amino acid requirements, were tested for viability by inoculating 1.5ml agar slopes with about 5 grains of silica gel. Good growth of all but four of them war established within 48 hours. A second inoculation of three of the four failures proved successful. The fourth, strain, a methionine-3 mutant (36104) could not be revived even when silica gel war added to liquid medium.

Conidia from six day old cultures were tested for reversions to prototrophy on minimal medium. Two of the 163 cultures contained revertant conidia. Both of them (his-5 alleles K350 and K354) were subsequently recovered as auxotrophs from additional inoculates.

- Department of Genetics, University of Aberdeen, Aberdeen AB9 2TN, Scotland.