

Fiber glass loops for rapid manipulation of *Neurospora* ascospores

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Recommended Citation

Totten, R. E., and H.B. Howe (1965) "Fiber glass loops for rapid manipulation of *Neurospora* ascospores," *Fungal Genetics Reports*: Vol. 7, Article 17. <https://doi.org/10.4148/1941-4765.2121>

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Abstract

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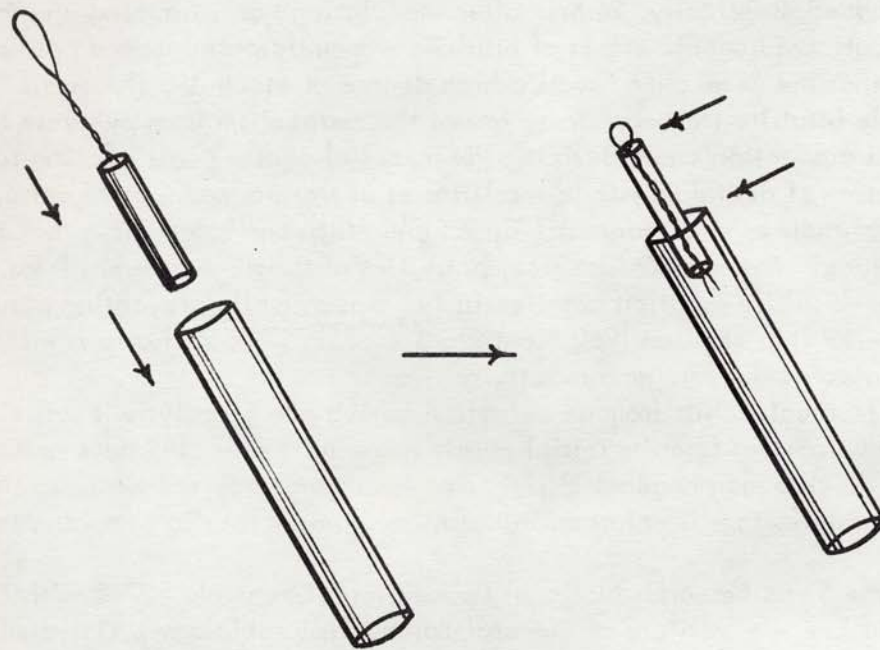
Totten, R. E. and H. B. Howe, Jr. Fiber glass loops for rapid manipulation of *Neurospora* ascospores.

however, that loops allow more rapid manipulation than do straight implements or are, at least, useful auxiliary equipment. Fiber glass is choice loop-making material because of its strength, flexibility, and resistance to heat and chemical agents. The single fibers, moreover, are thin enough for immediate free-hand use so that a microforge is unnecessary.

When a wisp of Pyrex brand fiber glass (glass wool) is teased apart with the fingers, a single fiber approximately 25 microns in thickness and 6 cm long may be obtained. Cheaper grades of fiber glass having thicker fibers are less satisfactory. The single fiber is bent in half, the two loose ends are twisted a few turns, and the twist is pushed through the bore of a short piece (about 2 cm) of thin-walled melting point capillary tubing (outside diameter, about 1.2 mm). When the twisted end emerges from the tubing, the twist is pulled until a loop of desired diameter is obtained at the other end of the tubing. Adjustments at this point are best

Slender glass or tungsten needles have been traditionally used for isolating *Neurospora* ascospores on agar dissection plates. We have found,

made under the stereomicroscope. The optimum loop diameter is one which approximates the outside diameter of the tubing. If the loop diameter is made much smaller than that of the tubing, the latter will interfere with the loop during use. The loop is glued in place with a drop of epoxy cement, which also seals the tube opening and set aside to harden. When hard, the device is ready to use. Since holding such small tubing becomes tiring, however, we usually insert the small tubing into a piece of larger tubing to achieve a more comfortable handle. This connection is also secured with epoxy cement (Figure 1).



A. Insert sections

B. Cement in place

Figure 1. Fiber glass loop for rapid ascospore manipulation.

Although the outside edge of the loop may be used to push ascospores, the most rapid manipulation is obtained by raking with the inside edge. Accuracy improves with a little practice. We wish to thank Dr. Max Brugh, Jr. for suggesting to us the practicality of fiber glass for ascospore manipulation. - - - Department of Bacteriology, University of Georgia, Athens, Georgia.