How to make disposable spreaders from long-nose Pasteur pipets.

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Background

Plating of Neurospora conidia or ascospores is often accomplished using a glass spreader to distribute suspended cells on the agar surface. See *How to plate conidia and ascospores*. Spreaders are commonly made of 3 mm diameter soft glass rod with a 70° bend 50 mm from one end (Davis and de Serres 1970). These are sturdy and suitable for reuse. Common practice is to sterilize the spreader between using it for different spore samples by dipping it in alcohol and flaming to burn off the excess alcohol. This kills conidia. Ascospores, however, are large, thick-walled, and heat-resistant, and the procedure does not ensure that all ascospores adhering to the spreader will be killed (Newmeyer and Wallace 1971). It is imperative, therefore, that an already used spreader be replaced with a sterile spreader whenever ascospores from different crosses are to be plated one after another.

Spreaders handmade from disposable Pasteur pipettes provide a convenient alternative to the conventional spreaders made of glass rod.

Procedure

Disposable Pasteur pipets 23 cm long are suitable. (VWR Scientific Catalog No. 14572-380. Flint glass. Outside dimension of body, 7 mm; OD of 12 cm-long capillary stem, ~1.5 mm.) Pipets are sterilized in a hot-air oven. Each spreader is made just before use. A pipet is brought carefully toward a small flame (Bunsen Burner pilot or alcohol lamp) until the long, thin stem melts at a selected point and the distal portion bends downward as a result of gravity. The angle at which it solidifies depends on how the pipette is held. A second bend, made quickly and easily, can shape the capillary tip into a straight, 4- or 5-cm-long interval suitably angled for spreading. There is no need to dip in alcohol or to flame before using. Each newly made spreader is discarded after use. Because the capillary portion of the Pasteur pipet is thinner than the solid glass rod of conventional spreaders, cells are spread more evenly and are not concentrated in the water film that is formed by surface tension if a spreader is picked up before liquid has been completely imbibed.

References

Davis, R. H., and F. J. de Serres. 1970. Genetic and microbiological research techniques for *Neurospora crassa*. Meth. Enzymol. 17A: 79-143.

Newmeyer, D., and D. G. Wallace. 1971. Ascospore viability on glass spreaders after alcohol treatment. Neurospora Newslett. 18: 13.

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