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TECHNICAL NOTE

THE USE OF GELATIN TO DRY CELLOPHANE WOUND SLAB GELS IN AN EMBROIDERING HOOP

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Polyacrilamide gel electrophoresis is a widespread technique in population genetics and other fields of study for which an effective separation of proteins is useful. Preservation of gels long after electrophoresis is frequently desirable. Several methods for drying polyacrilamide slab gels have been described. In Maizel's method (1971, in Studier, 1973) the gels are placed on a piece of Whatman 3 MM filter paper and dried under a vacuum in a boiling water bath. Simpler methods, which do not require special apparati, have been devised by Mayer (1976) and Popescu (1983). In the latter method, the gels are transferred to a plexiglass plate and covered with a 5% aqueous solution of gelatin spread evenly over the gel surface. The gels are then air dried for 24 hours or more at room temperature. Recently, a method for drying acrylamide slab gels using acrylic frames and cellophane has been described (Krishnan and Nguyen, 1990). An advantage of this method is the use of plastic wrap on one side of the gel, which prevents it from sticking to the cellophane, making fluorography of the dried gel possible.

Several methods for drying cylindrical acrilamide gels have also been described in the literature. For example, Aono *et al.* (1985) developed a method for drying SDS polyacrilamide disc gels at room temperature, using commercial slab gel drying equipment.

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This paper presents a procedure for drying slab gels in an embroidering hoop, using gelatin. This method has been used in our laboratory since 1987, for non-denaturing gels stained for esterase isoenzymes or stained for proteins after sodium dodecyl sulfate (SDS) electrophoresis (Ceron, 1988; Ceron and Santos, 1988). In this procedure, polyacrylamide slab gels are prepared as usual (T = 5 to 10%, C = 2.6%). Electrophoresis is carried out on a vertical slab gel apparatus, at room temperature, using the discontinous buffer system of Laemmli (1964), but omitting the stacking gel and SDS in the case of isozyme separation. The gels are stained for esterases following Zouros *et al.* (1982). After destaining, the gels are left at room temperature for one hour in a 7.5% acetic acid and 10% glycerol solution. Then, they are embedded in a 5% commercial gelatin solution and placed between two sheets of wet cellophane paper which are stretched out in an embroidering hoop. Two spring clips are adapted to the hoop to help fix the sheets. The hoop is left at room temperature for 24-48 hours. As the cellophane sheets dry, a smooth, transparent film is obtained which can be easily handled, photographed and stored for long periods without deterioration (Figure 1).

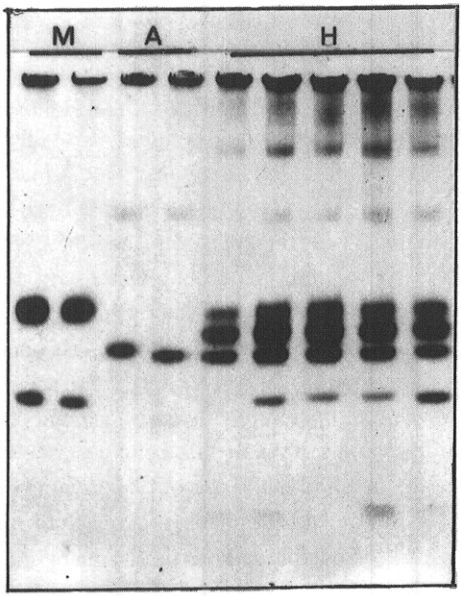

Figure 1 - Polyacrilamide gel, prepared and dried as described in the text, showing esterases of *Drosophila mulleri* (M), *D. arizonensis* (A) and their hybrids (H). The process preserves the quality of the gels.

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