Adamkiewicz, S.L. and R. Milkman. The University of Iowa, Iowa City, Iowa. A multiple sample homogenizer/applicator for cellulose acetate electrophoresis.

Up to 20 samples per 1" x 6" cellulose acetate strip are permitted by the use of the following device, which is essentially a multiple-well lucite block and a brass strip fitted with 20 complementary stainless steel rods and 3 guide rods. All rods are flat ended.

Flies are placed in the wells with buffer and homogenized by the rods. The homogenate is applied to the strip by resting the rods on it. No additional pressure is used. The strip is then electrophoresed and stained accord- into common procedures. We use the Gel- man system.

Each lucite base has two sets of twenty holes and thus fits two brass applicators at once. The arrangement compensates for net migration differences due to the unavoidable evaporation that occurs even at low temperatures and causes bulk flow toward the center. Resolution is not impaired.

Alcohol dehydrogenase, α-glycerophosphate dehydrogenase, and hemoglobin have been run successfully; a variety of animals (12 major classes) have been used in addition to Drosophila. One person, unassisted, can run hundreds of samples per day. The ease of application is emphasized.

In a double blind test, using D. melanogaster α-glycerophosphate dehydrogenase, 391 of 398 spots were scored correctly.