

Concentration of chromatographic effluent for gel electrophoresis

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Abstract

Concentration of chromatographic effluent for gel electrophoresis

Tsao, M. U. and M. W. Smith. Concentration of chromatographic effluent for gel electrophoresis.

effluent collected from the chromatographic column are much too dilute for direct application to supporting material for gel electrophoresis. A simple method of concentrating the effluent was needed to allow detection of bands of protein or isoenzymes after electrophoresis. This method is based on the technique first described by Horowitz and Fling (1962 *NN*^{#2}: 19) who placed dilute solutions of tyrosinase in dialysis bags to dialyze against solid sucrose. We reversed the positions of the sucrose and the sample. Sucrose granules are placed in a dialysis bag of large diameter. The top surface of the bag is flattened so that a row of filter paper pieces can be placed in close contact with the surface. The bag is chilled and cold fractions of effluent are pipetted onto the surface until a layer of liquid is formed on top of each piece. Water and electrolytes are absorbed into the sucrose below and in an hour or so a second application, if necessary, can be made or the filter paper piece can now be inserted into starch or acrylamide gel for electrophoresis. This method allows a large number of samples to be concentrated simultaneously and requires very little expenditure of equipment or material. The pipetted amounts of effluent also give a control of the amount of protein or enzymes to be subjected to electrophoresis. - - - Pediatric Laboratory, University of Michigan Medical Center, Ann Arbor, Michigan.

This is a technique we have developed for use in the purification of dehydrogenases from *Neurospora* but it may have other applications. In the purification of enzyme extracts the fractions of