The size of the bags can be varied to meet the requirements of different regions in terms of request form size and sample container size. The size found most useful in this study was one with a total length of 50 cm and 13.5 cm wide.

The transparency of the plastic bag permits of immediate identification of leakage, and facilitates reading or photocopying request forms without breaking the seal.

Bags marked 'high risk' or 'hepatitis' (Fig. 3) which arrive in the laboratory can be instantly recognized and conveyed to a high-risk area.

Modification of the electrophoretic separation of lipoproteins on paper

J. PYROVOLAKIS, J. HATZIOANNOU, AND C. GARDIKAS
From the Professorial Medical Unit, Evangelismos Hospital, Athens

The conventional paper electrophoresis as suggested by Lees and Hatch (1963) does not afford complete resolution of the pre- β lipoprotein band. Chin and Blankenhorn (1968) obtained a satisfactory separation by electrophoresis on cellulose acetate and Rapp and Kahlke (1968) and Noble (1968) in agarose gel.

By a slight modification of the conventional paper electrophoresis technique, we obtained a good separation of the pre- β lipoprotein. Electrophoresis was carried out at room temperature on paper, Whatman no. 1 chromatographic grade, in a horizontal cell (Gelman Instrument Company) for 10 hours at 120V with a current of approximately 1 Ma per strip. Barbitol buffer of ionic strength 0.09, pH 8.6, containing 0.001 M EDTA was used in all experiments. Bovine albumin was added to the buffer so that the final concentration of the albumin in the buffer solution was 1%.

Before applying the sample the strips were equilibrated for two hours in the closed cell.

After electrophoresis the strips were dried in an oven at 95°C for 20 min and then stained by immersion in a supersaturated alcoholic solution of Oil-red-O for four to six hours at 40°C (Fredrickson, Levy, and Lees, 1967). The samples were then rinsed with water and dried.

As illustrated in the Figure, it was found that the duration of the electrophoresis is crucial for the good separation of the pre- β band; the optimum duration is 10 hours instead of 16, as suggested by

Comment

The system described has been tested in hospital wards and laboratories and a group general practice. It has been shown to be reliable, simple to operate, and acceptable to ward, laboratory, and general practice personnel.

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