

[54] **MICROPREPARATIVE ELECTROPHORESIS APPARATUS**

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[58] **Field of Search**..... **204/180 G; 299**

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[57] **ABSTRACT**

The Micropreparative electrophoresis apparatus comprises a first zone with an inlet and outlet for a buffer

solution, a separation zone (gel column) an elution or collection zone, and a lower zone with an inlet and outlet for a buffer solution. To produce the electrophoresis there are two electrodes, one in the upper zone and the other in the lower zone, the electrodes being connected to a D.C. source of power. The first zone is partially filled with a gel or similar material and the shape of the zone is generally cylindrical. The electrical potential between the two electrodes and within the gel produces a separation of its layered components and therefore migration downward. The migration downward of the different components will be at different speeds. Migration is due to two factors, electrical charge of the particles being migrated with relation to the polarity of the electrodes, and molecular sieving action of the gel itself (porosity of gel). Thus the components leave the gel subsequently and then enter the elution or collection zone where they are isolated, purified and subsequently collected in order of their separation. This apparatus provides a continuous collection according to the separation of the components within the gel and the speed of migration downward through the gel. This apparatus also provides a lower buffer chamber in which there is contained a gel column and elution chamber. The entire gel column is cooled as it migrates downward (A must for temperature sensitive materials).

4 Claims, 3 Drawing Figures

