

will be completely retained at the start when mixed with ferro- or ferricyanide while they move rather quickly when placed on the paper alone.

Fig. 1 shows several typical electropherograms.

We should like to offer the following explanation for this phenomenon: Caesium forms extremely insoluble double ferrocyanides with Zn and other transition metals which have been used to remove tracer Cs quantitatively from solution. Such precipitates seem to form with the traces of Cu or Zn present in the paper as impurity. A neutral soluble particle is not formed, as paper chromatography of  $^{137}\text{Cs}$  mixed with ferrocyanide with aqueous solvents gives a spot of  $R_F$  0.

We should like to offer this observation as it might suggest similar explanations for quite a number of "ghost spots" and "comets" encountered in paper electrophoresis.

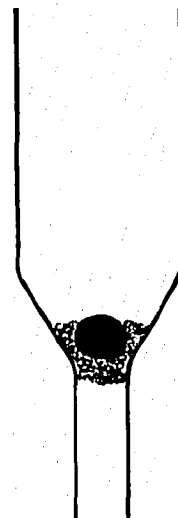
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### Practical method of closing small columns in column chromatography

In a study on the chlorophylls in lichens it proved to be necessary to reduce the quantity of cotton wool used to retain the adsorbent more than is allowed in the well-known methods<sup>1,2</sup>. A glass bead wrapped up in a thin layer of cotton wool was found to be handy. After the coated glass bead has been dropped into the tube, it is pressed down gently and the cotton wool on the top of the glass bead is "brushed" into the crevice between the tube and the glass bead (see Fig. 1).



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<sup>1</sup> G. BRAUNITZER, *Die chromatographische Analyse in Säulen*, in K. PAECH AND M. TRACEY, *Moderne Methoden der Pflanzenanalyse*, Vol. 1, Springer Verlag, Berlin, 1956, p. 110.

<sup>2</sup> H. G. CASSIDY, *Fundamentals of chromatography*, in A. WEISSBERGER, *Technique of Organic Chemistry*, Vol. 10, Interscience, New York-London, 1957.

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