An equilibration device for paper chromatography

Equilibration of paper with solvent vapour is frequently a critical requirement for the success of a paper chromatographic separation. In many laboratories, however, where specialised chromatography tanks are not available, the techniques of equilibration in general use may be inconvenient or unsatisfactory. Thus one of the methods employed involves boring a hole in the side of the tank, from which more solvent can be added until the level of the paper is reached, whilst a common practice depends on removing the cover so as to enable a frame holding the paper to be lowered into the solvent. This communication describes a simple and efficient device for equilibration that can be made readily in the workshop to fit the usual "fish-tank" employed for paper chromatography.

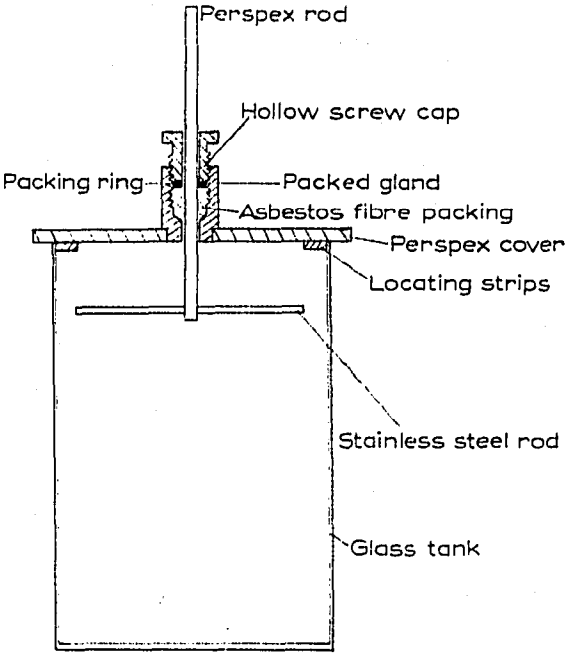

Fig. 1. Chromatography tank with equilibration device (drawing not to scale).

The device, shown in Fig. 1 (which is not drawn to scale), consists essentially of a vertical rod of circular cross section fitted through a packed gland in the middle of the cover, and having a horizontal bar attached centrally at the lower extremity. This bar carries clips (or, more simply, clothes pegs), from which the paper strips may be suspended for ascending chromatography. The gland is provided with an internal screw thread, and the packing can therefore be compressed or loosened by adjustment of a screw cap. By means of this arrangement, the bar carrying the papers may be raised or lowered without opening the tank; thus the papers may be suspended in the tank above the level of the solvent, and then lowered into the solvent after saturation with the vapour is considered to be achieved.

Fig. 2 illustrates the gland in greater detail. The hollow screw, A, presses on a

plate B lying on asbestos fibre packing C, which seals the space between the vertical rod D and its enclosing gland. As long as the packing is loose, the rod D may be raised or lowered at will, but on tightening A the packing becomes compressed, thus locking the rod in position and sealing the gland.

The device described in this instance was made of "perspex" and for use in

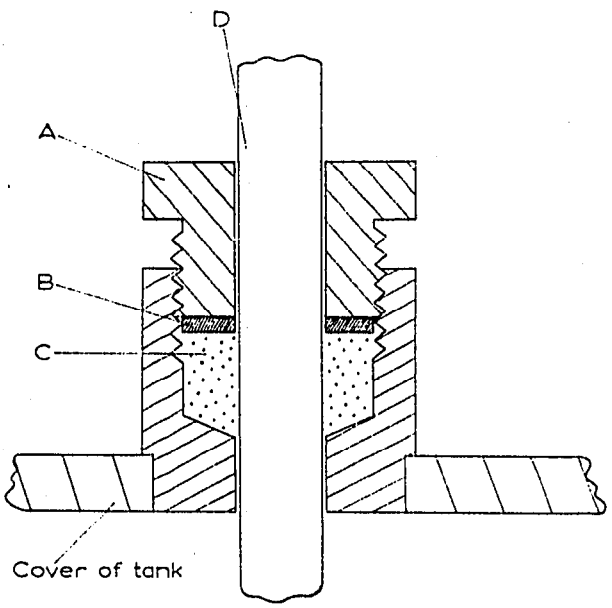

Fig. 2. The packed gland. A = hollow screw. B = packing ring. C = asbestos fibre packing. D = vertical rod. Scale is actual size.

ascending chromatography. The same principle, of course, could be used for material more resistant to the action of solvents, and likewise it would not be difficult to adapt the method for descending chromatography.

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BOOK REVIEW

Protides of the Biological Fluids, Proceedings of the Sixth Colloquium, Bruges, 1958. Edited by Dr. H. PEETERS, published by Elsevier Publ. Co., Amsterdam, 1959, 330 pages, price 45 s.

Following the publication of the reports of the Fifth Colloquium on Protides of the Biological Fluids (Bruges, 1957), all the communications of the Sixth Colloquium, held also at Bruges in 1958, have now appeared.

It should be pointed out that some of the contributions to this Colloquium have already been published in *Clinica Chimica Acta*, but the great advantage of publishing