B. Overpressured Thin-Layer Chromatography

The overpressured thin-layer mode of planar chromatography was introduced by Hungarian scientists (41,42) in the 1970s. In overpressured thin-layer chromatography (OPTLC) the vapor phase has been eliminated, the sorbent layer being completely covered with an elastic membrane under external pressure. Thus, the mobile phase migrates through the thin layer due to the "cushion system" at overpressure. In this way, OPTLC combines advantages of the continuous development technique, mentioned before (increase in l), with elimination of the free space in the chromatographic chamber, which is also typical of the column techniques. This is done in an effort to enhance the theoretical plate number N of a regular thin layer, although high-performance plates are used as well.

C. Centrifugal Layer Chromatography

Centrifugal layer chromatography (CLC) (45) is a preparative circular chromatographic technique in which the mobile phase flow is induced by centrifugal force. The sample is applied near the center of a rotating disk covered with adsorbent material. Concentric zones of substances migrate toward the outside of the plate during elution. The circles elute sequentially from the disk and can be recovered separately. Thus CLC can also be regarded as a continuous development mode (increase in l).

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