

HPCCC: An Orthogonal and Complementary Separation Technique

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ABSTRACT

Preparative scale liquid-liquid chromatography (in general Countercurrent Chromatography (CCC); specifically High Performance Countercurrent Chromatography (HPCCC)) is a separation technique which is both complementary and orthogonal to solid-liquid chromatographic techniques e.g. RP-HPLC, NP-LC, IEX etc.

Unlike solid-liquid chromatography, which are normally subject to the influences of primary and one or more secondary interaction modes, liquid-liquid chromatography depends solely on its primary separation mode. Although liquid-liquid chromatographic instruments have only relatively low plate efficiencies, measured in hundreds, they have far greater scope for controlling selectivity and thereby maintaining high resolution. Liquid-liquid methodologies offer a number of elution options that are impossible when using solid chromatographic media and are applicable to the resolution of a wide range of molecule types including natural products, peptides and small, synthetic compounds of therapeutic interest.