



Explains the advantages of TLC and why it is particularly well-suited to this field...

46772 FL

Thin Layer Chromatography in Phytochemistry

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Volume 89 in the *Chromatographic Science Series*

Convenient Technique Serves Multiple Needs for Analysis and Production of Plant-Based Pharmaceuticals

Thin layer chromatography (TLC) is increasingly used in the fields of plant chemistry, biochemistry, and molecular biology. Advantages such as speed, versatility, and low cost make it one of the leading techniques used for locating and analyzing bioactive components in plants.

Thin Layer Chromatography in Phytochemistry is the first source devoted to supplying state-of-the-art information on TLC as it applies to the separation, identification, quantification, and isolation of medicinal plant components. Renowned scientists working with laboratories around the world demonstrate the applicability of TLC to a remarkable diversity of fields including plant genetics, drug discovery, nutraceuticals, and toxicology.

Elucidates the role of plant materials in the pharmaceutical industry...

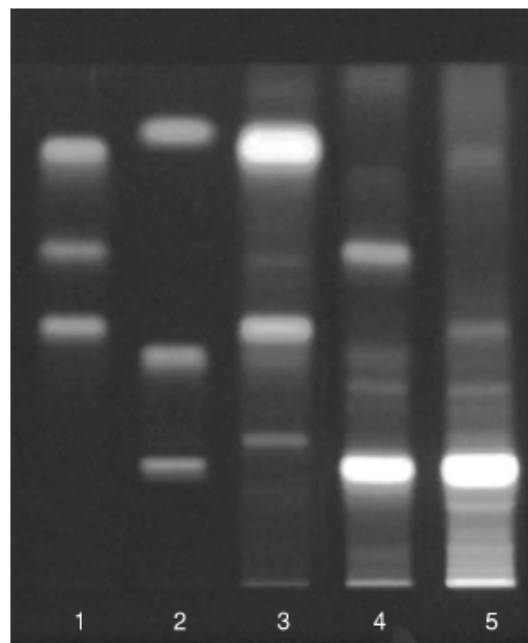
Part I provides a practical review of techniques, relevant materials, and the particular demands for using TLC in phytochemical applications. The text explains how to determine the biological activity of metabolites and assess the effectiveness of herbal medicines and nutritional supplements. **Part II** concentrates on TLC methods used to analyze specific plant-based metabolite classes such as carbohydrates, proteins, alkaloids, flavonoids, terpenes, etc. Organized by compound type, each chapter discusses key topics such as sample preparation, plate development, zone detection, densitometry, and biodetection.

Demonstrates practical methods that can be applied to a wide range of disciplines...

From identification to commercial scale production and quality control, **Thin Layer Chromatography in Phytochemistry** is an essential bench-top companion and reference on using TLC for the study of plant-based bioactive compounds.

Features

- Underscores the advantages of using TLC for locating and analyzing bioactive compounds from plant sources
- Explains the benefits of using TLC over more expensive and complex chromatographic techniques
- Reviews the techniques, materials, instrumentation, and procedures specific to the analysis and isolation of each compound class
- Discusses methods for online derivatization, detection, identification, and quantification
- Includes up-to-date tables, figures, and references throughout the text



Fingerprints for differentiation of three *Echinacea* species; Track assignment: 1: caftaric acid, cynarin, cichoric acid (with increasing Rf); 2: echinacoside, chlorogenic acid, caffeic acid (with increasing Rf); 3: *E. purpurea* root; 4: *angustifolia* root; 5: *E. pallida* root.

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