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| Autore | Teutenberg Thorsten |
| Titolo | High-temperature liquid chromatography [[electronic resource]] : a user's guide for method development / / Thorsten Teutenberg |
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| ISBN | 1-62198-162-2 1-84973-109-8 |
| Descrizione fisica | 1 online resource (221 p.) |
| Collana | RSC chromatography monographs, , 1757-7055 ; ; 13 |
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| Soggetti | High performance liquid chromatography High temperature chemistry |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | A brief definition of high-temperature liquid chromatography -- System set-up for high-temperature liquid chromatography -- The heating system -- Mobile phase considerations -- Suitable stationary phases -- Method development using temperature as an active variable -- Analyte stability -- Special hyphenation techniques -- Critical outlook and future prospects. |
| Sommario/riassunto | "High-temperature liquid chromatography has attracted much interest in recent years but has not yet recognized its full potential in the chromatographic community. There is a widespread reluctance in industry to use temperature to speed up the separation process, influence the selectivity of a separation or implement novel detection techniques. However, the technology has now matured and could revolutionize chromatography as we see it today. Better equipment, such as heating systems able to generate faster heating rates, is becoming more readily available. Also, columns based on silica gel, which can withstand higher temperatures for an extended period, are now being introduced. Nevertheless, further technological and methodical efforts are needed to establish the method in a regulated environment like the pharmaceutical industry. This is the only text to cover all the practical aspects, as well as the underlying theoretical principles, of setting up an HPLC system for high temperature operation. It is not intended solely for academics but will also benefit |

the researcher interested in more practical considerations. The author is a recognized expert and has conducted several studies with partners from industry to validate the method. Many real examples from these studies have been included in the book. The aim is to support practitioners in the creation of their own protocols without the need to rely solely on trial and error. The book starts with a brief definition of high temperature liquid chromatography before going on to cover: system set up; the heating system; mobile phase considerations; suitable stationary phases; method development using temperature programming; analyte stability, and special hyphenation techniques using superheated water as a mobile phase. In each chapter, experimental data is used to illustrate the main statements and the advantages over conventional HPLC are evaluated. The book concludes with a critical outlook on further developments and applications underlining the necessary advances needed to make high temperature HPLC more robust."--Back cover.
