

1. Record Nr.	UNINA9910830245703321
Autore	Hubschmann Hans-Joachim
Titolo	Handbook of GC/MS : fundamentals and applications / / Hans-Joachim Hubschmann
Pubbl/distr/stampa	Weinheim, [Germany] : , : Wiley-VCH Verlag GmbH & Co. KGaA, , 2009 ©2009
ISBN	1-282-02171-0 9786612021718 3-527-62521-6 3-527-62522-4
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (739 p.)
Disciplina	543.85 543/.85
Soggetti	Gas chromatography Mass spectrometry
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 at the end of each chapters and index.
Nota di contenuto	Handbook of GC/MS; Foreword; Preface to the Second Edition; Preface to the First Edition; Contents; 1 Introduction; 2 Fundamentals; 2.1 Sample Preparation; 2.1.1 Solid Phase Extraction; 2.1.1.1 Solid Phase Microextraction; 2.1.2 Supercritical Fluid Extraction; 2.1.3 Pressurized Fluid Extraction; 2.1.4 Online Liquid Chromatography Clean-up; 2.1.5 Headspace Techniques; 2.1.5.1 Static Headspace Technique; 2.1.5.2 Dynamic Headspace Technique (Purge and Trap); 2.1.5.3 Headspace versus Purge and Trap; 2.1.6 Adsorptive Enrichment and Thermodesorption; 2.1.6.1 Sample Collection; 2.1.6.2 Calibration 2.2.3.4 Cold Injection Systems2.2.3.5 Injection Volumes; 2.2.3.6 On-column Injection; 2.2.3.7 Cryofocusing; 2.2.4 Capillary Columns; 2.2.4.1 Sample Capacity; 2.2.4.2 Internal Diameter; 2.2.4.3 Film Thickness; 2.2.4.4 Column Length; 2.2.4.5 Adjusting the Carrier Gas Flow; 2.2.4.6 Properties of Stationary Phases; 2.2.5 Chromatography Parameters; 2.2.5.1 The Chromatogram and its Meaning; 2.2.5.2 Capacity Factor k ; 2.2.5.3 Chromatographic Resolution; 2.2.5.4 Factors

Affecting the Resolution; 2.2.5.5 Maximum Sample Capacity; 2.2.5.6 Peak Symmetry; 2.2.5.7 Optimisation of Flow
 2.2.6 Classical Detectors for GC/MS Systems 2.2.6.1 FID; 2.2.6.2 NPD; 2.2.6.3 ECD; 2.2.6.4 PID; 2.2.6.5 ELCD; 2.2.6.6 FPD; 2.2.6.7 PDD; 2.2.6.8 Connection of Classical Detectors Parallel to the Mass Spectrometer; 2.3 Mass Spectrometry; 2.3.1 Resolving Power and Resolution in Mass Spectrometry; 2.3.1.1 High Resolution; 2.3.1.2 Unit Mass Resolution; 2.3.1.3 High and Low Resolution in the Case of Dioxin Analysis; 2.3.2 Time-of-Flight Analyser; 2.3.3 Isotope Ratio Monitoring GC/MS; 2.3.4 Ionisation Procedures; 2.3.4.1 Electron Impact Ionisation; 2.3.4.2 Chemical Ionisation
 2.3.5 Measuring Techniques in GC/MS 2.3.5.1 Detection of the Complete Spectrum (Full Scan); 2.3.5.2 Recording Individual Masses (SIM/MID); 2.3.5.3 High Resolution Accurate Mass MID Data Acquisition; 2.3.6 MS/MS -Tandem Mass Spectrometry; 2.3.7 Mass Calibration; 2.4 Special Aspects of GC/MS Coupling; 2.4.1 Vacuum Systems; 2.4.2 GC/MS Interface Solutions; 2.4.2.1 Open Split Coupling; 2.4.2.2 Direct Coupling; 2.4.2.3 Separator Techniques; References for Chapter 2; 3 Evaluation of GC/MS Analyses; 3.1 Display of Chromatograms; 3.1.1 Total Ion Current Chromatograms; 3.1.2 Mass Chromatograms
 3.2 Substance Identification

Sommario/riassunto

This is the first comprehensive reference work for GC/MS now in its second edition. It offers broad coverage, from sample preparation to the evaluation of MS-Data, including library searches. Fundamentals, techniques, and applications are described. A large part of the book is devoted to numerous examples for GC/MS-applications in environmental, food, pharmaceutical and clinical analysis. These proven examples come from the daily practice of various laboratories. The book also features a glossary of terms and a substance index that helps the reader to find information for his particul
