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	Solution State NMR; 1 Introduction; 2 Basics; 3 Quantitative NMR Spectroscopy; 3.1 Relative method; 3.2 Absolute method; 4 Validation 4.1 Linearity; 4.2 Robustness; 4.3 Specificity and selectivity; 4.4 Accuracy; 4.5 Precision; 4.6 Measurement uncertainty; 4.7 Round robin tests; 5 Sensitivity; 6 Conclusion; Chapter 3 qNMR in Solid State; 1 Introduction to Solid-state NMR; 2 Quantitative Aspects of Solid-state NMR, Protocol for Quantitation; 3 An Example: Quantitation of Pseudoephedrine in Dosage Form; 4 Quantitation of Polymorphs and Formulated Drugs; Chapter 4 Microcoil Nuclear Magnetic Resonance Spectroscopy; 1 Introduction; 2 Intrinsic NMR Sensitivity; 3 Development of Small Coils for High-Resolution NMR 3.1 Saddle/Helmholtz coils; 3.2 Solenoidal coils; 3.3 Planar RF coils; 3.4 Novel microcoil designs; 3.5 High-temperature superconducting microprobes; 4 Sensitivity Comparisons; 5 Nanoliter Volume Applications of RF Microcoils - Hyphenated cITP-NMR; 6 Microliter Volume Applications of RF Microcoils; 6.1 Helmholtz/saddle coils; 6.2 Solenoidal coils; 6.3 Superconducting microcoils; 7 Hyphenation of Microseparation Techniques with Microliter NMR Detection; 8 Multiple Coil Probeheads; 9 Solid-State Applications of Small Coils; 10 Conclusion Chapter 5 qNMR Spectroscopy in Drug Analysis - A General View; 1 Introduction; 2 NMR Spectroscopy in International Pharmacopoeias; 2.1 Identification of drugs; 2.2 Tests; 2.3 Assay; 3 Validation; 4 Conclusions; Part II GENERAL APPLICATIONS; Chapter 1 Investigation of Multi-Component Drugs by NMR Spectroscopy; 1 Introduction; 1.1 Solvent; 1.2 pH value; 1.3 Temperature; 1.4 Auxiliary reagents; 1.5 Limitations; 2 Codergocrine Mesylate; 2.1 1H NMR spectroscopy; 2.2 13C NMR spectroscopy; 2.3 High-performance liquid chromatography; 2.4 HPLC versus NMR spectroscopy; Chapter 2 NMR Applications for Polymer Characterisation
Sommario/riassunto	For almost a decade, quantitative NMR spectroscopy (qNMR) has been established as valuable tool in drug analysis. In all disciplines, i. e. drug identification, impurity profiling and assay, qNMR can be utilized. Separation techniques such as high performance liquid chromatography, gas chromatography, super fluid chromatography and capillary electrophoresis techniques, govern the purity evaluation of drugs. However, these techniques are not always able to solve the analytical problems often resulting in insufficient methods.