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Nota di contenuto	The Troubleshooting and Maintenance Guide for Gas Chromatographers; Preface; Contents; Intentions and Introduction; 1 Introduction to Capillary Gas Chromatography; 1.1 What Is Gas Chromatography?; 1.2 What Types of Compounds Are Suitable for GC Analysis?; 1.3 The Basic Parts of a Gas Chromatograph; 1.3.1 Gas Supply and Flow Controllers; 1.3.2 Injector; 1.3.3 Capillary Column and Oven; 1.3.4 Detector; 1.3.5 Data System; 1.4 The Chromatogram; 1.5 The Mechanism of Compound Separation; 1.5.1 A Simple Description of the Chromatographic Process 1.5.2 A Detailed Description of the Chromatographic Process 1.6 Factors Affecting Separation; 1.6.1 Stationary Phase; 1.6.2 Compound Structure; 1.6.3 Column Temperature; 2 Basic Definitions and Equations; 2.1 Why Bother?; 2.2 Peak Shapes; 2.2.1 Peak Width (W); 2.2.2 Peak Symmetry; 2.3 Retention; 2.3.1 Retention Time (t(r)); 2.3.2 Adjusted Retention Time (t'(r)); 2.3.3 Retention Factor (k); 2.3.4

Retention Index (I); 2.4 Phase Ratio (); 2.5 Distribution Constant (K(C)); 2.5.1 K(C) and Column Dimensions; 2.5.2 K(C) and Column Temperature; 2.6 Column Efficiency  
2.6.1 Number of Theoretical Plates (N) 2.6.2 Height Equivalent to a Theoretical Plate (H); 2.6.3 Effective Theoretical Plates (N<sub>eff</sub>) and Effective Plate Heights (H<sub>eff</sub>); 2.6.4 Precautions When Using Theoretical Plates; 2.7 Utilization of Theoretical Efficiency (UTE%); 2.8 Separation Factor (); 2.9 Resolution (R); 2.10 Trennzahl (TZ); 2.11 Column Capacity; 3 Capillary GC Columns: Tubing; 3.1 Fused Silica Capillary Columns; 3.2 Fused Silica Tubing; 3.3 Outer Coating; 3.4 Other Tubing Materials; 3.5 Polyimide Fused Silica Tubing Bending Stress; 4 Capillary GC Columns: Stationary Phases  
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5.3.3 Column Diameter and Pressure

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## Sommario/riassunto

This fourth edition of the classic guide for every user of gas chromatographic instrumentation is now updated to include such new topics as fast GC using narrow, short columns, electronic pressure control, and basic aspects of quantitative gas chromatography. The author shares his many years of experience in technical support for gas chromatography users, addressing the most common problems, questions and misconceptions in capillary gas chromatography. He structures and presents the material in a concise and practical manner, suitable even for the most inexperienced user without any detail

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