

## CONTENTS

	Page
<b>Chapter 1. INTRODUCTION</b>	
1.1 Particle size analysis	7
1.2 Disperse systems	7
1.3 Particles	8
1.4 Means of expressing the size, shape and polydispersity of particles	9
1.5 Survey of methods	16
1.6 Sample preparation	16
<b>Chapter 2. OPTICAL METHODS</b>	<b>18</b>
2.1 Microscopy	18
2.2 Automatic evaluation of microphotographs and oscilloscopic microscopy	23
2.3 Ultramicroscopy	25
2.4 Electron microscopy	27
2.5 Light scattering	35
2.6 X-Ray analysis	48
<b>Chapter 3. MECHANICAL METHODS</b>	<b>58</b>
3.1 Sieve analysis	58
3.2 Ultrafiltration	63
3.3 Gel permeation chromatography	65
<b>Chapter 4. GRAVITATION METHODS</b>	<b>70</b>
4.1 Sedimentation	70
4.2 Centrifugation	79
4.3 Ultracentrifugation	85
4.4 Sedimentation and classification in a stream	92
<b>Chapter 5. OSMOTIC METHODS</b>	<b>94</b>
5.1 Diffusion methods	94
5.2 Osmometry	102
<b>Chapter 6. TRANSLATIONAL METHODS</b>	<b>107</b>
6.1 Viscometry	107
6.2 Permeametric determination of the specific surface	114
6.3 The transient flow method	120
6.4 Liquid permeametry	123
<b>Chapter 7. PORE SIZE ANALYSIS</b>	<b>126</b>
7.1 Analysis of pore distribution	126
7.2 Determination of the pore distribution	129
7.3 Determination of the pore distribution by the desorption method	130
<b>Chapter 8. ADSORPTION METHODS</b>	<b>134</b>
8.1 The B. E. T. method	134
8.2 The thermal desorption method	142
8.3 The Harkins and Jura relative method	144
<b>Chapter 9. CONDUCTOMETRIC METHODS</b>	<b>147</b>
<b>Chapter 10. MISCELLANEOUS METHODS</b>	<b>150</b>
10.1 Radiometric methods	150
10.2 Pulse methods	152

