578.45 HAY V.1

Serial Sectioning

CONTENTS

	1	FIXATION	
Introduction			5
Factors Affecting the Quality of fixation			13
Types of Fixatives			35
Methods of Fixation			95
Tissue Storage			105
	2 EM	MBEDDING	
Washing			111
Dehydration			112
Simultaneous Dehydration			117
Infiltration			117
Viscosity and Agitation			119
Loss of Cellular Materials			122
Dehydration with water-miscible Resins			126
Mixed Resin Embedding			129
Tissue Orientation			134
Labeling			137
Polymerization			138
Embedding Media			144
Water-Miscible Embedding			163
	3 SE	CCTIONING	
Introduction			183
Section Thickness			184
Cutting Speed			189
Glass Knives			190
Diamond Knives			199
Knife Angle			203
Specimen Block			206
Preparation of Troughs			210
Flotation Fluids			212
Section Flotation			213
Section Flattening			215
Section Collection			217
Section Viewing			221

222

The Chatter	225
Section Contamination	230
Sectioning Procedure	232
Defects Appearing During Sectioning	234
Thick Sections for Optical Microscopy	236
Electron Stereoscopy	237
4 STAINING	
Introduction	241
Factors Affecting the Contrast	246
Duration of Staining	248
Stain Specificity	249
Stains	251
Staining Procedures	304
Multiple Staining	308
Staining of Thick Sections	309
Selected Staining Methods for Thick Sections	314
List of staining Methods	318
5 SUPPORT FILMS	
Introduction	323
Materials for Support Films	324
Preparation of Plastic Films	326
Preparation of Carbon Films	329
6 APPENDIX	
Fixing Formulations	335
Preparation of Buffers	342
Special Fixing Procedures	345
Supply Distributors	348
References	353
Index	397