

CONTENTS

PART I : NORMAL CELLULOSE

I.	THE PREPARATION OF STANDARD CELLULOSE	1
II.	SOME MEASURABLE QUALITIES OF CELLULOSE AND THE DIAGNOSIS OF CHANGE IN CELLULOSE	10
III.	SOLUTIONS OF CELLULOSE AND THE MEASUREMENT OF THEIR VISCOSITY	40
IV.	MEASUREMENT OF THE TENSILE STRENGTH OF HAIR, YARN AND FABRIC	73
V.	DISPERSED CELLULOSE – MERCERISED COTTON AND RAYONS	84
VI.	OXYCELLULOSE	106
VII.	HYDROCELLULOSE	144
VIII.	THE STRUCTURE AND APPARENT MOLECULAR WEIGHT OF CELLULOSE AND ITS MODIFICATION	178
IX.	THE DEGRADATION PRODUCTS OF CELLULOSE	195
X.	THE DETECTION AND ESTIMATION OF ACIDS IN CELLULOSIC MATERIALS	209
XI.	THE INVESTIGATION OF CASES OF DAMAGE IN COTTON AND LINEN CELLULOSE	216

PART II : SYNTHETIC DERIVATIVES OF CELLULOSE

XII.	CELLULOSE ESTERS AND ETHERS. SOME GENERAL METHODS AND CONSIDERATIONS	226
XIII.	CELLULOSE NITRATE	233
XIV.	CELLULOSE SODIUM XANTHATE	251
XV.	CELLULOSE ACETATE	272
XVI.	CELLULOSE ESTERS OF OTHER ACIDS AND THE MIXED ESTERS OF CELLULOSE	293
XVII.	CELLULOSE ETHERS	311

PART III : THE INVESTIGATION OF THE SO-CALLED COMPOUND

XVIII.	THE COMPOUND CELLULOSES	331
XIX.	THE GENERAL QUALITATIVE AND QUANTITATIVE EXAMINATION OF PLANT TISSUES	338
XX.	THE ESTIMATION OF CELLULOSE AND LIGNIN	352
XXI.	THE ESTIMATION OF FURFURAL, URONIC ACID, AND METHOXYL	375
XXII.	THE HEMICELLULOSES	405

XXIII. THE ANALYSIS OF WOOD	441
XXIV. THE INVESTIGATION OF PULP AND PULP PROCESSES	453
XXV. THE CHEMISTRY OF ISOLATED LIGNIN	484
XXVI. THE PECTIC SUBSTANCES	507
APPENDIX	
GRAPH SHOWING RELATION BETWEEN TEMPERATURE OF WATER AND PRESSURE OF STEAM	527
SOME BOOKS ON CELLULOSE AND WOOD	527
COMPARISON OF HYDROMETER SCALES	529
SPECIFIC GRAVITY AND STRENGTHS OF HYDROCHLORIC ACID AND NITRIC ACID SOLUTIONS	530
SPECIFIC GRAVITY AND STRENGTHS OF SULPHURIC ACID SOLUTIONS	531
SPECIFIC GRAVITY AND STRENGTHS OF SODIUM HYDROXIDE SOLUTIONS	532
AUTHOR INDEX	533
SUBJECT INDEX	538