

LIST OF CONTENTS

LEGALIZATION PAGE	i
ORIGINALIZATION STATEMENT SHEET	ii
PUBLICATION APPROVAL SHEET.....	iii
BIOGRAPHY.....	iv
ABSTRACT	v
PREFACE	vi
LIST OF CONTENTS	viii
LIST OF FIGURES	xi
LIST OF TABLES	xii
LIST OF APPENDIX.....	xiii
CHAPTER I INTRODUCTION	1
1.1 Background	1
1.2 Problem Identification.....	5
1.3 Scope of Study	6
1.4 Problem Limitation	6
1.5 Problem Formulation	6
1.6 Research Objective	7
1.7 Research Benefit	7
CHAPTER II LITERATURE STUDY	9
2.1 Development Research	9
2.2 4D Development Model.....	10
2.2.1 Stage I: Definition (Define)	10
2.2.2 Stage II: Design (Design).....	11
2.2.3 Stage III: Development (Development).....	12
2.2.4 Stage IV: Dissemination	12
2.3 Learning Media.....	13
2.3.1 Understanding Learning Media	13
2.3.2 Characteristics of Learning Media.....	14
2.3.3 Benefits of Learning Media	15
2.3.4 Types of Learning Media.....	15
2.4 Student worksheet.....	15

2.4.1	Understanding Student Worksheets	15
2.4.2	Purpose of Student Worksheets	16
2.4.3	Benefits of Student Worksheets	16
2.4.4	Advantages and Disadvantages of Student Worksheets	17
2.4.5	Steps for Preparing Student Worksheets.....	17
2.5	Android system.....	18
2.5.1	Understanding and Development of Android.....	18
2.5.2	Effectiveness of Using the Android System to Support the Teaching and Learning Process	18
2.5.3	Advantages and Disadvantages of Using the Android System for Learning Chemistry.....	19
2.6	iSpring Application.....	19
2.7	Salt Hydrolysis.....	21
2.7.1	Salt Hydrolysis Concept	22
2.7.2	Hydrolysis of Salts from Weak Acids and Strong Bases.....	23
2.7.3	Hydrolysis of Salts from Strong Acids and Weak Bases.....	25
2.7.4	Hydrolysis of Salts from Weak Acids and Weak Bases.....	26
2.7.5	Properties of Salt Solutions.....	28
2.7.6	Determination of the Hydrolysis Constant (Kh) and pH of Salt Solutions	29
2.8	Framework of thinking	32
2.9	Hypothesis.....	33
	CHAPTER III RESEARCH METHODOLOGY.....	34
3.1	Time and Place of Research.....	34
3.2	Research Population and Sample.....	34
3.3	Variables and Research Design	34
3.4	Operational definition	35
3.5	Research Instrument.....	35
3.6	Data collection technique.....	37
3.7	Research procedure	37
3.7.1	Initial Research Stage.....	39
3.7.2	Product Creation Stage	39
3.7.3	Final Research Stage	42
3.8	Data analysis	42

3.8.1. Feasibility Analysis of Learning Media.....	42
3.8.2. Normality Test.....	48
3.8.3. Homegeneity Test.....	48
3.8.4. Hypothesis Test.....	48
3.8.5. N-Gain test.....	49
CHAPTER IV RESULT AND DISCUSSION.....	50
4.1 Result of Research.....	50
4.1.1. Result of Define Stage.....	50
4.1.2. Result of Design Stage.....	54
4.1.3. Result of Development Stage.....	60
4.1.4. Result of Disseminate Stage.....	68
4.2 Result of Analysis Instrument Test.....	70
4.2.1. Validity Test.....	71
4.2.2. Reliability Test.....	71
4.2.3. Difficulty Test.....	71
4.2.4. Different Index.....	72
4.3. Result of Data Analysis Research.....	72
4.3.1. Normality Test.....	73
4.3.2. Homogeneity Test.....	74
4.3.3. Percentage of Improved Learning Outcomes (N-Gain Test).....	75
4.3.4. Hypothesis Test.....	75
4.4. Discussion.....	75
CHAPTER V CONCLUSION AND SUGGESTION.....	81
REFERENCES	83