

การตัดแปรรและการทำให้ชั้นสนบริสุทธิ์



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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาดตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต

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MODIFICATION AND PURIFICATION OF ROSIN

Mr. Prapas Khorphueng

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Science

Program of Petrochemistry

Graduate School

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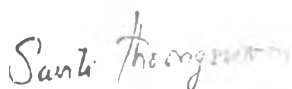
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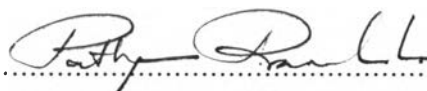
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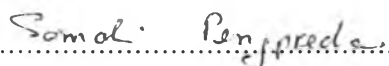


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พิมพ์ต้นฉบับบทคัดย่อ วิทยาลัยนอร์ทกรุงเทพ กรุงเทพมหานคร

ประเภทของหนังสือ : การตัดแปรและการทำให้ชั้นสนบริสุทธิ์ (MODIFICATION AND PURIFICATION OF ROSIN) อาจารย์ที่ปรึกษา : รศ.ดร. โสภณ เรืองสำราญ, 113 หน้า. ISBN 974-632-386-5

ในงานวิจัยนี้ได้ทำการตัดแปรและการทำให้ชั้นสนให้บริสุทธิ์โดยใช้ 2 กระบวนการ ดีไฮโดรจีเนชัน (ดีสพรอพอชันเนชัน) และไฮโดรจีเนชัน กระบวนการดีไฮโดรจีเนชัน กระทำโดยใช้ 0.3% Pd/C เป็นตัวเร่งปฏิกิริยาที่อุณหภูมิระหว่าง 240–280°C เป็นเวลา 4 ชั่วโมง ภายใต้บรรยากาศของไนโตรเจน ชั้นสนที่ผ่านกระบวนการดีไฮโดรจีเนชันทำให้บริสุทธิ์โดยการกลั่นลดความดันที่ 3 mmHg และตกผลึกโดยใช้ตัวทำละลายที่เหมาะสม ผลิตภัณฑ์ที่ได้ประกอบด้วยกรดดีไฮโดรอะบิติก 97 เปอร์เซ็นต์ ที่มีจุดหลอมเหลว 160°C

ไฮโดรจีเนชัน กระทำโดยใช้เรนิคเกิลเป็นตัวเร่งปฏิกิริยาที่เหมาะสมคือ อุณหภูมิ 200°C ภายใต้ความดันไฮโดรเจน 700 psi และปริมาณตัวเร่งปฏิกิริยา 10% โดยน้ำหนักของชั้นสนเป็นเวลา 12 ชั่วโมง ในตัวทำละลายเอทานอล ผลิตภัณฑ์ได้นำไปทำการกลั่นลดความดันที่ 3 mmHg ได้ผลิตภัณฑ์กรดเทตระไฮโดรอะบิติก 81.23 เปอร์เซ็นต์

ภาควิชา ..... สหสาขาวิชาปิโตรเคมี-พอลิเมอร์  
สาขาวิชา ..... ปิโตรเคมี  
ปีการศึกษา ..... 2537

ลายมือชื่อนิสิต .....  
ลายมือชื่ออาจารย์ที่ปรึกษา .....  
ลายมือชื่ออาจารย์ที่ปรึกษาร่วม .....

# # C585190 : MAJOR PETROCHEMISTRY  
KEY WORD: MODIFIED ROSIN/ ABIETIC ACID/ CATALYTIC HYDROGENATION

PRAPAS KHORPHUENG : MODIFICATION AND PURIFICATION OF ROSIN : THESIS ADVISOR :  
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The aim of this research was to modify and purify rosin by dehydrogenation (disproportionation), and hydrogenation reactions. Dehydrogenation was to operate in a temperature range of 240–280°C under nitrogen atmosphere and concentration of Pd/C catalyst 0.3% by weight of rosin for 4 hours. Dehydrogenated rosin was distilled under reduced pressure of 3 mmHg in an atmosphere of nitrogen to obtain 87% yield of purified rosin. The purified rosin was crystallized from acetone to obtain 97% of dehydroabietic acid having a melting point 160°C.

Hydrogenation was to operate at optimum condition using Raney Nickel catalyst at 200°C, 12 hours, 700 psi, 10% catalyst concentration by weight of rosin and in ethanol. Hydrogenated rosin was distilled under reduced pressure of 3 mmHg to give pure hydrogenated rosin (86.23%).

ภาควิชา..... สหสาขาวิชาปิโตรเคมี-พอลิเมอร์

สาขาวิชา..... ปิโตรเคมี

ปีการศึกษา..... 2537

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ลายมือชื่ออาจารย์ที่ปรึกษา..... 

ลายมือชื่อคณาจารย์ที่ปรึกษา.....



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## CONTENTS

	Page
ABSTRACT IN THAI .....	IV
ABSTRACT IN ENGLISH .....	V
ACKNOWLEDGEMENTS .....	VI
CONTENTS .....	VII
LIST OF TABLES .....	X
LIST OF FIGURES.....	XI
CHAPTER I. INTRODUCTION	
CHAPTER II. THEORETICAL CONSIDERATIONS	
Production Method .....	5
1 Gum rosin .....	5
2 Wood rosin .....	6
3 Tall oil rosin .....	6
Rosin Grades and Tests .....	8
1 Color grades .....	8
2 Foreign matter .....	9
3 Softening point .....	9
4 Acid number .....	9
5 Sponification number .....	9
Composition Gum and Wood Rosins .....	10
Reactions and Derivatives .....	13
1 Reaction at the double bond .....	13
Isomerization .....	13
Addition of maleic anhydride .....	14

## CONTENTS (continued)

	Page
Rosin modified phenolics .....	16
Oxidation .....	17
Other oxidation .....	18
Hydrogenation .....	20
Disproportionation (Dehydrogenation) .....	21
Polymerization .....	23
2 Reaction at carboxyl group .....	25
Salt formation .....	25
Esterification .....	26
Decarboxylation .....	28
 CHAPTER III    EXPERIMENTAL	
Instruments and Apparatus .....	30
Materials .....	31
Experiments Based on Methylation .....	31
Raw Material Analyses .....	32
Experiments Based on Dehydrogenation (Disproportionation Reaction) .....	32
1. Characterization and Quantitative Analyzes .....	33
Experiments Based on Hydrogenation .....	33
1. The Effect of Catalyst on the Hydrogenation .....	33
2. The Effect of Reaction Temperature on Hydrogenation .....	34
3. The Effect of Reaction Time on Hydrogenation .....	35



**CONTENTS (continued)**

	Page
4. The Effect of Hydrogen Pressure on Hydrogenation .....	35
5. The Effect of Catalyst Concentration on Hydrogenation .....	36
CHAPTER IV RESULTS AND DISCUSSION	
CHAPTER V CONCLUSIONS	
REFERENCES .....	59
APPENDIX .....	62
VITA .....	98

## LIST OF TABLES

TABLE	Page
2.1 Physical properties of rosin acids and their methyl esters. ....	12
2.2 Important properties of rosin and modified rosins. ....	25
2.3 Products from decarboxylation of rosin. ....	29
4.1 Relative retention time and weight percent composition of rosin. ....	37
4.2 Relative abundances in the recorded mass spectra of the identified rosin acid methyl esters. ....	38
4.3 Relative abundances in recorded mass spectra of the raw material rosin. ....	39
4.4 Main fractions of disproportionated rosin determined by distilling under a pressure of 3 mmHg. ....	41
4.5 Relative retention times and percent yield of dehydrogenated rosin at various temperatures. ....	42
4.6 The percent yield and relative retention times of hydrogenated rosin produced with various catalyst types. ....	44–45
4.7 The percent yield and relative retention times of hydrogenated rosin produced at various reaction temperatures. ....	46–47
4.8 The percent yield and relative retention times of hydrogenated rosin produced at various reaction times. ....	49
4.9 The percent yield and relative retention times of hydrogenated rosin produced at various hydrogen pressures. ....	51–52
4.10 The percent yield and relative retention times of hydrogenated rosin produced at various catalyst concentrations. ....	54

## LIST OF FIGURES

FIGURE	Page
2.1 Process for producing tall oil rosin from crude tall oil. ....	7
2.2 Spectral transmission curves for rosin samples selected to match the glass standard in color. ....	8
2.3 Oxygen absorption by rosin derivatives at room temperature and 300 psi. ....	19
4.1 The percent by weight of resin acids in rosin. ....	40
4.2 Percent yield compositions of dehydrogenated rosin (Dehydroabietic acid) produced at various temperatures. ....	44
4.3 Percent yields of hydrogenated rosin at various reaction temperatures. ....	49
4.4 Percent yields of hydrogenated rosin at various reaction times. ....	51
4.5 Percent yields of hydrogenated rosin at various hydrogen pressures. ....	53
4.6 Percent yields of hydrogenated rosin at various catalyst concentrations. ....	55
A 1 GC-MS chromatogram of original rosin. ....	63
A 2 <sup>1</sup> H-NMR of original rosin. ....	64
A 3 <sup>13</sup> C-NMR of original rosin. ....	65
A 4 Mass spectra of original rosin. ....	66-67
A 5 DSC of original rosin. ....	68
A 6 <sup>1</sup> H-NMR of dehydrogenated rosin. ....	69
A 7 <sup>13</sup> C-NMR of dehydrogenated rosin. ....	70

**LIST OF FIGURES (continued)**

FIGURE	Page
A 8 GC–MS chromatogram of dehydrogenated rosin produced at various reaction temperatures. ....	71
A 9 Mass spectra of dehydrogenated rosin. ....	72
A 10 <sup>1</sup> H–NMR of crystallized dehydrogenated rosin. ....	73
A 11 <sup>13</sup> C–NMR of crystallized dehydrogenated rosin. ....	74
A 12 DSC of dehydrogenated rosin. ....	75
A 13 GC–MS chromatogram of hydrogenated rosin produced with various catalyst types. ....	76
A 14 Mass spectra of hydrogenated rosin produced with various catalyst types. ....	77–80
A 15 GC–MS chromatogram of hydrogenated rosin produced at various reaction temperatures. ....	81
A 16 Mass spectra of hydrogenated rosin at various reaction temperatures. ....	82–84
A 17 GC–MS chromatogram of hydrogenated rosin produced during various reaction times. ....	85
A 18 Mass spectra of hydrogenated rosin produced during various reaction times. ....	86–88
A 19 GC–MS chromatogram of hydrogenated rosin produced at various hydrogen pressures. ....	89
A 20 Mass spectra of hydrogenated rosin produced at various hydrogen pressures. ....	90–92

**LIST OF FIGURES (continued)**

FIGURE	Page
A 21 GC–MS chromatogram of hydrogenated rosin produced at various catalyst concentrations. ....	93
A 22 Mass spectra of hydrogenated rosins produced at various catalyst concentrations. ....	94–96
A 23 DSC of hydrogenated rosin produced at optimum condition. ....	97
A 24 <sup>1</sup> H–NMR of hydrogenated rosin produced at optimum condition. ....	98
A 25 <sup>13</sup> C–NMR of hydrogenated rosin produced at optimum condition. ...	99