

องค์ประกอบทางเคมีของเมล็ดสวาด

*Caesalpinia major* (Medik.) Dandy & Exell.

นางสาว สุภัตตรา ถิมสุวรรณเกษร

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิทยาศาสตรมหาบัณฑิต

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CHEMICAL CONSTITUENTS OF THE SEEDS OF  
*Caesalpinia major* (Medik.) Dandy & Exell.

Miss Supassara Limsuwankesorn

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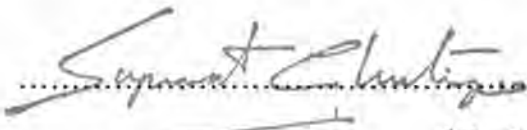
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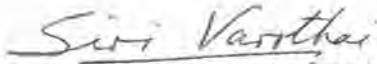
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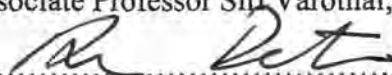
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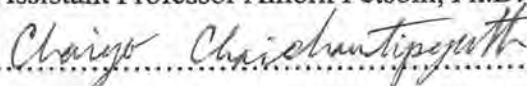
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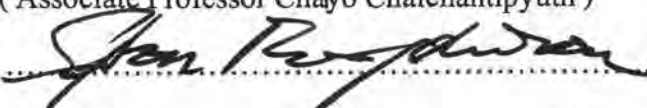
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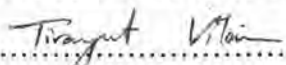
( Assistant Professor Amorn Petsom, Ph.D. )

 .....Co-Advisor

( Associate Professor Chaiyo Chaichantipyuth )

 .....Member

( Associate Professor Sapon Roengsumran, Ph.D. )

 .....Member

( Tirayut Vilaivan, D.Phil )

สุภัทสรา ลิมสุวรรณเกษร : องค์ประกอบทางเคมีของเมล็ดสวาด [*Caesalpinia major*  
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จากการแยกองค์ประกอบทางเคมีของเมล็ดสวาด และทำให้บริสุทธิ์ โดยการสกัดด้วยตัว  
เมทานอล และโดยวิธีโครมาโทกราฟีบนซิลิกาเจล สามารถสกัดสารได้ 4 ชนิด ได้แก่  $\phi$ -  
caesalpin (I) ซึ่งเป็นสารใหม่ , neocaesalpin B (II), ของผสมของสเตอรอยด์ 2 ชนิด ได้แก่  
stigmasterol และ  $\beta$ -sitosterol และสารใหม่อีกชนิดหนึ่งคือ  $\eta$ -caesalpin (IV) ซึ่งได้เสนอสูตร  
โครงสร้างไว้ การหาสูตรโครงสร้างของสารต่างๆที่แยกได้ทำโดยอาศัยสมบัติทางกายภาพและ  
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SUPASSARA LIMSUWANKESORN : CHEMICAL CONSTITUENTS OF THE SEED OF *Caesalpinia major* (Medik.) Dandy & Exell. THESIS ADVISOR : ASSI. PROF. AMORN PETSOM, Ph.D. THESIS CO-ADVISOR : ASSOC. PROF. CHAIYO CAICHANTIPYUTH 91 PP., ISBN 974-637-620-9

Chemical constituents of the seeds of the *Caesalpinia major* (Medik.) Dandy&Exell. were isolate and purified by methanol extraction and column chromatography on silica gel. Four substances were isolated and identified namely  $\phi$ -caesalpin (I) which was a new compound, neocaesalpin B (II), a mixture of steroid (III) (stigmasterol and  $\beta$ -sitosterol) and a new compound  $\eta$ -caesalpin (IV) which it's structure had been proposed. Structure elucidation of isolated compounds was achieved by physical and chemical properties.

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## LIST OF ABBREVIATIONS

$^{\circ}\text{C}$	degree celsius
$^{13}\text{C NMR}$	carbon 13 nuclear magnetic resonance
$^1\text{H NMR}$	proton nuclear magnetic resonance
<b>br</b>	broad (NMR)
<b>cm</b>	centimeter
$\text{cm}^{-1}$	unit of wavenumber
$\delta$	chemical shift
<b>d</b>	doublet (NMR)
<b>dd</b>	doublet of doublet (NMR)
<b>DEPT</b>	Distortionless Enhancement by Polarization Transfer
<b>EI</b>	electron impact technique in mass spectrometry
<b>g</b>	gram (s)
<b>GLC</b>	gas liquid chromatography
<b>HMBC</b>	Heteronuclear Multiple Bond Correlation
<b>HMQC</b>	Heteronuclear Multiple Quantum Coherence
<b>IR</b>	infrared
<b><i>J</i></b>	coupling constant (NMR)
<b>m</b>	multiplet (NMR)
<b><math>\text{M}^+</math></b>	molecular ion in mass spectrum
<b>m.p.</b>	melting point
<b>m/z</b>	mass per charge
<b>mg</b>	milligram (s)
<b>min</b>	minute
<b>ml</b>	millilitre
<b><math>\lambda_{\text{max}}</math></b>	the wavelength at maximum absorption

<b>No.</b>	number
<b>NOESY</b>	Nuclear Overhauser Effect Spectroscopy
<b>ppm</b>	part per million
<b>q</b>	quartet (IR)
<b>R<sub>f</sub></b>	retention factor in TLC
<b>s</b>	singlet (NMR)
<b>t</b>	triplet (NMR)
<b>TLC</b>	thin layer chromatography
<b>wt. by wt.</b>	weight by weight