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PHYTOCHEMICAL STUDIES OF *BIDENS BITERNATA* MERR. & SHERFF

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พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสีเขียวนี้เพียงแผ่นเดียว

กรกนก อิงคนินันท์ : การศึกษาทางพฤกษเคมีของกันจ้ำ (PHYTOCHEMICAL STUDIES OF *BIDENS BITERNATA* MERR. & SHERFF) อ.ที่ปรึกษา : รศ. ชัยโย ชัยชาญฟิพยุทธ. 102 หน้า. ISBN 974-584-152-8

จากการใช้วิธีการทางโครมาโตกราฟี และการตกผลึก ทำให้สามารถแยกสารประกอบจากสิ่งสกัดในเมธานอลจากกันจ้ำ (*Bidens biternata* Merr. & Sherff) ได้สี่ชนิด ได้แก่ (Z)-6-O-(4,6-O-diacetyl-β-D-glucopyranosyl)-6,7,3',4'-tetrahydroxyaurone ซึ่งเป็นสารชนิดใหม่, (Z)-6-O-(6-O-acetyl-β-D-glucopyranosyl)-6,7,3',4'-tetrahydroxyaurone ซึ่งเป็นสารที่มีการศึกษามาแล้ว, ของผสมแอลกอฮอล์โซ่ตรง (C_{26}-C_{30}) และของผสมสเตียรอยด์ (stigmasterol และ β-sitosterol) การพิสูจน์เอกลักษณ์ และสูตรโครงสร้างทางเคมีของสารทั้งสี่ชนิดนี้พิสูจน์โดยการวิเคราะห์ข้อมูลจากสเปคตรัมของ UV, IR, MS, 1-D NMR และ 2-D NMR ร่วมกับการเปรียบเทียบข้อมูลของสารที่ทราบสูตรโครงสร้างแล้ว

ภาควิชา เภสัชเวท	**ลายมือชื่อนิสิต** กรกนก อิงคนินันท์
สาขาวิชา เภสัชเวท	**ลายมือชื่ออาจารย์ที่ปรึกษา** ชัยโย ชัยชาญฟิพยุทธ
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By means of chromatographic and crystallization techniques, a new aurone glycoside, (Z)-6-O-(4,6-diacetyl-β-D-glucopyranosyl)-6,7,3',4'-tetrahydroxyaurone, a known aurone glycoside, (Z)-6-O-(6-O-acetyl-β-D-glucopyranosyl)-6,7,3',4'-tetrahydroxyaurone, a mixture of C_{26}-C_{30} aliphatic long chain alcohols and a mixture of stigmasterol and β-sitosterol were isolated from the methanol extract of *Bidens biternata* Merr. & Sherff. The identification and structure elucidation of the isolated compounds were executed by analyses of the UV, IR, MS, 1-D NMR, 2-D NMR spectral data, as well as comparison with other known compounds.

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ABBREVIATIONS

APCI	= Atmospheric pressure chemical ionization
ε	= Molar absorptivity
br.d	= Broad doublet (for NMR spectra)
^{o} C	= Degree celsius
^{13}C NMR	= Carbon-13 nuclear magnetic resonance
cm	= Centimeter
COSY	= Correlated spectroscopy
1-D	= One dimentional
2-D	= Two dimensional
d	= Doublet (for NMR spectra)
dd	= Doublets of doublet (for NMR spectra)
ddd	= Doublets of doublets of doublet (for NMR spectra)
δ	= Chemical shift
E	= Entgegen : against
EIMS	= Electron impact mass spectrum
eV	= Electron volt
g	= Gram
GC	= Gas chromatography
^{1}H-NMR	= Proton nuclear magnetic resonance
HMBC	= 1H-detected multiple bond heteronuclear multiple quantum coherent
Hz	= Hertz
IR	= Infrared
J	= Coupling constant
Kg	= Kilogram
LD_{50}	= 50% Lethal dose
λ_{max}	= Wavelength at maxima absorption
M^{+}	= Molecular ion
m	= Mutiplet (for NMR spectra)
MeOH	= Methanol
mg	= Miligram
MHz	= Mega Hertz
ml	= Millilitre
mm	= Millimeter

μm	= Microlmeter
m/z	= Mass to charge ratio
MS	= Mass spectrum
NMR	= Nuclear magnetic resonance
No.	= Number
nm	= Nanometer
ν_{max}	= Wavenumber at maximum absorption
s	= Singlet (for NMR spectra)
spp.	= Species
t	= Triplet (for NMR spectra)
TLC	= Thin layer chromatography
TMS	= Tetramethylsilane
UV	= Ultraviolet
Z	= Zusammen : together