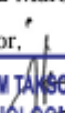


LAMPIRAN

Lampiran 1 Turnitin

SKRIPSI_M_IHSAN_A_211FF03014-1759207018807			
ORIGINALITY REPORT			
8%	8%	5%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
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Lampiran 2 Determinasi Tanaman

HERBARIUM JATINANGOR LABORATORIUM TAKSONOMI TUMBUHAN JURUSAN BIOLOGI FMIPA UNPAD Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor Telp. 089689992695, email: phanerogamae@yahoo.com	
LEMBAR IDENTIFIKASI TUMBUHAN No.29/HB/03/2024.	
Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:	
Nama	: Fiqri Mochamad Haikal
NIM/NIP	: 201FF03122
Instansi	: Universitas Bhakti Kencana.
Lokasi	: Bandung.
Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: - Tanggal Koleksi : 02 Maret 2024.	
Hasil Identifikasi	
Nama Ilmiah	: <i>Leea aequata</i> (L.) Kuntze
Sinonim	: <i>Leea ancoloa</i>
Nama Lokal	: Daun Ginggiyang
Suku/Famili	: Vitaceae
Klasifikasi (Hirarki Taksonomi)	
Kingdom	Plantae
Divisi	Tracheophyta
Class	Magnoliopsida
Ordo	Vitales
Famili	Vitaceae
Genus	<i>Leea</i>
Species	<i>Leea aequata</i> (L.) Kuntze
Referensi: The Plant List.Website DuniaTumbuhan. http://www.theplantlist.org/tpl1.1/record/kew-158489 .	
Jatinangor, 02 Maret 2024. Identifikator,	
 LABORATORIUM TAKSONOMI TUMBUHAN JURUSAN BIOLOGI FMIPA-UNPAD Drs. Joko Kusumoro, M.P. NIP. 19600801 199101 1 001	

Lampiran 3 COA Skopoletin



Program IBIKK – RISPRO LPDP, KK Biologi Farmasi, Sekolah Farmasi,
Institut Teknologi Bandung
Jalan Ganesa No 10, Bandung 40132, Jawa Barat, Indonesia
www.markherb.com

CERTIFICATE OF ANALYSIS *For Laboratory Use Only*

Product name Scopoletin

Other names 6-Methoxyumbelliferone; 6-Methylesculetin; 7-Hydroxy-6-methoxy-2H-1-benzopyran-2-one; 7-Hydroxy-6-methoxycoumarin; Buxuletin; Chrysotropic acid; Escopoletin; Esculetin-6-methyl ether; Gelseminic acid; Murrayetin; Skopoletin (INA)

CAS 92-61-5

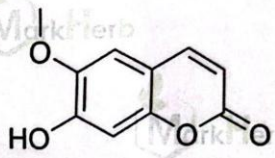
Catalog No. COU-1-10

Formula C₂₁H₂₂O₉

Molecular mass 192.17 g/mol

Date of sample 02/09/2020

Date of report 22/10/2020



Structure

ANALYTICAL RESULTS

Test	Method	Specification	Result
Appearance	NA	White, powder	White, powder
Purity	HPLC-UV	> 98%	98.99%
UV spectrum	UV Spectroscopy	NA	NA
Mass spectrum	LC-MS/MS	NA	NA
NMR	¹ H-NMR, ¹³ C-NMR	NA	NA

NA, not available

STORAGE CONDITIONS

Storage Keep in dry, cool, and well-ventilated place

Transport Room temperature

Digitally signed by
Dr. rer.nat. Agus Chahyadi
Date: 22.10.2020
Bandung - Indonesia



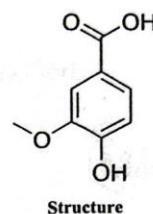
Lampiran 4 COA Asam Vanilat



EBM Scientific and Technology, Ltd. (EBM Scitech)
Jl. Bukit Raya No. 582, Ciumbuleuit, Cidadap, Bandung City 40142,
West Java, Indonesia
www.markherb.com

CERTIFICATE OF ANALYSIS*For Laboratory Use Only*

Product name Vanillic acid
Other names 4-hydroxy-3-methoxybenzoic acid;
4-HYDROXY-3-METHOXY
BENZOIC ACID; Acide Vanillique;
Benzoic Acid, 4-Hydroxy-3-
Methoxy-; P-Vanillic Acid; 3-
Methoxy-4-Hydroxybenzoic Acid;
Vanillate; Asam vanilat (INA)
CAS 121-34-6
Catalog No. FLV-11-1
Lot Number # 240125
Formula C₈H₈O₄
Molecular mass 168.15 g/mol
Date of sample 24/01/2024
Date of report 25/01/2024

**ANALYTICAL RESULTS**

Test	Method	Specification	Result
Appearance	NA	White, powder	White, powder
Purity	UPLC-PDA	> 95%	97.50%
UV spectrum	UPLC-PDA	222 nm, 261 nm, 293 nm	222 nm, 261 nm, 293 nm
Mass spectrum	UPLC-TQD MS	Conforms	Conforms
NMR	¹ H-NMR, ¹³ C-NMR	NA	NA

NA, not available

STORAGE CONDITIONS

Storage Room temperature in a dry place, keep away from direct light
Transport Room temperature

Digitally signed by
Andi Rifki Rosandy, Ph.D
Date: 25.01.2024
Bandung - Indonesia

Lampiran 5 Perhitungan Uji Linearitas dan Sensitivitas

1. Asam vanilat

No	Konsentrasi (µg/ml)	AUC (y)	Yi (bx+a)	Y-Yi	Y-Yi ²
1	0,5	10478	10513,9	-35,9	1288,81
2	1	23268	23319,4	-51,4	2641,96
3	1,5	36494	36124,9	369,1	136235
4	2	48905	48930,4	-25,4	645,16
5	2,5	60713	61735,9	-1022,9	1046324
6	3	75672	74541,4	1130,6	1278256
7	3,5	86989	87346,9	-357,9	128092
Rata - rata	2			Jumlah	2593484

Persamaan regresi : $y = 25611x - 2291,6$

$$\begin{aligned}
 S_y &= \sqrt{\frac{\text{Jumlah } y-y_i^2}{n-2}} \\
 &= \sqrt{\frac{2593484}{7-2}} \\
 &= \sqrt{\frac{2593494}{5}} = 720,206 \\
 S_{x0} &= \frac{S_y}{b} \\
 &= \frac{720,206}{25611} \\
 V_{x0} &= \frac{S_{x0}}{\text{Rata rata}} \\
 &= \frac{0,02812}{2} = 1,40605
 \end{aligned}$$

UJI SENSITIVITAS	
Batas Deteksi $3 \frac{S_y}{b}$ $= 3 \frac{720,206}{25611} = 0,084362899$	Batas Kuantitasi $10 \frac{S_y}{b}$ $= 10 \frac{720,206}{25611} = 0,281209664$

2. Skopoletin

No	Konsentrasi (µg/ml)	AUC (y)	Yi (bx+a)	Y-Yi	Y-Yi ²
1	0,5	12501	11776,1	724,9	525480
2	1	25189	25822,6	-633,6	401449
3	1,5	39722	39869,1	-147,1	21638,4
4	2	53938	53915,6	22,4	501,76
5	2,5	67087	67962,1	-875,1	765800
6	3	83086	82008,6	1077,4	1160791
7	3,5	95880	96055,1	-175,1	30660
Rata – rata	2			Jumlah	2906320

Persamaan regresi : $y = 28093x - 2270,4$

$$S_y = \sqrt{\frac{\text{Jumlah } y - y_i^2}{n-2}}$$

$$= \sqrt{\frac{2906329}{7-2}}$$

$$= \sqrt{\frac{2906329}{5}} = 762,407$$

$$S_{x0} = \frac{S_y}{b}$$

$$= \frac{762,07}{28093} = 0,02714$$

$$V_{x0} = \frac{S_{x0}}{\text{Rata rata}}$$

$$\frac{0,02714}{2} = 1,35693$$

UJI SENSITIVITAS	
Batas Deteksi $3 \frac{S_y}{b}$ $= 3 \frac{762,407}{28093} = 0,081416015$	Batas Kuantitasi $10 \frac{S_y}{b}$ $= 10 \frac{762,407}{28093} = 0,271386717$

Lampiran 6 Perhitungan Akurasi

1. Asam vanilat

FORMULA	AUC	C ADISI	C ADISI - C SAMPEL	C TEORITIS	%RECOVERI	RATA RATA % RECOVERI
80%	55496	2,2563586	1,718909844	2	85,9454922	87,3238062
	56219	2,2845887	1,747139901	2	87,35699507	
	56891	2,3108274	1,773378627	2	88,66893134	
				SD	1,362022879	
				RSD	1,559738333	
100%	66579	2,6891023	2,151653587	2,5	86,06614347	85,19412234
	66325	2,6791847	2,141735973	2,5	85,66943893	
	65158	2,6336184	2,096169615	2,5	83,8467846	
				SD	1,183567846	
				RSD	1,389259979	
120%	76365	3,0712038	2,533755028	3	84,45850092	84,62032375
	76104	3,0610128	2,523564094	3	84,11880313	
	76999	3,0959588	2,558510016	3	85,28366719	
				SD	0,599055121	
				RSD	0,707932911	
SAMPEL	11541	0,5401039	RATA-RATA			
	11423	0,5354965	0,537448752			
	11455	0,5367459				
SD		0,0023827				
RSD		0,4433444				

2. Skopoletin

FORMULA	AUC	C ADISI	C ADISI-C SAMPEL	C TEORITIS	% RECOVERI	RATA RATA % RECOVERI
	70868	2,6034386	1,770702073	2	88,53510365	88,85072201
80%	70470	2,5892713	1,756534843	2	87,82674214	
	71798	2,6365429	1,803806405	2	90,19032025	
				SD	1,212986641	
				RSD	1,365196155	
100%	79524	2,911558	2,078821533	2,5	83,15286133	83,68395449
	79704	2,9179653	2,085228823	2,5	83,40915294	
	80463	2,9449827	2,11224623	2,5	84,4898492	
				SD	0,709592175	
				RSD	0,84794293	
120%	98385	3,5829353	2,750198745	3	91,67329149	91,25286252
	98085	3,5722564	2,739519928	3	91,31733093	
	97622	3,5557755	2,723038954	3	90,76796514	
				SD	0,456093286	
				RSD	0,499812579	
SAMPEL	21124	0,8327484	RATA RATA			
	21183	0,8348485	0,832736506			
	21064	0,8306126				
SD		0,002118				
RSD		0,254341				

Lampiran 7 Perhitungan Presisi

1. AV

SAMPEL	11541	0,540103862	RATA-RATA
	11423	0,535496466	0,537448752
	11455	0,536745929	
SD		0,002382749	
RSD		0,443344414	

Presisi Intraday

HARI 1				
NO	AUC	KONSENTRASI TOTAL	KONSENTRASI SAMPEL	KONSENTRASI SEBENARNYA
1	66576	2,688985202	0,537448752	2,15153645
2	66325	2,679184725	0,537448752	2,141735973
3	65158	2,633618367	0,537448752	2,096169615
4	64327	2,601171372	0,537448752	2,06372262
5	65948	2,664464488	0,537448752	2,127015736
6	65200	2,635258287	0,537448752	2,097809535
			RATA - RATA	2,112998322
			SD	0,030137262
			RSD	1,426279488

HARI 2				
NO	AUC	KONSENTRASI TOTAL	KONSENTRASI SAMPEL	KONSENTRASI SEBENARNYA
1	65031	2,62865956	0,537448752	2,091210808
2	65262	2,637679122	0,537448752	2,10023037
3	66700	2,693826871	0,537448752	2,156378119
4	66866	2,700308461	0,537448752	2,162859709
5	65967	2,665206357	0,537448752	2,127757605
6	65753	2,656850572	0,537448752	2,11940182
			RATA - RATA	2,126306405
			SD	0,026463471
			RSD	1,244574678

HARI 3				
NO	AUC	KONSENTRASI TOTAL	KONSENTRASI SAMPEL	KONSENTRASI TEORITIS
1	64656	2,614017414	0,537448752	2,076568662
2	65272	2,638069579	0,537448752	2,100620827
3	66472	2,684924447	0,537448752	2,147475695
4	65007	2,627722463	0,537448752	2,090273711
5	66450	2,684065441	0,537448752	2,146616689
6	65406	2,643301706	0,537448752	2,105852954
			RATA - RATA	2,111234756
			SD	0,026919663
			RSD	1,275067248

Presisi Interday

Konsentrasi teoritis	Hari	Konsentrasi Sebenarnya
2,5	HARI 1	2,15153645
		2,141735973
		2,096169615
		2,06372262
		2,127015736
		2,097809535
	HARI 2	2,091210808
		2,10023037
		2,156378119
		2,162859709
		2,127757605
		2,11940182
	HARI 3	2,076568662
		2,100620827
		2,147475695
		2,090273711
		2,146616689
		2,105852954
	RATA RATA	2,116846494
	SD	0,029519852
	RSD	1,394520202

3. SP

SAMPEL	21124	0,832748371	RATA RATA
	21183	0,834848539	0,832736506
	21064	0,830612608	
SD		0,00211799	
RSD		0,254340988	

Presisi Intra Day

H-1				
NO	AUC	KONSENTRASI TOTAL	KONSENTRASI SAMPEL	KONSENTRASI SEBENARNYA
1	79524	2,911558039	0,832736506	2,078821533
2	79704	2,917965329	0,832736506	2,085228823
3	80463	2,944982736	0,832736506	2,11224623
4	78585	2,878133343	0,832736506	2,045396837
5	80210	2,935976934	0,832736506	2,103240428
6	80356	2,941173958	0,832736506	2,108437452
			RATA - RATA\	2,088895217
			SD	0,022876423
			RSD	1,095144604

H-2				
NO	AUC	KONSENTRASI TOTAL	KONSENTRASI SAMPEL	KONSENTRASI TEORITIS
1	81246	2,972854448	0,832736506	2,140117942
2	79879	2,924194639	0,832736506	2,091458133
3	79124	2,897319617	0,832736506	2,064583111
4	79397	2,90703734	0,832736506	2,074300834
5	79339	2,904972769	0,832736506	2,072236263
6	80355	2,941138362	0,832736506	2,108401856
			RATA RATA	2,09184969
			SD	0,028425576
			RSD	1,358872773

H3				
NO	AUC	KONSENTRASI TOTAL	KONSENTRASI SAMPEL	KONSENTRASI TEORITIS
1	81579	2,984707934	0,832736506	2,151971428
2	81071	2,966625138	0,832736506	2,133888632
3	80330	2,94024846	0,832736506	2,107511954

4	80658	2,951923967	0,832736506	2,119187461
5	80337	2,940497633	0,832736506	2,107761127
6	80602	2,949930588	0,832736506	2,117194082
			RATA RATA	2,122919114
			SD	0,017194265
			RSD	0,809934981

Presisi Interday

Konsentrasi Teoritis	Hari	Konsentrasi Sebenarnya
2,5	HARI 1	2,078821533
		2,085228823
		2,11224623
		2,045396837
		2,103240428
		2,108437452
	HARI 2	2,140117942
		2,091458133
		2,064583111
		2,074300834
		2,072236263
		2,108401856
	HARI 3	2,151971428
		2,133888632
		2,107511954
		2,119187461
		2,107761127
		2,117194082
	RATA RATA	2,10122134
	SD	0,027569796
	RSD	1,312084333

Lampiran 8 Penetapan Kadar

Ekstrak ditimbang 1000 mg

1. Penetapan kadar ekstrak etanol

	AUC	$x=(y-a)/b$	Kadar =ug/mlxLuxFp	FAKTOR KOREKSI	Konversi ke mg	% Kadar
AV	36616	1,519175354	126,5979464	147,7002543	0,126597946	0,012659795
	35821	1,488134005	124,0111673	144,6822912	0,124011167	0,012401117
	35365	1,470329155	122,5274299	142,9512331	0,12252743	0,012252743
					RATA RATA	0,012437885
					SD	0,000206002
					RSD	1,656243448

		$x=(y-a)/b$	Kadar =ug/mlxLuxFp	FAKTOR KOREKSI	Konversi ke mg	% Kadar
SP	27143	1,047001032	87,2500862	99,22768206	0,099227682	0,009922768
	27310	1,052945574	87,74546464	99,79106551	0,099791066	0,009979107
	26820	1,035503506	86,29195902	98,13802424	0,098138024	0,009813802
					RATA RATA	0,009905226
					SD	0,000840367
					RSD	0,848407759

2. Penetapan kadar ekstrak dekolorisasi

Ekstrak di timbang 500 mg

SAMPEL	AUC	$x=(y-a)/b$	Kadar =ug/mlxLuxFp	FAKTOR KOREKSI	Konversi ke mg	%kadar
AV	11541	0,540103862	54,01038616	63,01324781	0,063013248	0,01260265
	11423	0,535496466	53,54964664	62,47570871	0,062475709	0,012495142
	11455	0,536745929	53,67459295	62,62148203	0,062621482	0,012524296
					Rata rata	0,012540696
					SD	0,000555985
					RSD	0,443344414

SAMPEL	AUC	$x=(y-a)/b$	Kadar =ug/mlxLuxFp	FAKTOR KOREKSI	Konversi ke mg	%kadar
SP	21124	0,832748371	83,27483715	94,70671519	0,094706715	0,018941343
	21183	0,834848539	83,48485388	94,94556279	0,094945563	0,018989113
	21064	0,830612608	83,06126081	94,46381933	0,094463819	0,018892764
					RATA-RATA	0,018941073
					SD	0,000481749
					RSD	0,254340988

Lampiran 9 Kartu Bimbingan

No	Tanggal	Pembimbing Proposal	Topik	Disetujui	Aksi
1	8 Oktober 2024	Dr. apt. Winasih Rachmawati, M.Si.	Konsultasi tema	✓	
1	8 Oktober 2024	apt. Purwaniati, M.Si.	Konsultasi tema	✓	
2	25 November 2024	Dr. apt. Winasih Rachmawati, M.Si.	Penentuan Judul	✓	
2	25 Oktober 2024	apt. Purwaniati, M.Si.	Penentuan judul	✓	
3	2 November 2024	apt. Purwaniati, M.Si.	Pengajuan BAB 1	✓	
3	2 November 2024	Dr. apt. Winasih Rachmawati, M.Si.	Pengajuan BAB 1	✓	
4	9 November 2024	apt. Purwaniati, M.Si.	Laporan kemajuan 1	✓	
4	9 November 2024	Dr. apt. Winasih Rachmawati, M.Si.	Laporan kemajuan 1	✓	
5	14 November 2024	apt. Purwaniati, M.Si.	Arahan BAB 2	✓	
5	29 November 2024	Dr. apt. Winasih Rachmawati, M.Si.	Revisi BAB 1-2	✓	
6	2 Desember 2024	apt. Purwaniati, M.Si.	Arahan BAB 3	✓	
6	13 Desember 2024	Dr. apt. Winasih Rachmawati, M.Si.	Revisi BAB 3	✓	
7	14 Januari 2025	Dr. apt. Winasih Rachmawati, M.Si.	Revisi BAB 3	✓	
7	20 Desember 2024	apt. Purwaniati, M.Si.	Laporan kemajuan 2	✓	
7	9 Desember 2024	apt. Purwaniati, M.Si.	Revisi BAB 2-3	✓	
8	18 Desember 2024	apt. Purwaniati, M.Si.	Revisi BAB 1	✓	
8	17 Januari 2025	Dr. apt. Winasih Rachmawati, M.Si.	Revisi BAB 3	✓	
9	20 Desember 2024	apt. Purwaniati, M.Si.	Laporan kemajuan 2	✓	
10	12 Januari 2025	apt. Purwaniati, M.Si.	Revisi BAB 3 & Sistematika penulisan proposal		

No	Tanggal	Dosen Pembimbing	Topik	Disetujui	Aksi
1	12 Februari 2025	apt. Purwaniati, M.Si.	Maserasi dan evaporasi ekstrak	✓	
1	7 Maret 2025	Dr. apt. Winasih Rachmawati, M.Si.	Penentuan Panjang gelombang maksimum	✓	
2	19 Februari 2025	apt. Purwaniati, M.Si.	Prosedur kerja penelitian	✓	
2	20 Maret 2025	Dr. apt. Winasih Rachmawati, M.Si.	Uji Kesesuaian Sistem	✓	
3	6 Maret 2025	apt. Purwaniati, M.Si.	Penentuan panjang gelombang maksimum	✓	
3	10 April 2025	Dr. apt. Winasih Rachmawati, M.Si.	Optimasi Fase Gerak	✓	
4	12 Maret 2025	apt. Purwaniati, M.Si.	Prosedur penggunaan KCKT	✓	
4	21 April 2025	apt. Purwaniati, M.Si.	Olah Data uji kesesuaian sistem	✓	
5	23 April 2025	Dr. apt. Winasih Rachmawati, M.Si.	Kurva Kalibrasi	✓	
5	18 Maret 2025	apt. Purwaniati, M.Si.	Optimasi Fase Gerak	✓	
6	20 Maret 2025	apt. Purwaniati, M.Si.	Uji Kesesuaian Sistem	✓	
6	23 Juni 2025	Dr. apt. Winasih Rachmawati, M.Si.	Uji linearitas	✓	
7	23 April 2025	apt. Purwaniati, M.Si.	Uji Selektivitas	✓	
7	24 Juni 2025	Dr. apt. Winasih Rachmawati, M.Si.	UJI AKURASI	✓	
8	30 April 2025	apt. Purwaniati, M.Si.	Kurva Kalibrasi	✓	
8	26 Juni 2025	Dr. apt. Winasih Rachmawati, M.Si.	UJI PRESISI	✓	
9	4 Juli 2025	Dr. apt. Winasih Rachmawati, M.Si.	PENETAPAN KADAR	✓	
9	23 Juni 2025	apt. Purwaniati, M.Si.	UJI LINEARITAS		
10	24 Juni 2025	apt. Purwaniati, M.Si.	UJI AKURASI		
11	26 Juni 2025	apt. Purwaniati, M.Si.	UJI PRESISI		
12	3 Juli 2025	apt. Purwaniati, M.Si.	PENETAPAN KADAR		

Lampiran 10 Biodata Diri

**Biodata Diri**

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Tempat tanggal lahir	: Majalengka, 27 Juli 2003
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Pendidikan	: SDN Sunia Baru II : MTSN 5 Majalengka : SMAN 1 Talaga : Universitas Bhakti Kencana