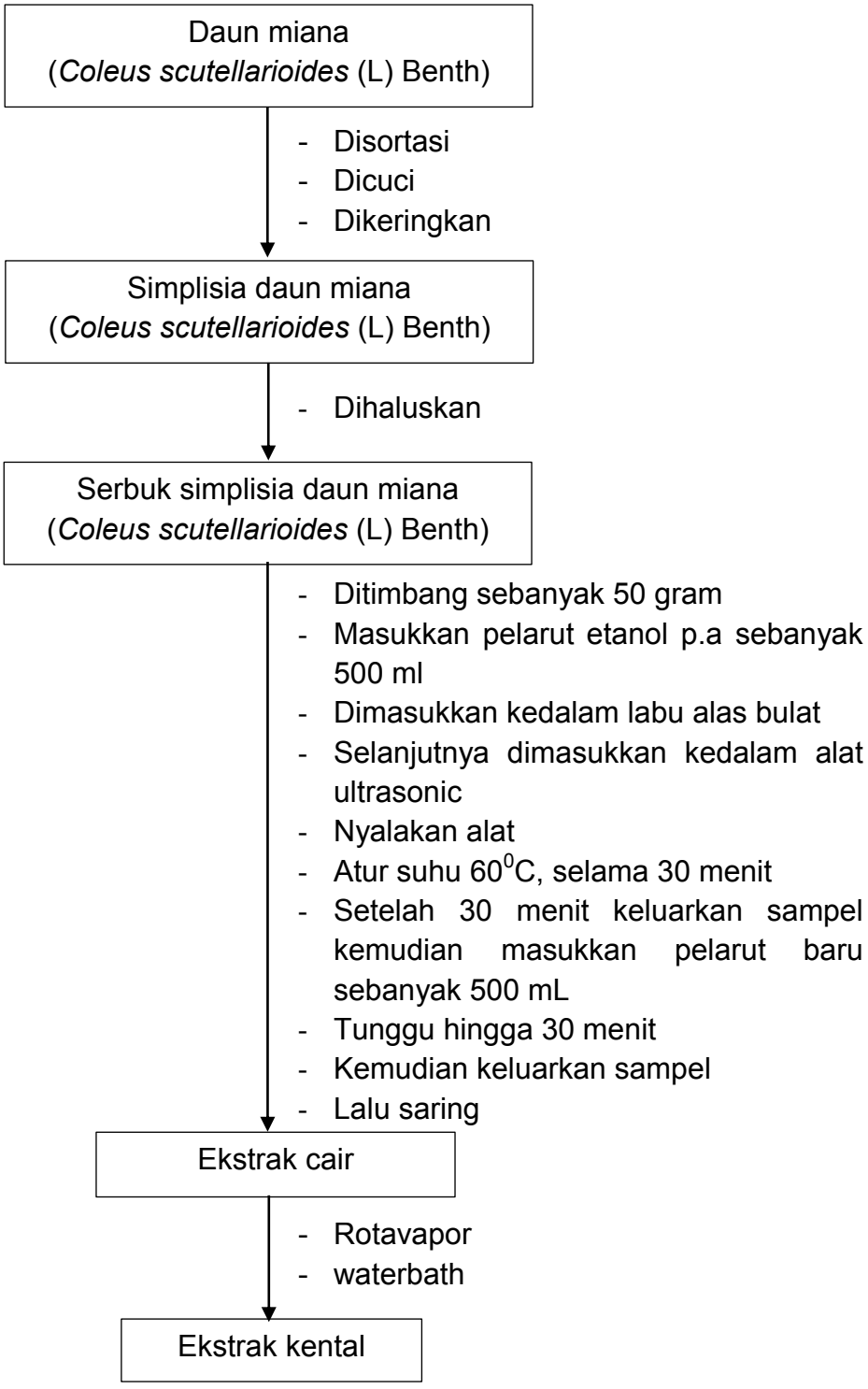
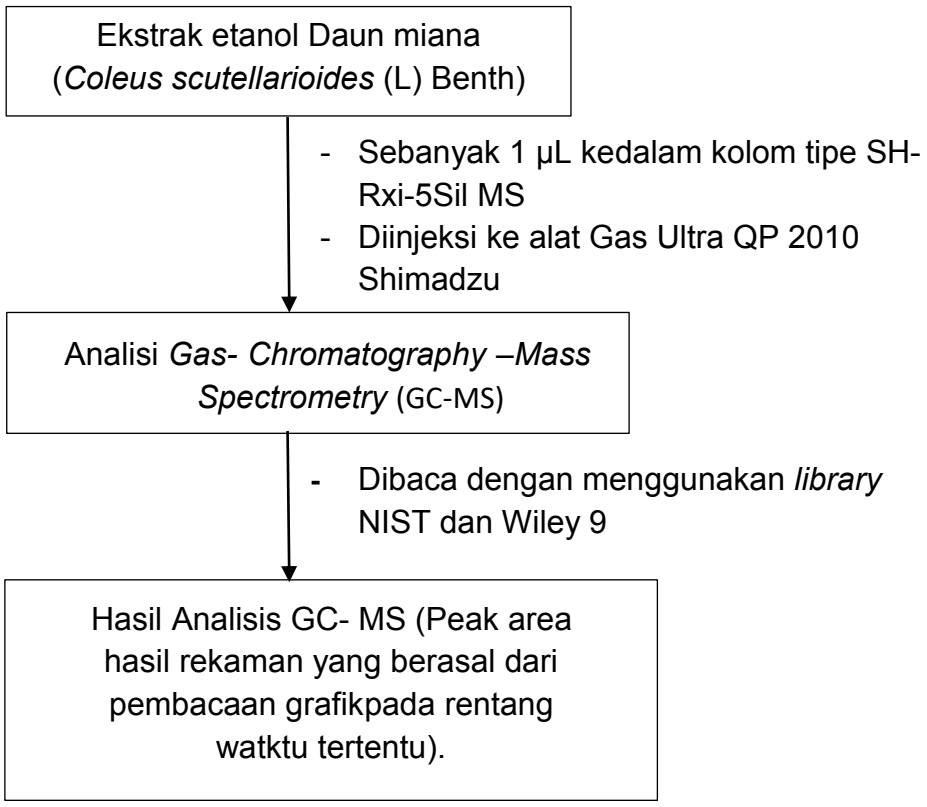
LAMPIRAN

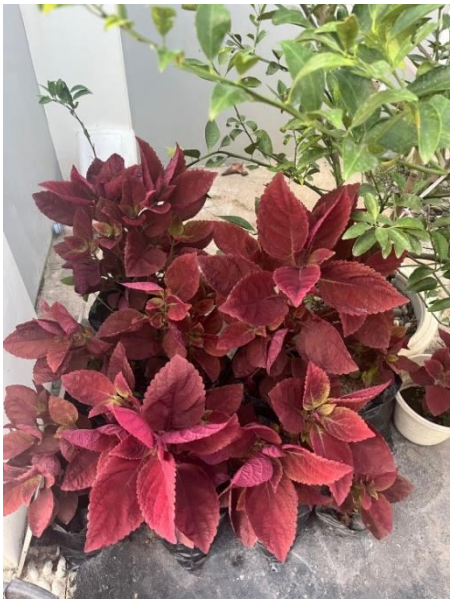
1. Lampiran 1 : Skema kerja ekstraksi metode ultrasonik



Lampiran 2 : Identifikasi komponen senyawa dengan *Gas-Chromatography –Mass Spectrometry* (GC-MS)


Ekstrak etanol Daun miana
(*Coleus scutellarioides* (L) Benth)
- Sebanyak 1 µL kedalam kolom tipe SH-Rxi-5Sil MS
- Diinjeksi ke alat Gas Ultra QP 2010 Shimadzu
Analisi *Gas- Chromatography –Mass Spectrometry* (GC-MS)
- Dibaca dengan menggunakan *library* NIST dan Wiley 9
Hasil Analisis GC- MS (Peak area hasil rekaman yang berasal dari pembacaan grafikpada rentang watktu tertentu).

Lampiran 3 : Dokumentasi Tanaman Miana (*Coleus scutellarioides* (L) Benth)



Gambar 3. Tanaman Miana (*Coleus scutellarioides* (L) Benth) (Sumber dokumentasi pribadi)

Gambar 4. Serbuk simplisia daun miana (*Coleus scutellarioides* (L) Benth)

(Sumber dukomentasi pribadi)

Lampiran 4 : Seperangkat alat Ultrasonic Assisted-Extraction (UAE) dan seperangkat alat Rotary Vacum Evaporat

Gambar 5. Ultrasonic Evaporator

(Sumber Dokumentasi pribadi)

Gambar 6. Rotary Vacum

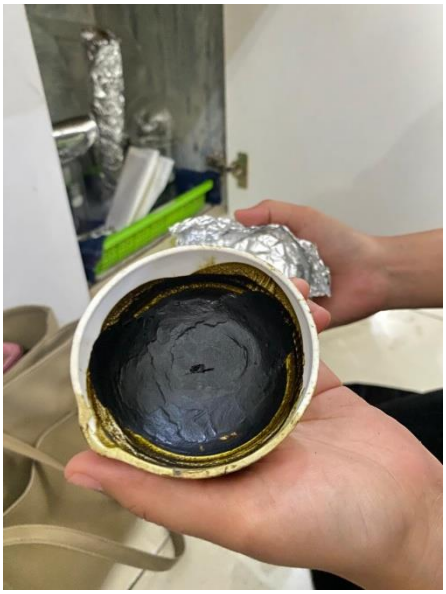
(Sumber Dokumentasi pribadi)

Gambar 7. Penguapan menggunakan rotary vacum evaporator

(Sumber dokumentasi pribadi)

Lampiran 5 : Proses Ekstraksi Daun Miana (*Coleus scutellarioides* (L) Benth)

(Sumber dukomentasi pribadi)



Lampiran 6 : Alat *Gas Chromatography Mass spectrometry* (GC – MS)

Gambar 8. Instrumen GC-MS

(Sumber dokumentasi pribadi)

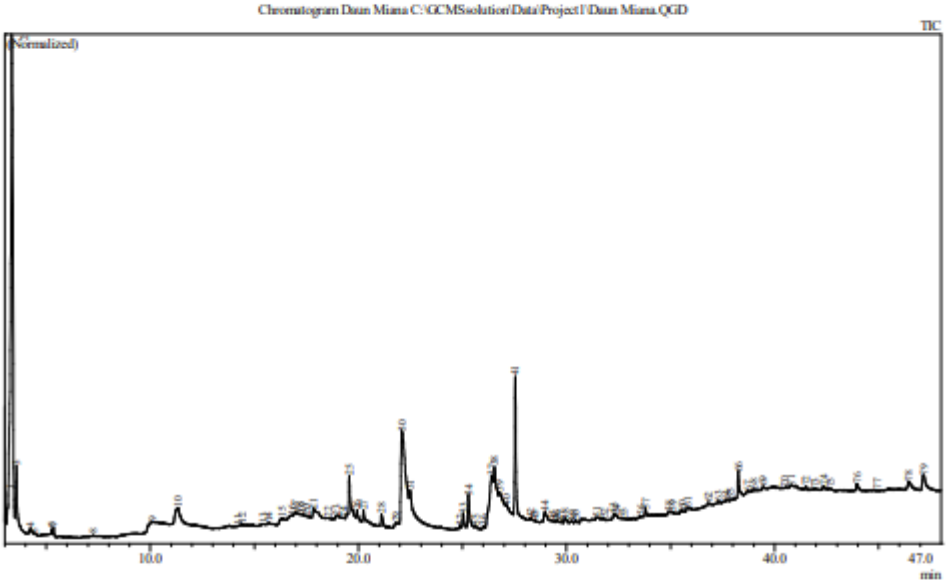
Lampiran 7 : Data Hasil *Gas Chromatography Mass spectrometry* (GC – MS)

DATA REPORT GCMS-QP2010 ULTRA SHIMADZU

Sample Information

Analyzed by	: Admin
Analyzed	: 29/10/2024 8:12:44 PM
Sample Type	: Unknown
Level #	: 1
Sample Name	: Daun Miana
Sample ID	: Daun Miana
IS Amount	: [1]=1
Sample Amount	: 1

Chromatogram Daun Miana C:\GCMSsolution\Data\Project1\Daun Miana.QGD



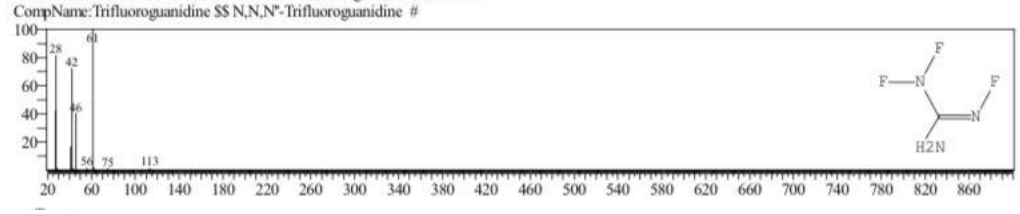
Peak Report TIC

Peak#	R.Time	Area	Area%	Name
1	3.032	846181	0.39	Ethane, 1-chloro-2-nitro-
2	3.344	54525783	25.33	Trifluoroguanidine
3	3.571	4905269	2.28	Nitrous acid, ethyl ester
4	4.248	773900	0.36	Methyl 2-hydroxy-2-methoxyacetate
5	4.450	176875	0.08	Benzene, 1-methoxy-2-(methoxymethyl)-
6	5.266	190314	0.09	3,3-Dimethoxy-2-butanone
7	5.356	248208	0.12	1,3-Dioxolane-4-methanol, 2-ethyl-
8	7.265	58526	0.03	Cyclotetrasiloxane, octamethyl-
9	10.103	2130355	0.99	Glycerin
10	11.327	4009580	1.86	N-Formylmorpholine
11	14.233	82151	0.04	9,10-Dimethyltricyclo[4.2.1.1(2,5)]decane-9,10-diol
12	14.404	141956	0.07	Caryophyllene
13	15.417	318224	0.15	2H-1-Benzopyran, 3,5,6,8a-tetrahydro-2,5,5,8a-tetramethyl-, trans-
14	15.698	196528	0.09	1-Isopropyl-4,7-dimethyl-1,2,3,5,6,8a-hexahydronaphthalene
15	16.329	1465906	0.68	1-Dodecen-3-ol
16	16.817	2632665	1.22	D-Allose
17	16.982	1810777	0.84	Fumaric acid, ethyl 2-methylallyl ester
18	17.133	1560825	0.73	3-Hydroxy-.beta.-damascone
19	17.333	2262027	1.05	10,12-Tricosadiynoic acid, methyl ester
20	17.533	1538288	0.71	Octasiloxane, 1,1,3,3,5,5,7,7,9,9,11,11,13,13,15,15-hexadecamethyl-
21	17.855	6067004	2.82	7-Oxabicyclo[4.1.0]heptan-3-ol, 6-(3-hydroxy-1-butenyl)-1,5,5-trimethyl-
22	18.550	1712800	0.80	2-Methyl-1-pentamethyldisilyloxypropane
23	18.968	3481448	1.62	Tetradecanoic acid
24	19.283	605603	0.28	2-(4-Methoxyphenyl)-1-(4-methylpiperazin-1-yl)-ethanone
25	19.568	7190157	3.34	Neophytadiene
26	19.941	1769822	0.82	Neophytadiene

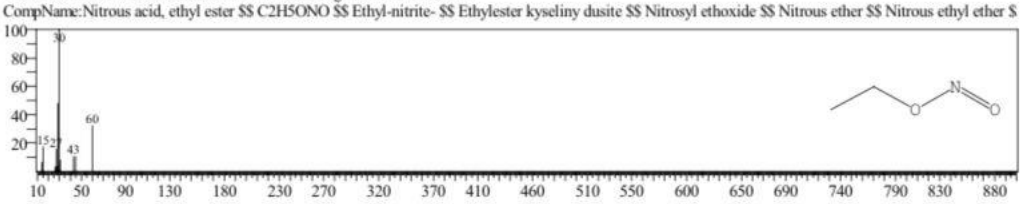
Peak#	R.Time	Area	Area%	Name
27	20.250	2169992	1.01	3,7,11,15-Tetramethyl-2-hexadecen-1-ol
28	21.119	1056011	0.49	Hexadecanoic acid, methyl ester
29	21.800	973886	0.45	Z-11-Pentadecenol
30	22.101	22068799	10.25	n-Hexadecanoic acid
31	22.491	9051114	4.20	Hexadecanoic acid, ethyl ester
32	24.898	316023	0.15	9,12-Octadecadienoic acid (Z,Z)-, methyl ester
33	25.041	1271704	0.59	8,11,14-Docosatrienoic acid, methyl ester
34	25.297	3487014	1.62	Phytol
35	25.633	326658	0.15	Methyl stearate
36	26.017	237262	0.11	1-Hexanol, 5-methyl-2-(1-methylethyl)-, acetate
37	26.404	9669439	4.49	9,12-Octadecadienoic acid (Z,Z)-
38	26.549	9806902	4.56	9,12,15-Octadecatrienoic acid, ethyl ester, (Z,Z,Z)-
39	26.798	9015779	4.19	Octadecanoic acid
40	27.133	5219504	2.42	Octadecanoic acid, ethyl ester
41	27.544	16327810	7.59	2-Hexadecen-1-ol, 3,7,11,15-tetramethyl-, acetate, [R-[R*,R*-(E)]]-
42	28.300	252991	0.12	3-Methylbutyl hexadecanoate
43	28.483	102001	0.05	bis(Hex-5-en-1-yloxy)(dimethyl)silane
44	28.970	2785491	1.29	Ethanone, 1-(1,2,3,4,7,7a-hexahydro-1,4,4,5-tetramethyl-1,3a-ethano-3aH-inden-6-yl)-
45	29.350	768680	0.36	Tetrapentacontane, 1,54-dibromo-
46	29.533	624297	0.29	Androst-5-en-16-one, 3,17-dihydroxy-, (3.beta.,17.beta.)-
47	29.767	198768	0.09	Butyl 9,12,15-octadecatrienoate
48	29.948	611317	0.28	Isopimarol
49	30.300	237585	0.11	2,2-Difluoroheptacosanoic acid
50	30.463	220589	0.10	4,8,12,16-Tetramethylheptadecan-4-olide
51	31.465	496517	0.23	(3S,3aS,6R,7R,9aS)-1,1,7-Trimethyldecahydro-3a,7-methanocyclopenta[8]annulene-3,6
52	31.817	318015	0.15	Butyl 9,12,15-octadecatrienoate
53	32.275	697134	0.32	Cyclohexane, 1,3,5-triphenyl-
54	32.400	556622	0.26	5-Isopentyl-6-methyl-2-(methylsulfanyl)-4-pyrimidinol, TMS derivative
55	32.750	162617	0.08	3,4-Dichlorophenylethanamine, N-[1-methylazacyclohex-3-yl]-N-methyl-
56	33.583	242619	0.11	Phenanthro[3,2-b]furan-7,11-dione, 1,2,3,4,8,9-hexahydro-4,4,8-trimethyl-, (+)-
57	33.805	494656	0.23	Bis(2-ethylhexyl) phthalate
58	34.943	422892	0.20	4-(3,5-Di-tert-butyl-4-hydroxyphenyl)butyl acrylate
59	35.133	75926	0.04	N-(2-Thioxo-4-p-tolyl-1H,2H-pyrimidin-1-yl)-butyramide
60	35.569	359153	0.17	4,6-Bis(1,1-dimethylethyl)-4'-methyl-1,1'-biphenyl-2-ol
61	35.821	645392	0.30	1,3-Dioxolane, 2-(6-heptynyl)-
62	36.829	739523	0.34	3-Octanol, 3,7-dimethyl-
63	37.300	378710	0.18	1,4-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
64	37.700	302313	0.14	5-Androsten-17.alpha.-ethynyl-3.beta.,17.beta.-diol
65	37.900	84192	0.04	Adenosine, 1,2-dihydro-2-oxo-
66	38.263	2312562	1.07	Squalene
67	38.717	600527	0.28	.alpha.-Tocospiro B
68	39.000	956034	0.44	.alpha.-Tocospiro A
69	39.450	243557	0.11	9(1H)-Phenanthrenone, 7-[2-(acetyloxy)-1-methylethyl]-2,3,4,4a-tetrahydro-5,6,8,10-tet
70	40.483	199315	0.09	Lignoceric acid, dimethyl(pentafluorophenyl)silyl ester
71	40.813	831688	0.39	1,1':3',1"-Terphenyl, 5'-phenyl-
72	41.515	204236	0.09	Stigmasta-4,7,22-trien-3.alpha.-ol
73	41.976	175200	0.08	2,5-Difluorobenzoic acid, nonyl ester
74	42.372	415437	0.19	(R)-6-Methoxy-2,8-dimethyl-2-((4R,8R)-4,8,12-trimethyltridecyl)chroman
75	42.677	533224	0.25	Cholesta-4,6-dien-3-ol, (3.beta.)-
76	43.969	763572	0.35	dl-.alpha.-Tocopherol
77	44.933	98699	0.05	Vanadyl phthalocyanine
78	46.454	1567943	0.73	Campesterol
79	47.166	2879756	1.34	Stigmasterol
		215258819	100.00	

Lampiran 8: Senyawa yang melimpah dari hasil identifikasi MS (Mass Spectrometry)

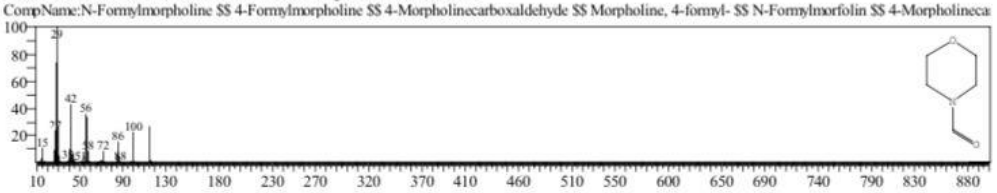
Hit#:1 Entry:3979 Library:NIST20M1.lib
SI:96 Formula:CH2F3N3 CAS:37950-72-4 MolWeight:113 RetIndex:0
CompName:Trifluoroguanidine $$ N,N,N"-Trifluoroguanidine #



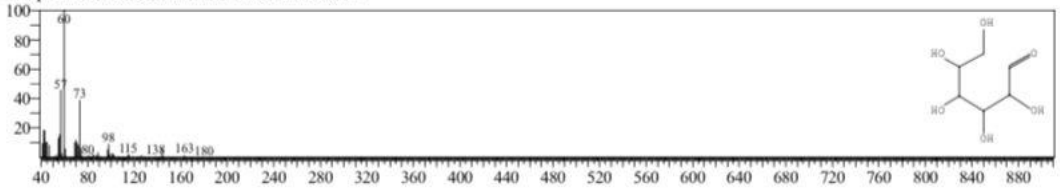
Hit#:1 Entry:419 Library:NIST20M1.lib
SI:97 Formula:C2H5NO2 CAS:109-95-5 MolWeight:75 RetIndex:410
CompName:Nitrous acid, ethyl ester $$ C2H5ONO $$ Ethyl-nitrite- $$ Ethylester kyseliny dusite $$ Nitrosyl ethoxide $$ Nitrous ether $$ Nitrous ethyl ether $



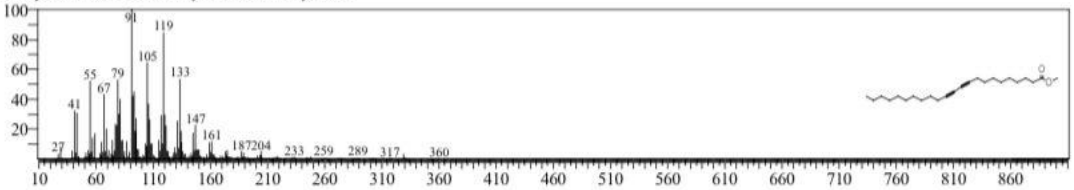
Hit#:1 Entry:4162 Library:NIST20R.lib
SI:79 Formula:C5H9NO2 CAS:4394-85-8 MolWeight:115 RetIndex:1010
CompName:N-Formylmorpholine $$ 4-Formylmorpholine $$ 4-Morpholinecarboxaldehyde $$ Morpholine, 4-formyl- $$ N-Formylmorfolin $$ 4-Morpholineca



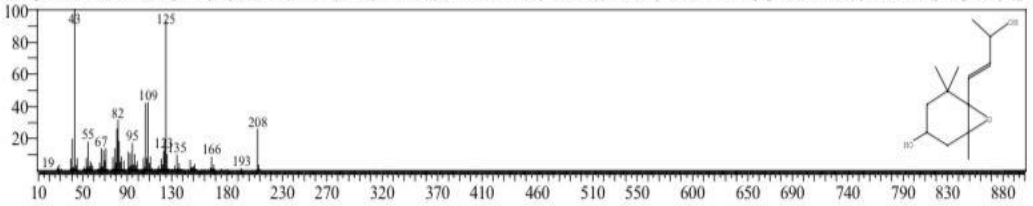
Hit#:1 Entry:36240 Library:NIST20M1.lib
SI:69 Formula:C6H12O6 CAS:2595-97-3 MolWeight:180 RetIndex:1698
CompName:D-Allose $$ .beta.-D-Allose $$ Hexose #



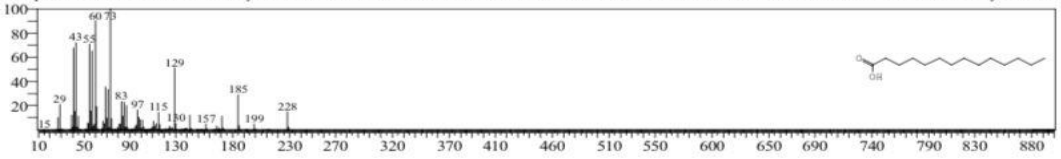
Hit#:1 Entry:230159 Library:NIST20M1.lib
SI:60 Formula:C24H40O2 CAS:0-00-0 MolWeight:360 RetIndex:2609
CompName:10,12-Tricosadiynoic acid, methyl ester



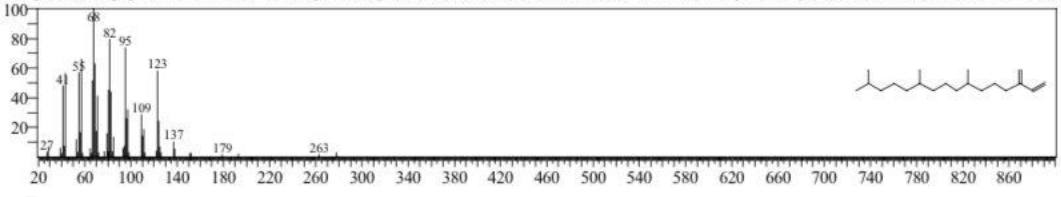
Hit#:1 Entry:79310 Library:NIST20M1.lib
SI:93 Formula:C13H22O3 CAS:72777-88-9 MolWeight:226 RetIndex:1669
CompName:7-Oxabicyclo[4.1.0]heptan-3-ol, 6-(3-hydroxy-1-butenyl)-1,5,5-trimethyl- $$ 6-[(1E)-3-Hydroxy-1-butenyl]-1,5,5-trimethyl-7-oxabicyclo[4.1.0]hep



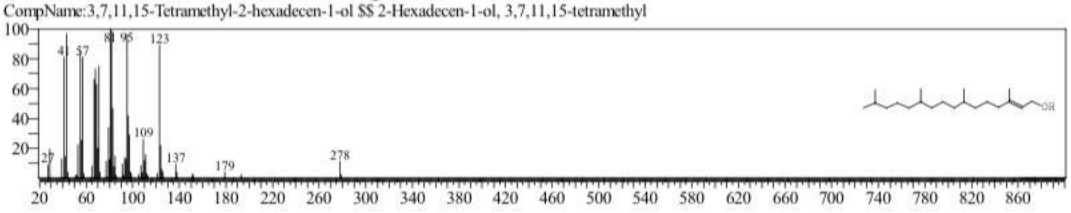
Hit#:1 Entry:81713 Library:NIST20M1.lib
SI:88 Formula:C14H28O2 CAS:544-63-8 MolWeight:228 RetIndex:1769
CompName:Tetradecanoic acid $$ Myristic acid $$ n-Tetradecanoic acid $$ n-Tetradecoic acid $$ Neo-Fat 14 $$ Univol U 316S $$ 1-Tridecanecarboxylic acid $



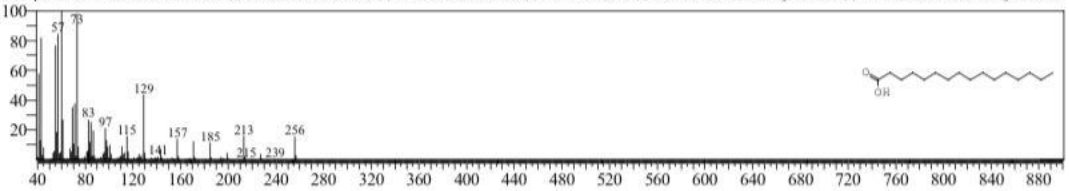
Hit#:1 Entry:137561 Library:NIST20M1.lib
SI:93 Formula:C20H38 CAS:504-96-1 MolWeight:278 RetIndex:1774
CompName:Neophytadiene $$ 7,11,15-Trimethyl-3-methylenehexadec-1-ene $$ 1-Hexadecene, 7,11,15-trimethyl-3-methylene- $$ 1,3-Butadiene, 2-(4,8,12-trim



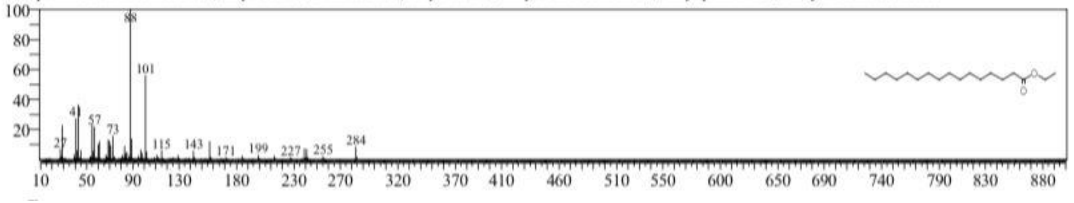
Hit#:1 Entry:159028 Library:NIST20M1.lib
SI:93 Formula:C20H40O CAS:102608-53-7 MolWeight:296 RetIndex:2045
CompName:3,7,11,15-Tetramethyl-2-hexadecen-1-ol $$ 2-Hexadecen-1-ol, 3,7,11,15-tetramethyl



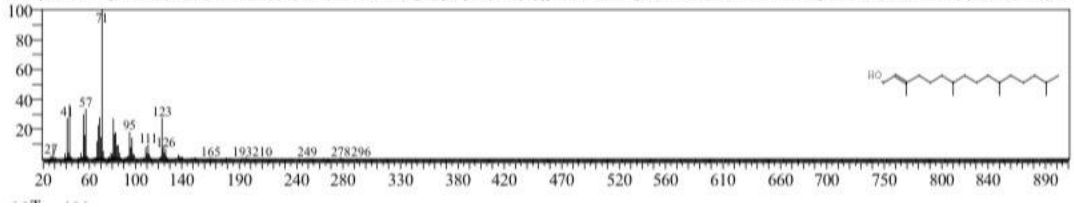
Hit#:1 Entry:31599 Library:NIST20R.lib
SI:96 Formula:C16H32O2 CAS:57-10-3 MolWeight:256 RetIndex:1968
CompName:n-Hexadecanoic acid $$ Hexadecanoic acid $$ n-Hexadecoic acid $$ Palmitic acid $$ Pentadecanecarboxylic acid $$ 1-Pentadecanecarboxylic acid



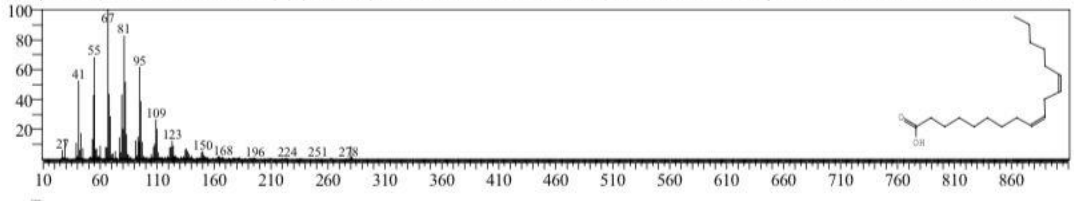
Hit#:1 Entry:144796 Library:NIST20M1.lib
SI:90 Formula:C18H36O2 CAS:628-97-7 MolWeight:284 RetIndex:1978
CompName:Hexadecanoic acid, ethyl ester $$ Palmitic acid, ethyl ester $$ Ethyl hexadecanoate $$ Ethyl palmitate $$ Ethyl n-hexadecanoate



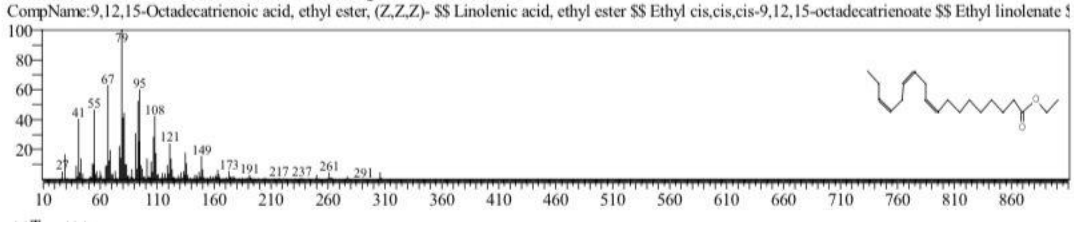
Hit#:1 Entry:159029 Library:NIST20M1.lib
SI:97 Formula:C20H40O CAS:150-86-7 MolWeight:296 RetIndex:2045
CompName:Phytol $$ 2-Hexadecen-1-ol, 3,7,11,15-tetramethyl-, [R-[R*,R*-(E)]]- $$ trans-Phytol $$ 3,7,11,15-Tetramethyl-2-hexadecen-1-ol-, (2E,7R,11R)- $



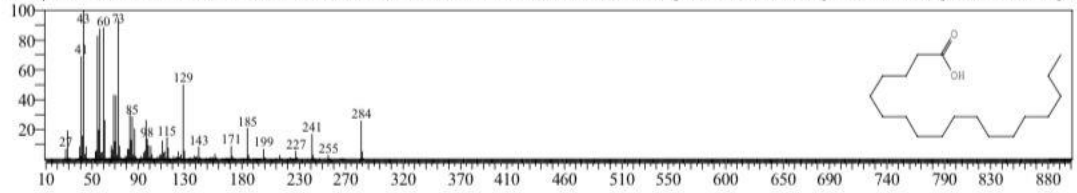
Hit#:1 Entry:34035 Library:NIST20R.lib
SI:92 Formula:C18H32O2 CAS:60-33-3 MolWeight:280 RetIndex:2183
CompName:9,12-Octadecadienoic acid (Z,Z)- $$ cis-9,cis-12-Octadecadienoic acid $$ cis,cis-Linoleic acid $$ Grape seed oil $$ Linoleic $$ Linoleic acid $$ Li



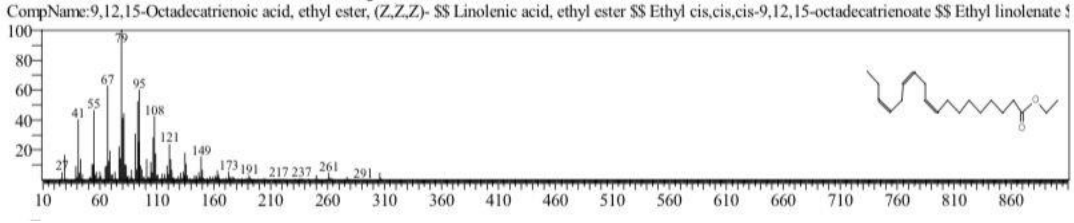
Hit#:1 Entry:36378 Library:NIST20R.lib
SI:91 Formula:C20H34O2 CAS:1191-41-9 MolWeight:306 RetIndex:2201
CompName:9,12,15-Octadecatrienoic acid, ethyl ester, (Z,Z,Z)- $$ Linolenic acid, ethyl ester $$ Ethyl cis,cis,cis-9,12,15-octadecatrienoate $$ Ethyl linolenate



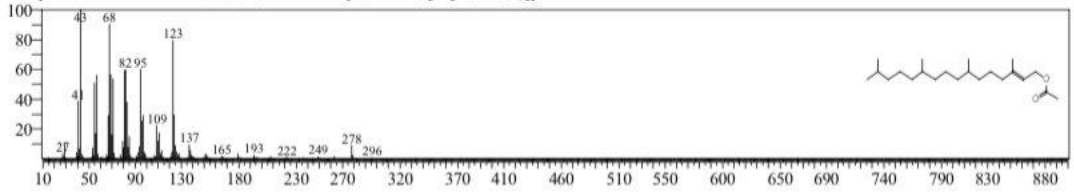
Hit#:1 Entry:34462 Library:NIST20R.lib
SI:87 Formula:C18H36O2 CAS:57-11-4 MolWeight:284 RetIndex:2167
CompName:Octadecanoic acid $$ Stearic acid $$ n-Octadecanoic acid $$ Humko Industrene R $$ Hydrofol Acid 150 $$ Hystrene S-97 $$ Hystrene T-70 $$ Hys



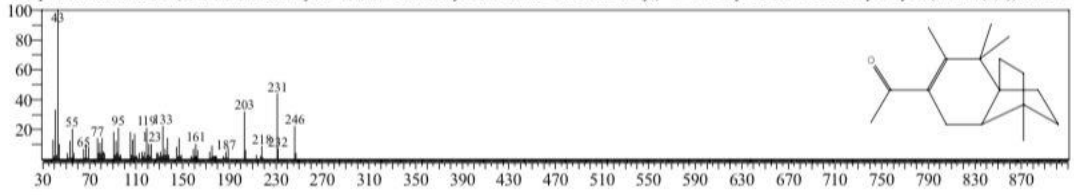
Hit#:1 Entry:36378 Library:NIST20R.lib
SI:91 Formula:C20H34O2 CAS:1191-41-9 MolWeight:306 RetIndex:2201
CompName:9,12,15-Octadecatrienoic acid, ethyl ester, (Z,Z,Z)- $$ Linolenic acid, ethyl ester $$ Ethyl cis,cis,cis-9,12,15-octadecatrienoate $$ Ethyl linolenate $



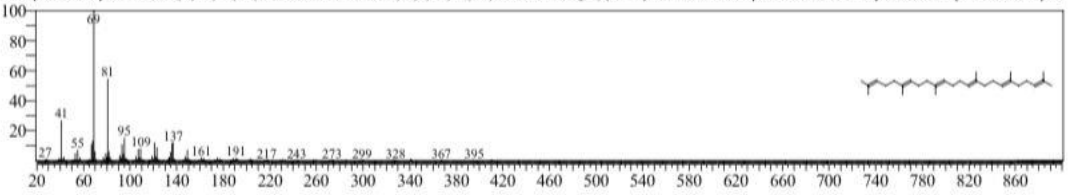
Hit#:1 Entry:207682 Library:NIST20M1.lib
SI:98 Formula:C22H42O2 CAS:10236-16-5 MolWeight:338 RetIndex:2168
CompName:2-Hexadecen-1-ol, 3,7,11,15-tetramethyl-, acetate, [R-[R*,R*-(E)]]-



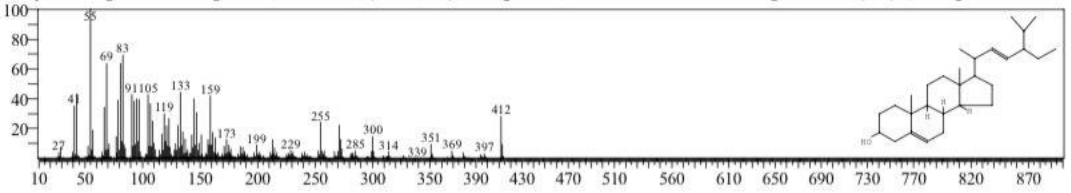
Hit#:1 Entry:100902 Library:NIST20M1.lib
SI:61 Formula:C17H26O CAS:32388-58-2 MolWeight:246 RetIndex:1740
CompName:Ethanone, 1-(1,2,3,4,7,7a-hexahydro-1,4,4,5-tetramethyl-1,3a-ethano-3aH-inden-6-yl)- $$ 4-Acetyl-2,2,3,7-tetramethyltricyclo(5.2.2.0(1,6))undec-3



Hit#:1 Entry:6116 Library:NIST20M2.lib
SI:97 Formula:C30H50 CAS:111-02-4 MolWeight:410 RetIndex:2914
CompName:Squalene $$ 2,6,10,14,18,22-Tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-E)- $$ all-trans-Squalene $$ trans-Squalene $$ Spinacen $$ Spin



Hit#:1 Entry:7247 Library:NIST20M2.lib
SI:88 Formula:C29H48O CAS:83-48-7 MolWeight:412 RetIndex:2739
CompName:Stigmasterol $$ Stigmasta-5,22-dien-3-ol, (3.beta.,22E)- $$ Stigmasta-5,22-dien-3.beta.-ol $$ .beta.-Stigmasterol $$ (24S)-5,22-Stigmastadien-3.be



Lampiran 9 : Determinasi

YAYASAN WAKAF UMI
UNIT DETERMINASI TUMBUHAN
LABORATORIUM FARMAKOGNOSI-FITOKIMIA
FAKULTAS FARMASI
UNIVERSITAS MUSLIM INDONESIA
Gedung Laboratorium Fakultas Farmasi Lt 3
Kampus II Universitas Muslim Indonesia Jl. Urip Sumiharjo KM 5 Makassar, Kode Pos 90132

Nomor : 0122/C/UD-FF/UMI/VI/2024 Makassar, 24-6-2024
Lampiran : -
Perihal : Hasil Determinasi Tumbuhan

Kepada Yth:
Bpk/Ibu/Sdr (i) Ketua Program Studi Sarjana Farmasi
Fakultas Farmasi Universitas Muslim Indonesia
di
Makassar

Bismillah, Atas rahmat Allah SWT, bersama ini kami sampaikan hasil determinasi tumbuhan yang dikirimkan ke Unit Determinasi Tumbuhan Laboratorium Farmakognosi-Fitokimia Fakultas Farmasi Universitas Muslim Indonesia, atas :

Nama / NIM : Fadillah
Asal Instutusi : Prodi Sarjana Farmasi- FFUMI
Pekerjaan : Mahasiswa
Judul Penelitian :Aktivitas Antioksidan Ekstrak Etanol Daun Miana (Coleus scutellarioides (L) Bent) Hasil Green Extraction Dengan Metode DPPH

Adapun hasil determinasi sebagai berikut:

No.	Nomor Spesimen/ Nama kolektor	Nama Tumbuhan (nama Lokal)	Spesies	Suku
1	0122 / Fadillah	Daun Miana	*Coleus scutellarioides* (L.) Benth.	Lamiaceae

Demikian surat keterangan ini kami sampaikan untuk dipergunakan sebagaimana mestinya.

Determinator I
Dr.apt.Asni Amin.,S.Si.,M.Farm.

Determinator II
apt. Abd. Malik, S.Farm, M.Sc, Ph.D

Mengetahui
Kepala Labotarorium Farmakognosi-Fitokimia UMI
(apt. Virsa Handayani.,S.Farm.,M.Farm)

Web https://sites.google.com/view/lab-farmakognosi-fitokimia/beranda
Blog : fitoklmiauml.wordpress.com