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Lampiran 1. Data Hasil determinasi



ORGANISASI RISET ILMU PENGETAHUAN HAYATI PUSAT RISET BIOLOGI

Jl. Raya Jakarta-Bogor Km.46, Cibinong, Kabupaten Bogor, Jawa Barat 16911
Telepon/WA: 08118610183| email: biologi-iph@brin.go.id
<https://www.brin.go.id>

Nomor : B-208/V/DI.05.07/1/2022 Cibinong, 28 Januari 2022
Lampiran : -
Perihal : Hasil Identifikasi/Determinasi Tumbuhan

Yth.
Bpk./Ibu/Sdr(i). **Apt. Hafiz Ramadhan, M.Sc.**
NIM : 010714057
Sekolah Tinggi Ilmu Kesehatan (STIKES)
Borneo Lestari
Jl. Kelapa Sawit No. 8 Bumi Berkat
Banjar Baru 70714
Kalimantan Selatan

Bersama ini kami sampaikan hasil identifikasi/determinasi tumbuhan yang Saudara kirimkan ke "Herbarium Bogoriense", Bidang Botani Pusat Riset Biologi BRIN Cibinong, adalah sebagai berikut :

No.	No. Kol.	Jenis	Suku
1.	Balik Angin	<i>Alphitonia incana</i> (Roxb.) Teijsm. & Binn. ex Kurz	Rhamnaceae

Demikian, semoga berguna bagi Saudara.

Kepala Pusat Riset Biologi BRIN

ORGANISASI RISET
ILMU PENGETAHUAN
HAYATI
Dr. Anang Setiawan Achmadi, S.KH., M.Sc.
NIP. 1972102620050210

Lampiran 2. Data Hasil FT-IR

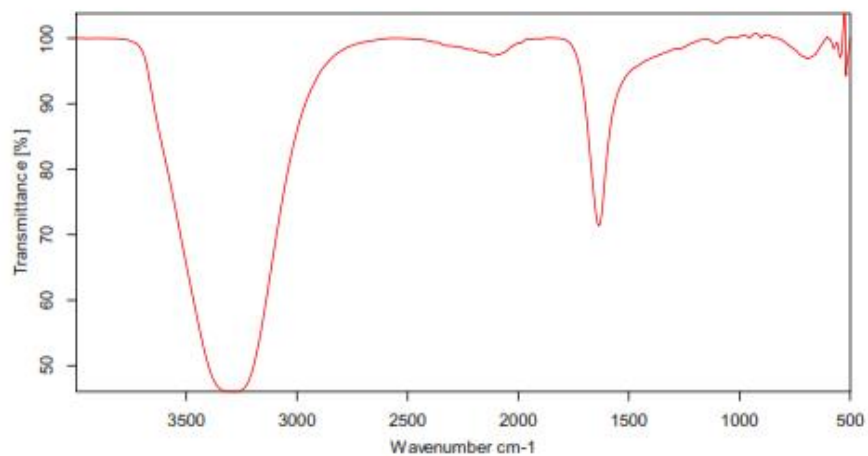
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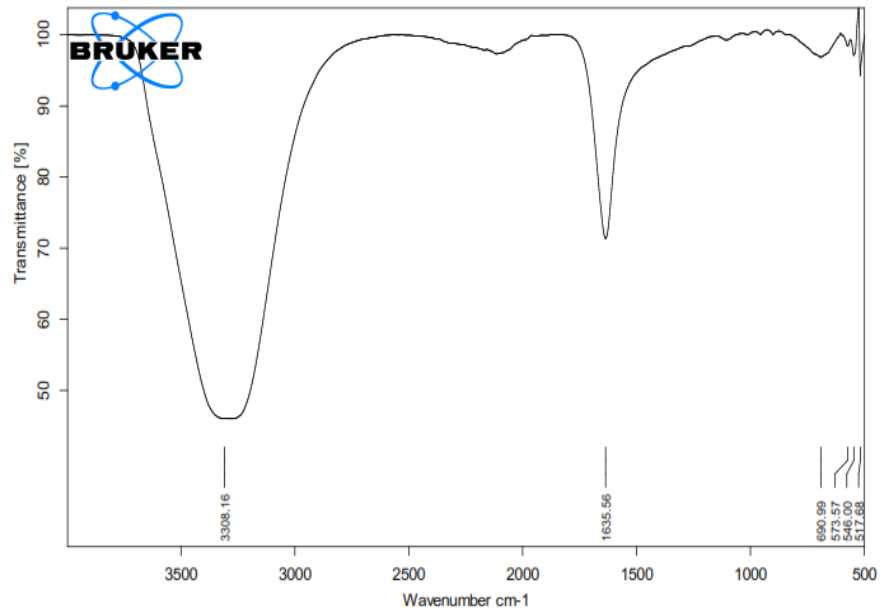
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Number of sample scans 45
Apodization function Blackman-Harris 3-Term
Resolution 4
Spectrum file name Minyak atsiri balik angin.0
Measurement date and time 20/07/2022 14:35:47 (GMT+7)
Sample name Minyak atsiri balik angin
Sample form Instrument type and / or accessory

Peak pick

Wave number	Abs. intensity	Rel. intensity	Width	Threshold	Shoulder
3308.158	0.460	0.006	170.779	0.24	0
1635.555	0.714	0.293	100.529	118.62	0
690.989	0.969	0.056	296.756	170.98	0
545.998	0.971	0.058	47.708	32.73	0
573.570	0.984	0.011	15.266	9.41	0
517.675	0.943	0.081	48.743	52.30	0

Spectrum





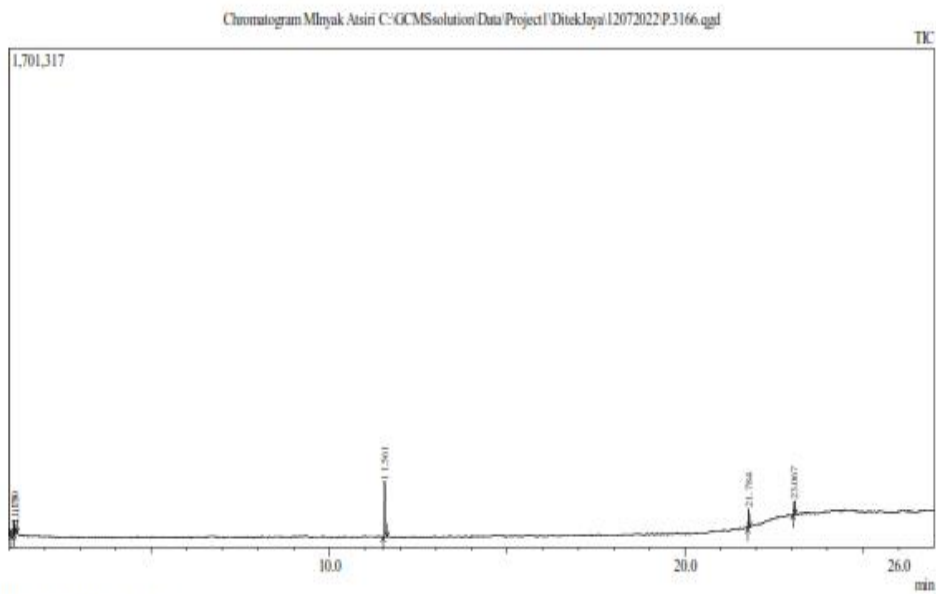
F:\FTIR 2022\JUL147685\Minyak atsiri balik angin\Minyak atsiri balik angin.0	Minyak atsiri balik angin	Instrument type and / or accessori	20/07/2022
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Activ

Lampiran 3. Data Hasil GC-MS

Sample Information

Analyzed by : Admin
 Analyzed : 12/07/2022 22:07:39
 Sample Type : Unknown
 Level # : 1
 Sample Name : Minyak Atsiri
 Sample ID : P.2376
 IS Amount : [1]-1
 Sample Amount : 1
 Dilution Factor : 1
 Vial # : 15
 Injection Volume : 1.00
 Data File : C:\GCMSsolution\Data\Project1\DitekJaya\12072022\P.3166.qgd
 Org Data File : C:\GCMSsolution\Data\Project1\Minyak Atsiri_P.2376_12072022_15.qgd
 Method File : C:\GCMSsolution\Data\Project1\Senyawa Organik 120722.qgm
 Org Method File : C:\GCMSsolution\Data\Project1\Senyawa Organik 120722.qgm
 Report File : C:\GCMSsolution\Data\Project1\2.qgr
 Tuning File : C:\GCMSsolution\System1\Tune1280622.qgt
 Modified by : Admin
 Modified : 22/07/2022 13:11:52



Quantitative Result Table

ID#	Name	R. Time	m/z	Area	Height	Conc. Conc.U
1	Ethanol (CAS) Ethyl alcohol	1.130	45.00	80665	27174	31.193 %
2	2,2-Dimethyl-1,3-dioxane-4,6-dione	1.167	43.00	17083	6835	6.606 %
3	Benzoic acid, 2-hydroxy-, methyl ester (CAS)	11.561	120.00	135578	64060	52.427 %
4	Hexadecanoic acid, methyl ester (CAS) Meth	21.784	74.00	21031	14302	8.133 %
5	9-Octadecenoic acid (Z)-, methyl ester (CAS)	23.068	55.00	4244	2743	1.641 %

Library

<< Target >>

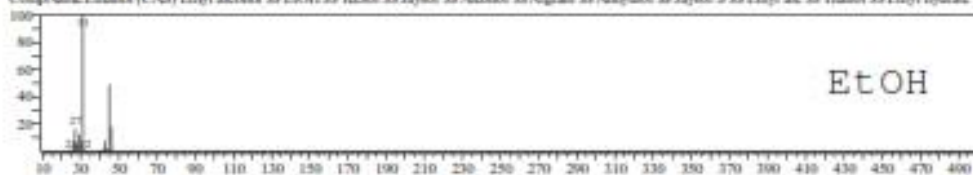
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ID Mod:Calc fromPeak Group 1 - Exact 1 Scan



Hit:1 Entry:205 Library:WILEY7.LIB

SE94 Formula:C2 H6 O CAS:64-17-5 MolWeight:46 RetIndex:0

CompName:Ethanol (CAS) Ethyl alcohol SS EtOH SS Tussol SS Jaysol SS Alcohol SS Algrain SS Anhydrol SS Jaysol S SS Ethyl alc SS Thanol SS Ethyl hydrate S



Hit:2 Entry:205 Library:WILEY7.LIB

SE91 Formula:C2 H6 O CAS:115-10-6 MolWeight:46 RetIndex:0

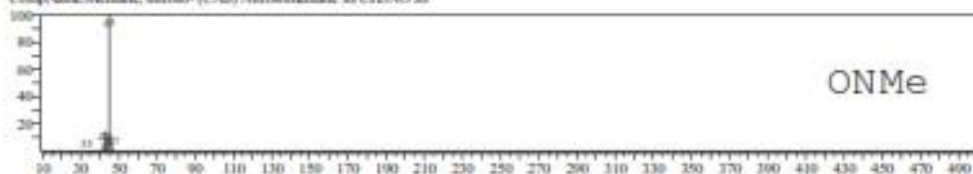
CompName:Methane, oxym- (CAS) Dimethyl ether SS Methyl ether SS Wood ether SS Methoxymethane SS Dimethyl oxide SS Dymal A SS Oxymethane SS (



Hit:3 Entry:224 Library:WILEY7.LIB

SE88 Formula:C2 H5 N O CAS:865-40-7 MolWeight:45 RetIndex:0

CompName:Methane, nitro- (CAS) Nitromethane SS CH3NO SS



Hit:4 Entry:4386 Library:WILEY7.LIB

SE87 Formula:C3 H8 O3 CAS:79-33-4 MolWeight:90 RetIndex:0

CompName:L(+)-MILCHSAURE SS PROPANIC ACID, 2-HYDROXY-, (S)- SS



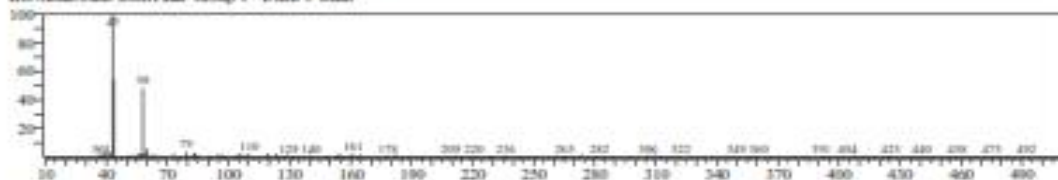
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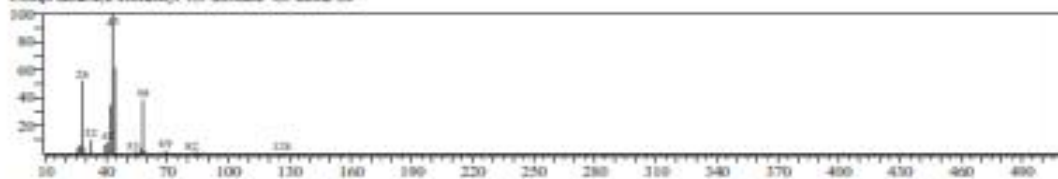
CompName:2-Propanol (CAS) Isopropyl alcohol SS PRO SS Propan-2-ol SS Isolol SS Propol SS Lutocol SS Alajol SS Avantin SS Incol A SS Petrolol SS Herten



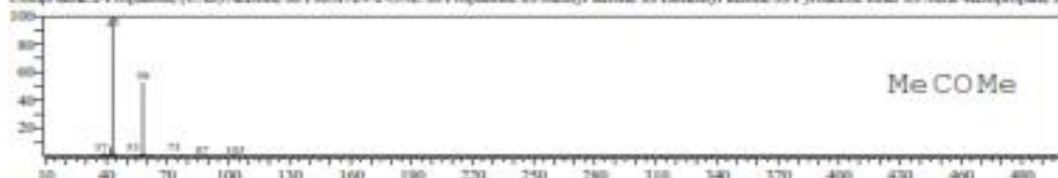
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 HD Msdk: Calc. from Peak Group 1 - Event 1 Scan



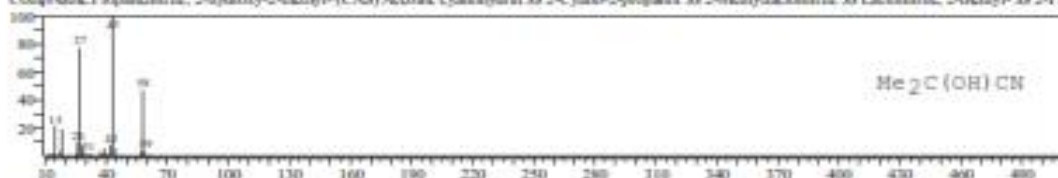
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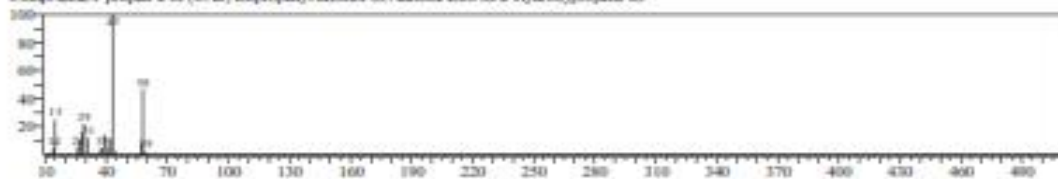
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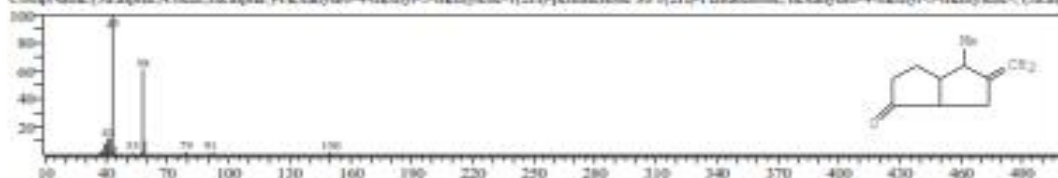
HM03 Entry: 3049 Library: WILEY7.LIB
 SE: 79 Formula: C4 H7 N O CAS: 75-86-5 MolWeight: 85 RetIndex: 0
 CompName: Propanitrile, 2-hydroxy-2-methyl- (CAS) Acetone cyanohydrin SS 2-Cyano-2-propanol SS 2-Methylacetonitrile SS Lactonitrile, 2-methyl- SS 2-Pn



HM04 Entry: 460 Library: WILEY7.LIB
 SE: 77 Formula: C3 H8 O CAS: 29450-04-0 MolWeight: 58 RetIndex: 0
 CompName: 1-propan-2-ol (CAS) Isopropyl alcohol SS Acetone enol SS 2-Hydroxypropane SS

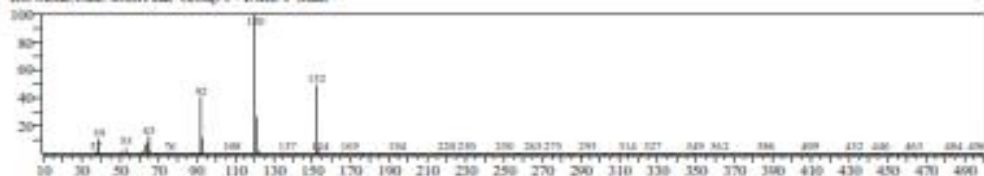


HM05 Entry: 37765 Library: WILEY7.LIB
 SE: 76 Formula: C10 H14 O CAS: 79090-46-8 MolWeight: 150 RetIndex: 0
 CompName: (2a.alpha.,4.beta.,5a.alpha.)Hexahydro-4-methyl-5-methylenc-(1(2H)-pentalone SS 1(2H)-Pentalone, hexahydro-4-methyl-5-methylenc-, (2a,5a)

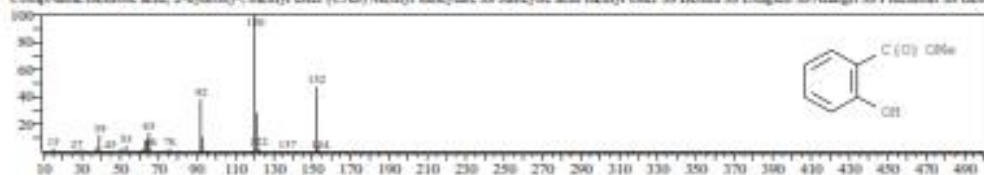


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BG Mode: Calc. from Peak Group 1 - Event 1 Scan



H001 Entry:40045 Library:WILEY7.LIB
SE98 Formula: C8 H8 O3 CAS:119-36-8 MolWeight:152 RefIndex:0
CompName: Benzoic acid, 2-hydroxy-, methyl ester (CAS) Methyl salicylate SS Salicylic acid methyl ester SS Betula SS Eucalypt SS Anigit SS Fluorant SS Ben



H002 Entry:30238 Library:WILEY7.LIB
SE89 Formula: C10 H10 O4 CAS:280-02-9 MolWeight:194 RefIndex:0
CompName: Benzoic acid, 2-(acetyloxy)-, methyl ester (CAS) ACETYL METHYL SALICYLATE SS O-Acetyl methyl salicylate SS ACETYL SALICYLIC ACID



H003 Entry:38079 Library:WILEY7.LIB
SE84 Formula: C7 H8 N2 O CAS:5331-17-7 MolWeight:151 RefIndex:0
CompName: Benzoic acid, 4-amino-, hydrazide (CAS) PARA-AMINOBENZYL HYDRAZIDE, 97% PARA-AMINOBENZONIC ACID HYDRAZIDE SS Amber



H004 Entry:50352 Library:WILEY7.LIB
SE84 Formula: C8 H9 N O2 CAS:609-45-4 MolWeight:151 RefIndex:0
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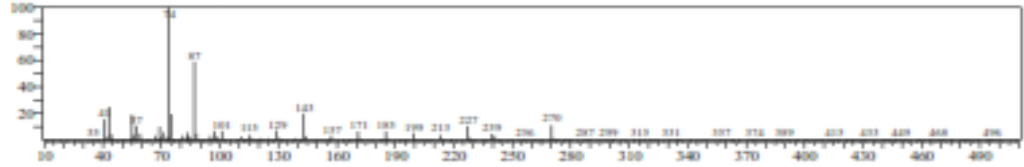


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<< Target >>

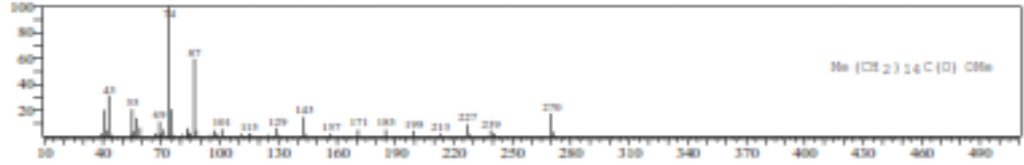
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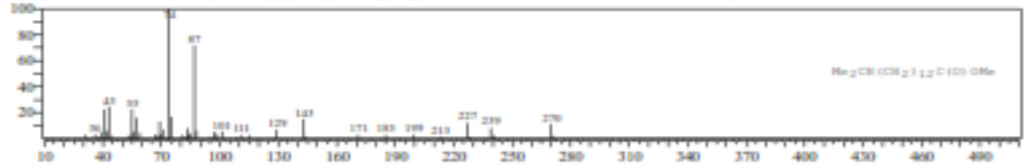
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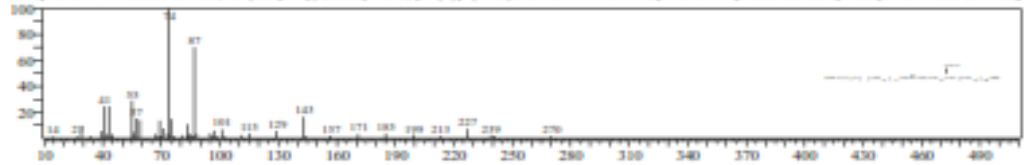
CompName:Heptadecanoic acid, 14-methyl-, methyl ester (CAS) METHYL 14-METHYL-PENTADECANOATE SS 14-METHYL-PENTADECANSÄUREME



H09:3 Entry:257015 Library:WILEY7.LIB

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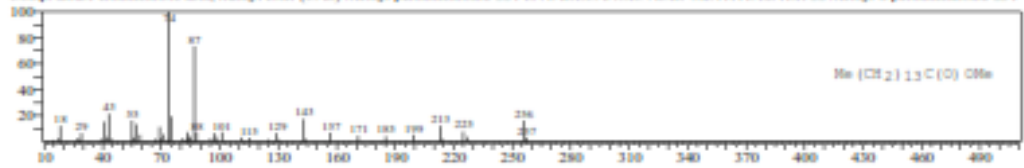
CompName:9-Octadecenoic acid, 12-(acetyloxy)-, methyl ester, [R-(Z)]- (CAS) Floricin P-4 SS Methyl 12-acetoxyoleate SS Methyl acetyl ricinoleate SS Methyl



H09:4 Entry:164477 Library:WILEY7.LIB

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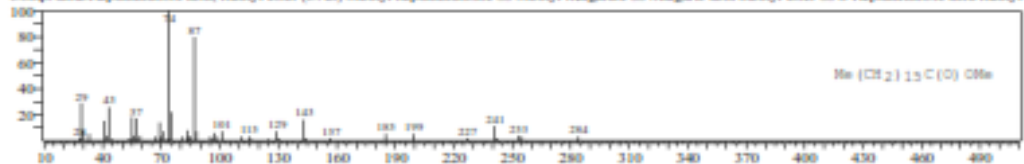
CompName:Pentadecanoic acid, methyl ester (CAS) Methyl pentadecanoate SS PENTADECANOID ACID-METHYL ESTER SS Methyl n-pentadecanoate SS P



H09:5 Entry:195591 Library:WILEY7.LIB

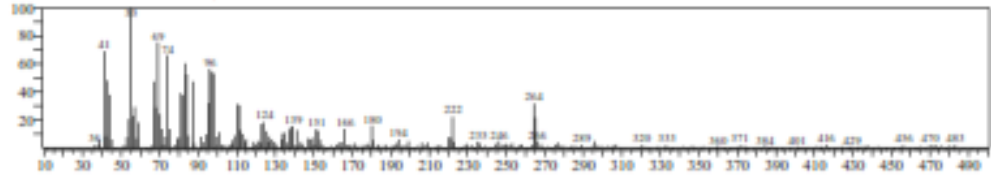
SI:99 Formula:C18 H36 O2 CAS:1731-62-6 MolWeight:284 RetIndex:0

CompName:Heptadecanoic acid, methyl ester (CAS) Methyl heptadecanoate SS Methyl margaric SS Margaric acid methyl ester SS n-Heptadecanoic acid methyl



<< Target >>

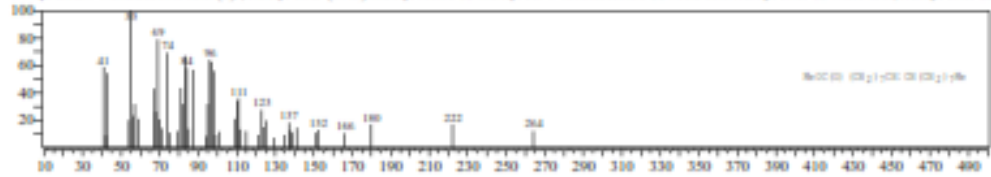
Line:5 R-Time:23.065(Scan:4414) MassPeak:292
RawMode:Averaged 23.060-23.070(4413-4415) BasePeak:55.00(2410)
IO Mode:Calc. from Peak Group 1 - Event 1 Scan



H09:1 Entry:207862 Library:WILEY7.LIB

SE92 Formula:C19H36O2 CAS:112-62-9 MolWeight:296 RefIndex:0

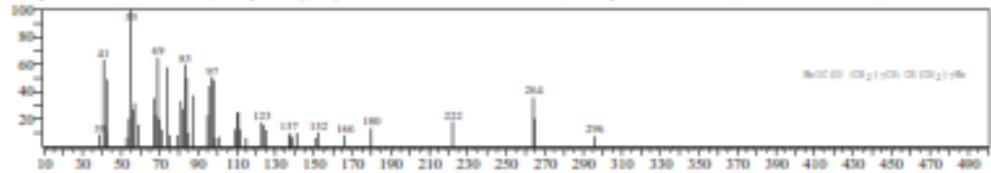
CompName:9-Octadecenoic acid (Z)-, methyl ester (CAS) Methyl oleate \$S\$ Methyl *cis*-9-octadecenoate \$S\$ Oleic acid methyl ester \$S\$ Oleic acid, methyl ester \$S\$



H09:2 Entry:207860 Library:WILEY7.LIB

SE92 Formula:C19H36O2 CAS:2462-84-2 MolWeight:296 RefIndex:0

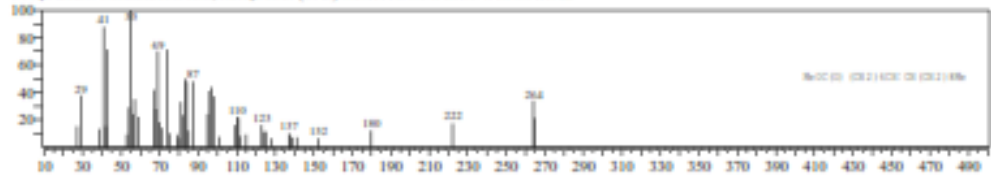
CompName:9-Octadecenoic acid, methyl ester (CAS) METHYL OCTADEC-9-ENOATE \$S\$ Methyl 9-octadecenoate \$S\$ METHYL OLEATE \$S\$



H09:3 Entry:207515 Library:WILEY7.LIB

SE90 Formula:C19H36O2 CAS:2345-29-1 MolWeight:296 RefIndex:0

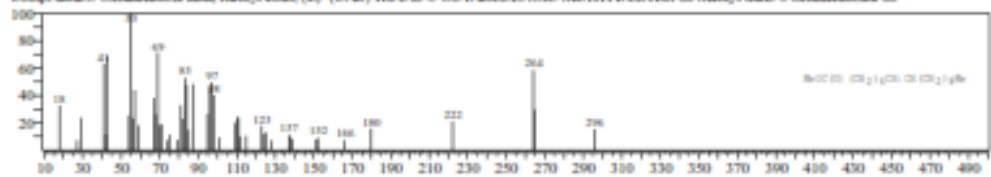
CompName:8-Octadecenoic acid, methyl ester (CAS) METHYL OCTADEC-8-ENOATE \$S\$



H09:4 Entry:207851 Library:WILEY7.LIB

SE89 Formula:C19H36O2 CAS:26528-50-7 MolWeight:296 RefIndex:0

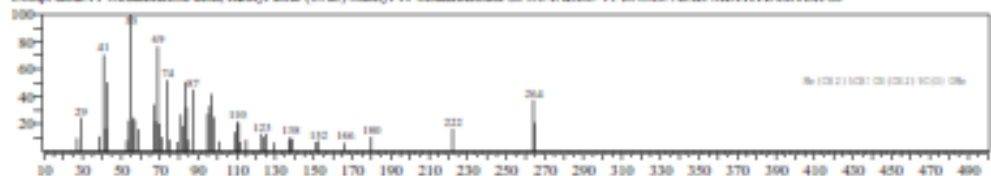
CompName:8-Octadecenoic acid, methyl ester, (E)- (CAS) TRANS-8-OCTADECENOIC METHYL ESTER \$S\$ Methyl *trans*-8-octadecenoate \$S\$



H09:5 Entry:207876 Library:WILEY7.LIB

SE89 Formula:C19H36O2 CAS:52380-33-3 MolWeight:296 RefIndex:0

CompName:11-Octadecenoic acid, methyl ester (CAS) Methyl 11-octadecenoate \$S\$ OCTADEC-11-ENOIC ACID METHYL ESTER \$S\$

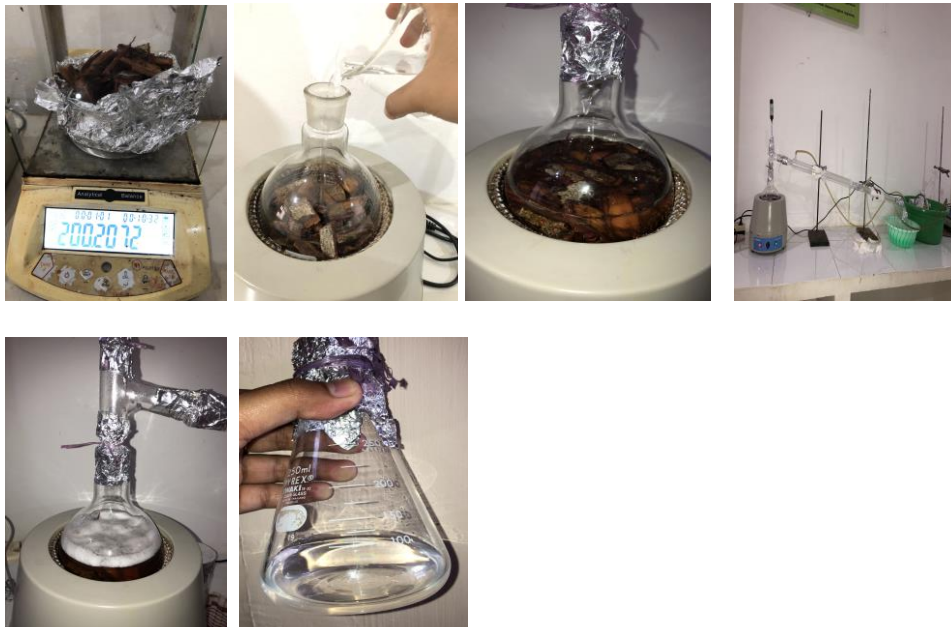


Lampiran 3. Dokumentasi

1. Pembuatan Simplisia



2. Ekstraksi Minyak Atsiri dengan Destilasi



Lampiran 4. Perhitungan

1. % Rendemen

$$\begin{aligned}\% \text{ Rendemen} &= \frac{\text{Bobot Isolat}}{\text{Bobot Simplisia}} \times 100\% \\ &= \frac{63 \text{ gram}}{200 \text{ gram}} \times 100\% = 31,5 \%\end{aligned}$$

2. Nilai Rf

$$Rf = \frac{\text{Jarak yang ditempuh analit}}{\text{Jarak tempuh eluen}}$$

Diketahui :

Jarak eluen : 8 cm

Jarak yang ditempuh analit :

- Noda 1 = 3 cm
- Noda 2 = 4,5 cm
- Noda 3 = 6 cm

Ditanya : Nilai Rf =.....?

Penyelesaian :

$$\begin{aligned}\text{a. Rf Noda 1} &= \frac{3}{8} \\ &= 0,375\end{aligned}$$

$$\begin{aligned}\text{b. Rf Noda 1} &= \frac{4,5}{8} \\ &= 0,55\end{aligned}$$

$$\begin{aligned}\text{c. Rf Noda 1} &= \frac{6}{8} \\ &= 0,75\end{aligned}$$