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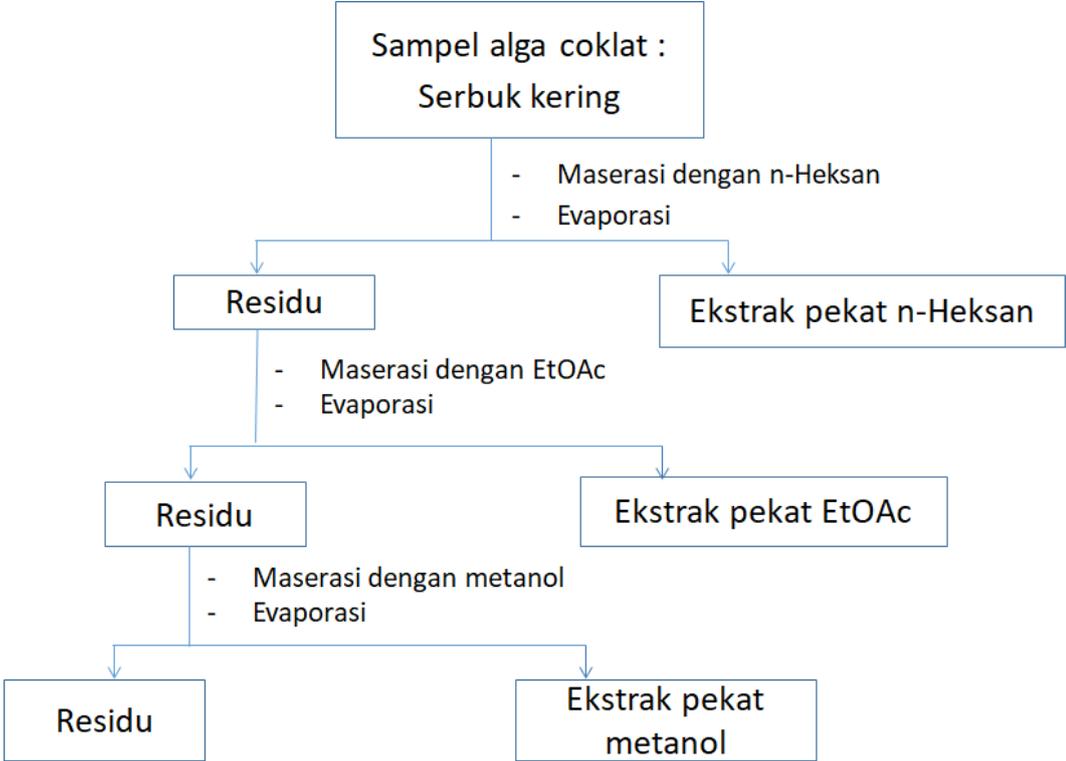
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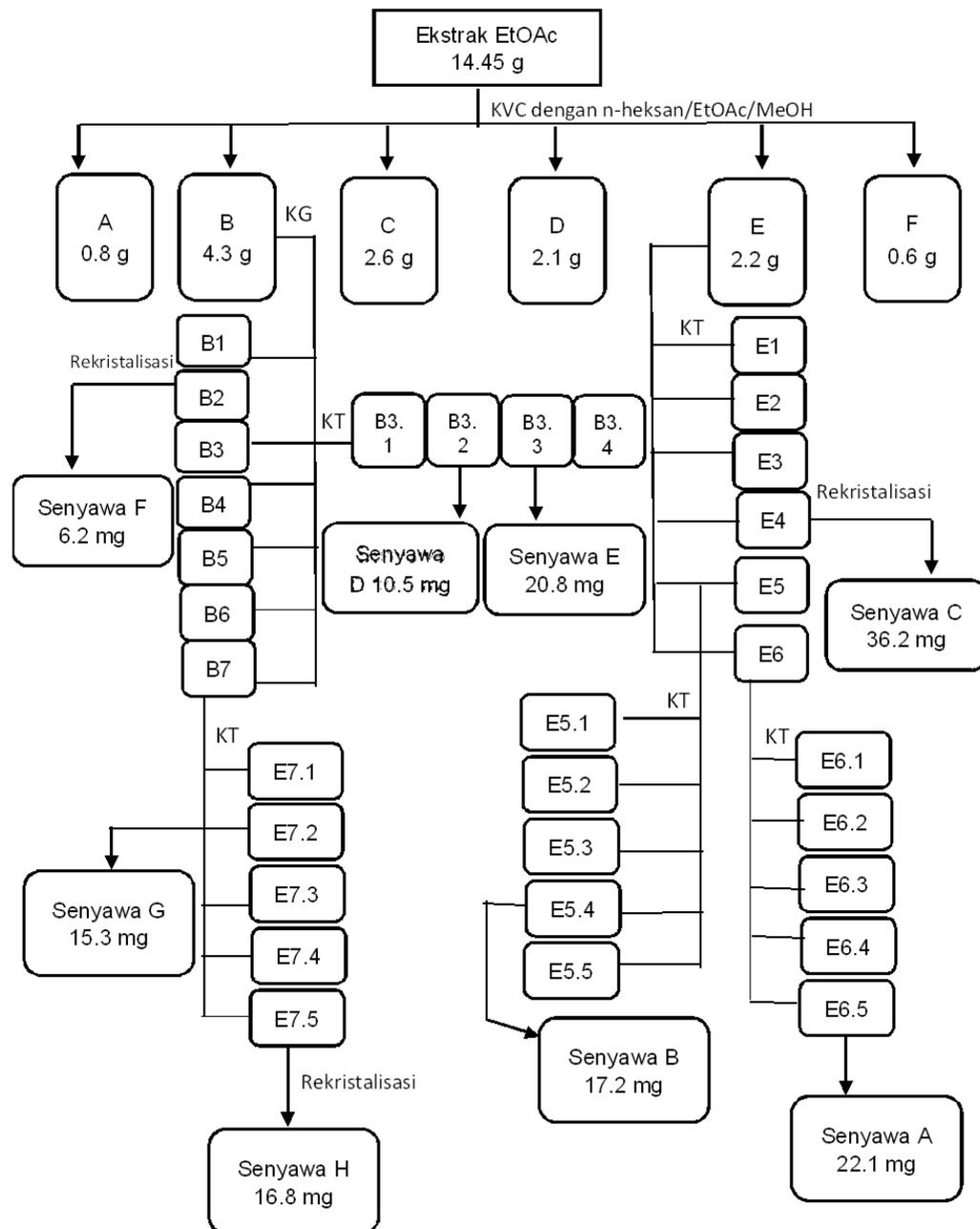
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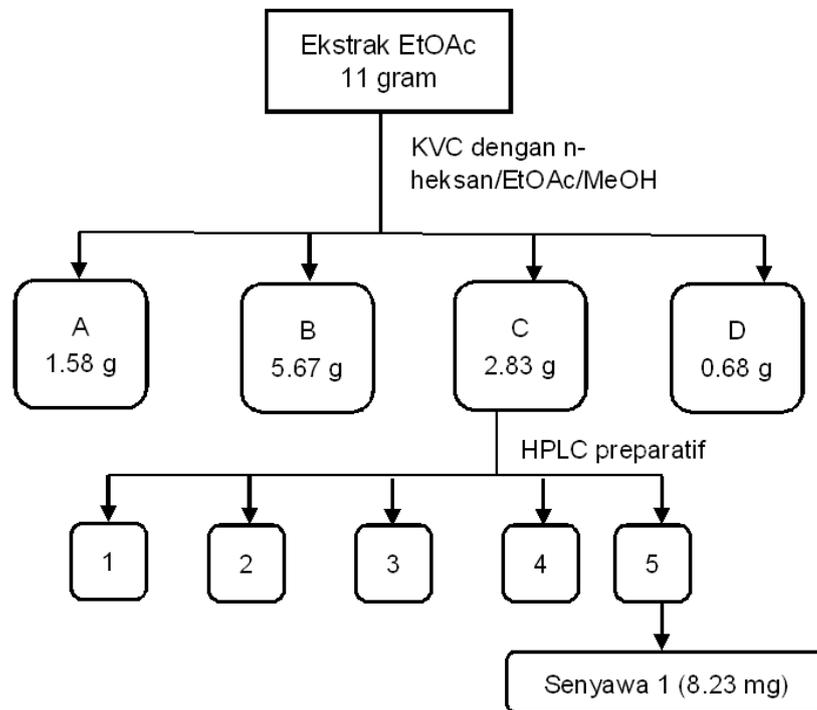
Lampiran 1. Skema ekstraksi sampel alga coklat



Lampiran 2. Bagan pemisahan dan pemurnian ekstrak etil asetat *T. decurrens* Bory



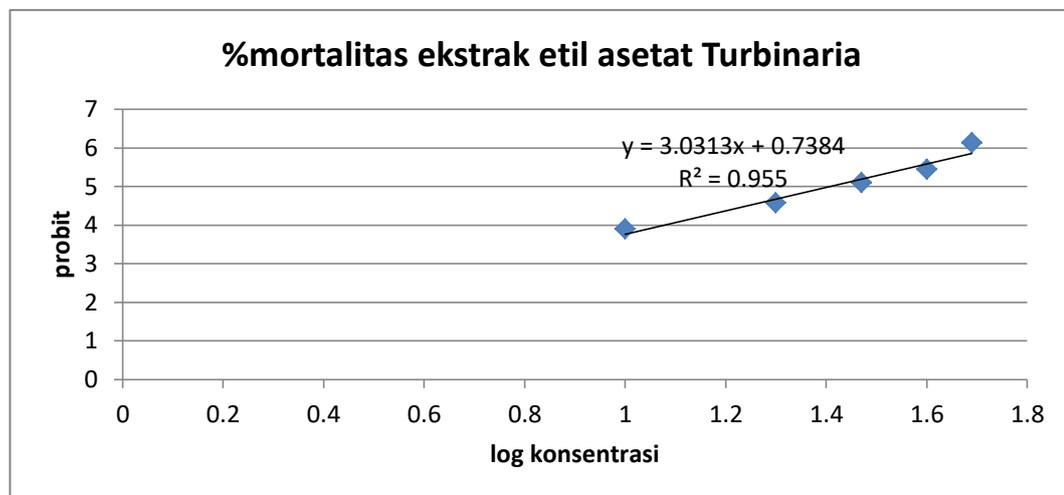
Lampiran 3. Bagan pemisahan dan pemurnian ekstrak etil asetat *S.polycystum*



Lampiran 4. Uji BSLT ekstrak *Turbinaria decurrens* Bory

Ekstrak Etil asetat

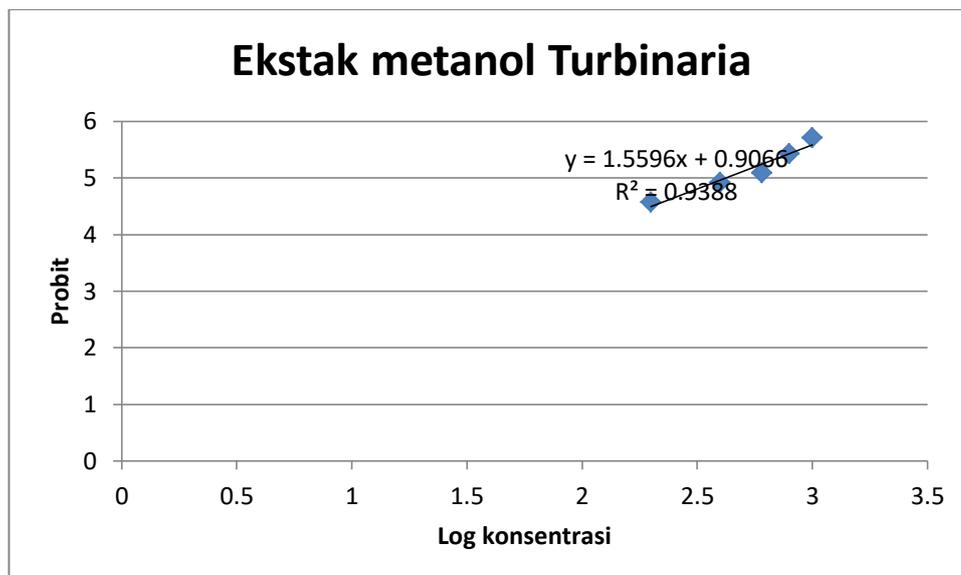
Pengamatan	Replikasi	Kontrol (-)	Ekstrak etil asetat <i>Turbinaria</i> (µg/mL)				
			10	20	30	40	50
Jumlah mortalitas	1	0	2	4	6	6	9
	2	0	1	2	5	7	8
	3	0	1	4	5	7	8
Total		0	4	10	16	20	26
%Mortalitas			13,33	33,33	53,33	66,67	87,00



LC<sub>50</sub> = 25,41 µg/mL

Ekstrak metanol

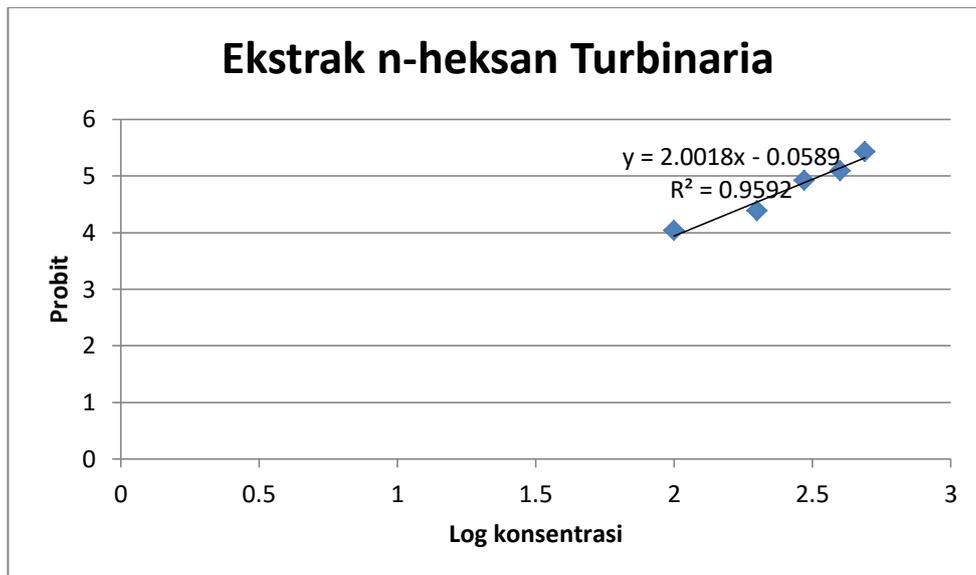
			Ekstrak metanol Turbinaria (µg/mL)				
Pengamatan	Replikasi	Kontrol (-)	200	400	600	800	1000
Jumlah mortalitas	1	0	4	4	5	6	9
	2	0	2	5	6	7	8
	3	0	4	5	5	7	7
Total		0	10	14	16	20	23
%Mortalitas			33,33	46,67	53,33	66,67	87,00



LC<sub>50</sub> = 421,31 µg/mL

Ekstrak n-heksan

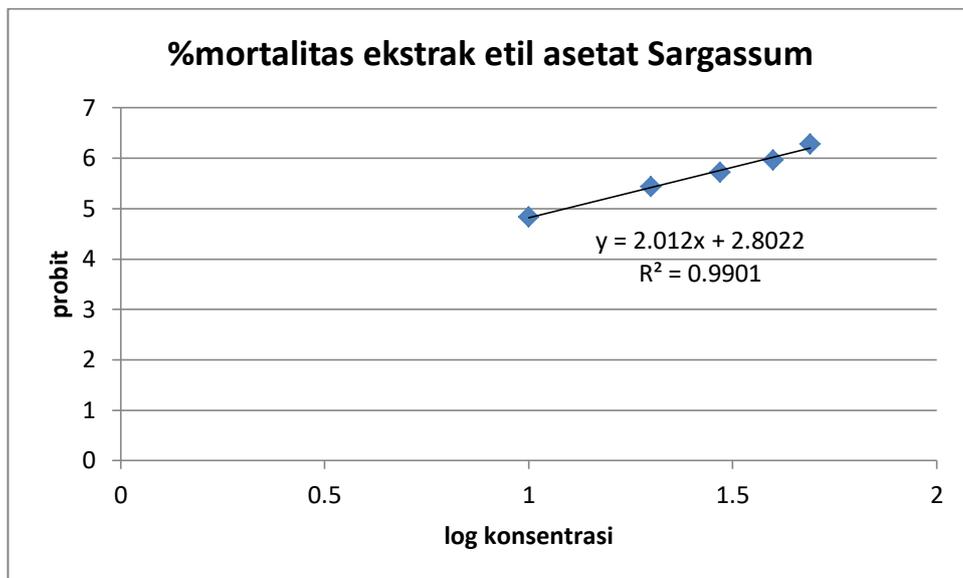
Pengamatan	Replikasi	Kontrol (-)	Ekstrak n-heksan Turbinaria (µg/mL)				
			100	200	300	400	500
Jumlah mortalitas	1	0	2	2	4	4	6
	2	0	2	3	5	7	7
	3	0	1	3	5	5	7
Total		0	5	8	14	16	23
%Mortalitas			16,67	26,67	46,67	53,33	66,67



LC<sub>50</sub> = 336,58 µg/mL

Lampiran 5. Uji BSLT ekstrak *Sargassum polycystum*

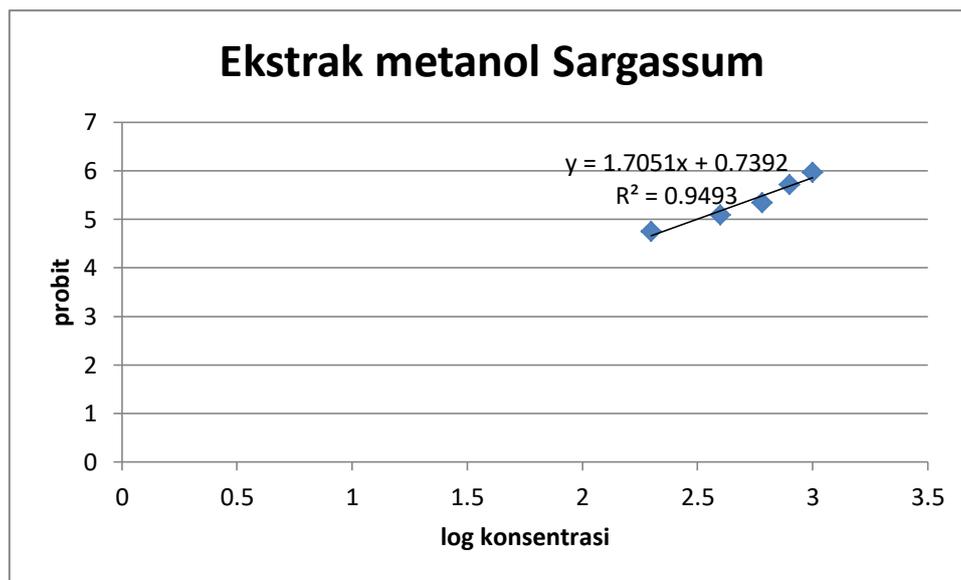
Pengamatan	Replikasi	Kontrol (-)	Ekstrak etil asetat Turbinaria (µg/mL)				
			10	20	30	40	50
Jumlah mortalitas	1	0	4	6	6	9	10
	2	0	2	5	7	8	9
	3	0	4	5	7	8	10
Total		0	10	16	20	26	29
%Mortalitas			33,33	53,33	66,67	87,00	99,99



LC<sub>50</sub> = 12,37 µg/mL

Ekstrak metanol

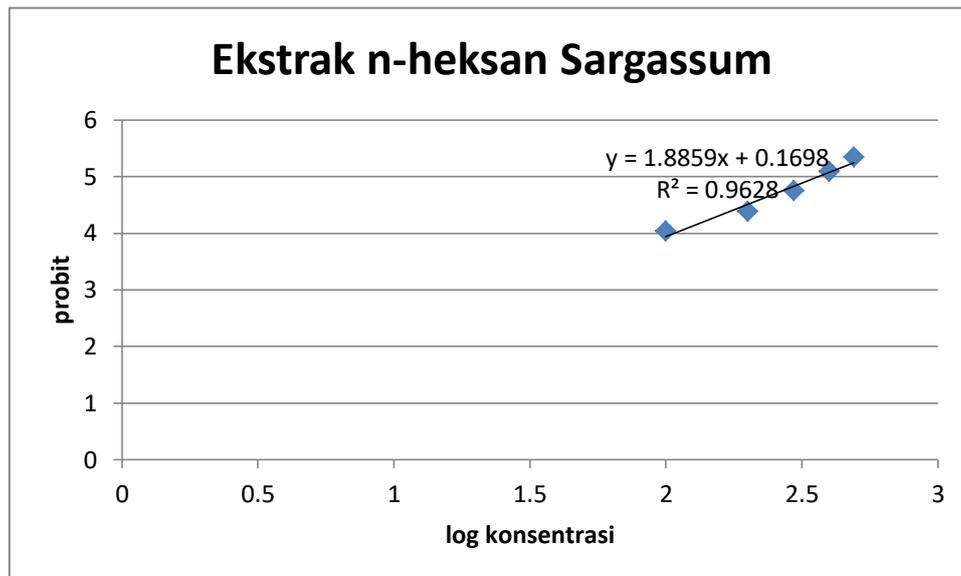
Pengamatan	Replikasi	Kontrol (-)	Ekstrak metanol Sargassum (µg/mL)				
			200	400	600	800	1000
Jumlah mortalitas	1	0	5	5	7	7	9
	2	0	4	5	7	8	9
	3	0	3	6	5	8	8
Total		0	12	16	19	23	25
%Mortalitas			33,33	53,33	63,33	76,67	83,33



LC<sub>50</sub> = 315,35 µg/mL

Ekstrak n-heksan

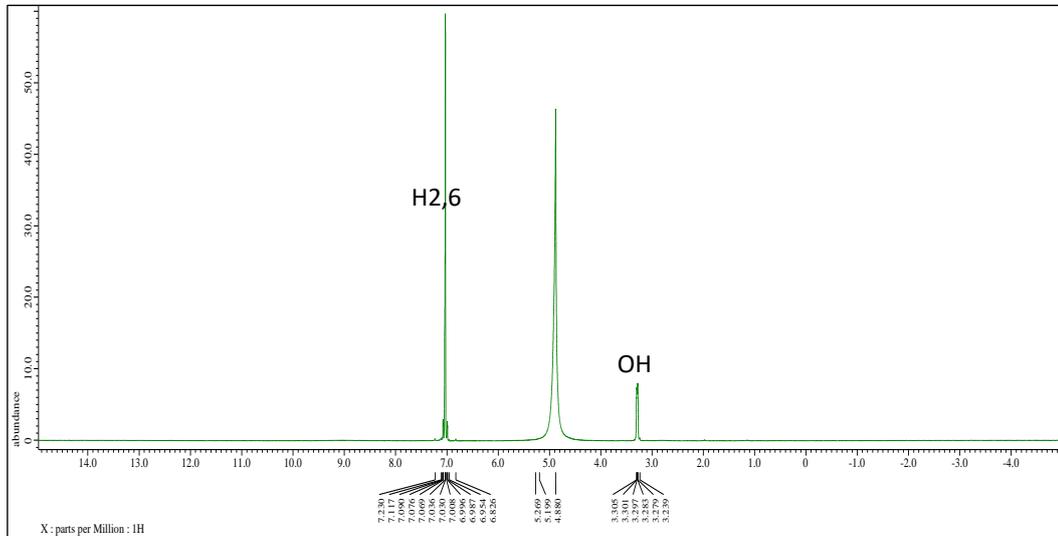
Pengamatan	Replikasi	Kontrol (-)	Ekstrak n-heksan Sargassum (µg/mL)				
			100 ppm	200 ppm	300 ppm	400 ppm	500 ppm
Jumlah mortalitas	1	0	2	3	4	5	6
	2	0	1	2	4	7	6
	3	0	2	3	4	4	7
Total		0	5	8	40	16	19
%Mortalitas			16,67	26,67	46,67	53,33	63,33



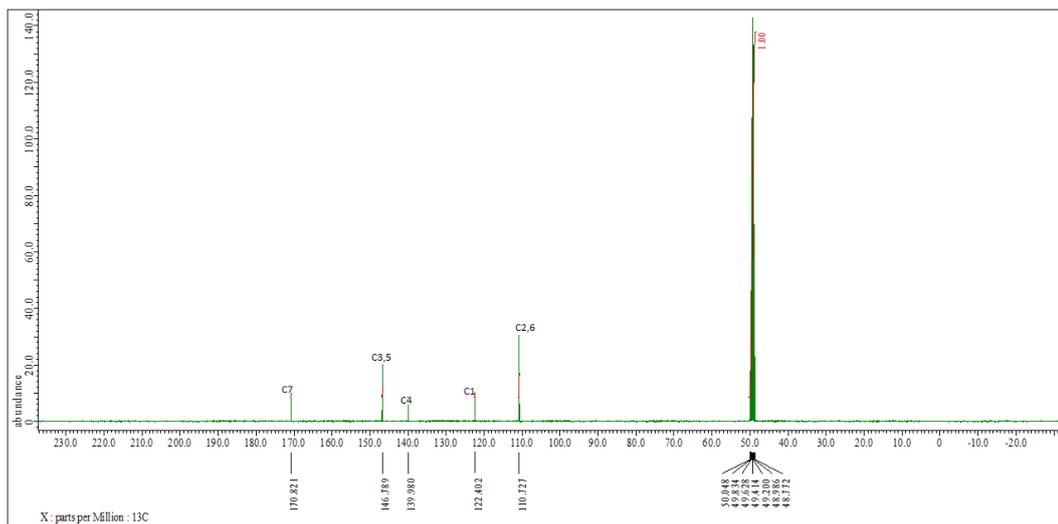
LC<sub>50</sub> = 364,08 µg/mL

## Lampiran 6. Spektrum $^1\text{H}$ dan $^{13}\text{C}$ -NMR senyawa **A**

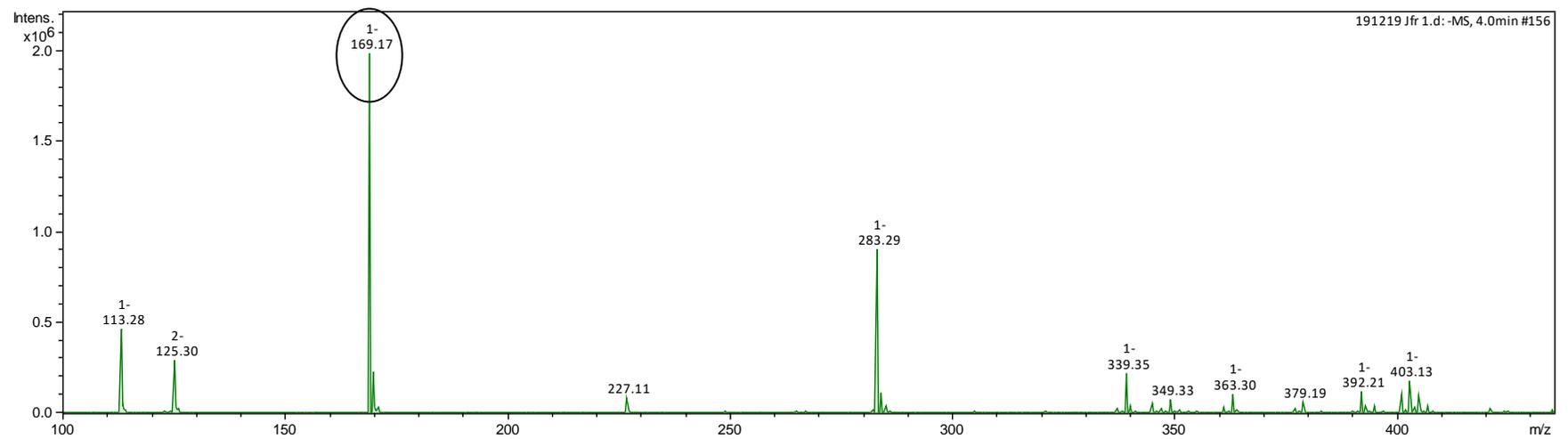
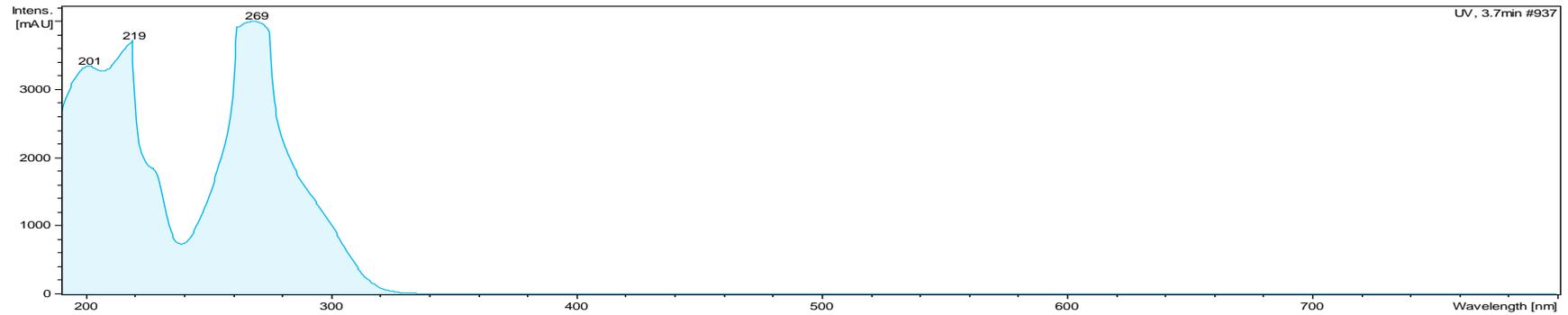
### $^1\text{H}$ -NMR ( $\text{CD}_3\text{OD}$ , 400 MHz)



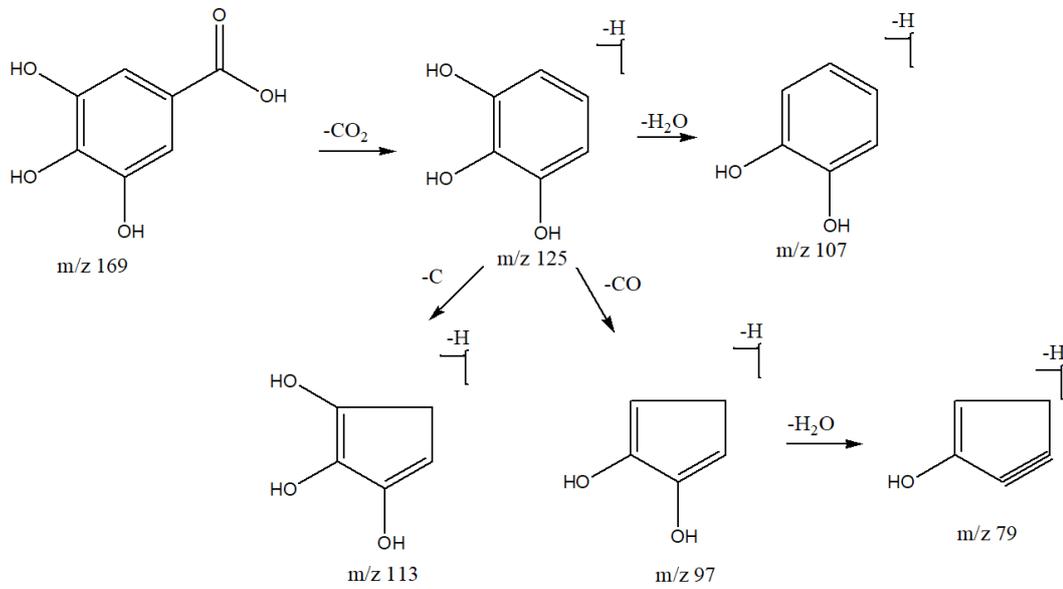
### $^{13}\text{C}$ -NMR ( $\text{CD}_3\text{OD}$ , 125 MHz)



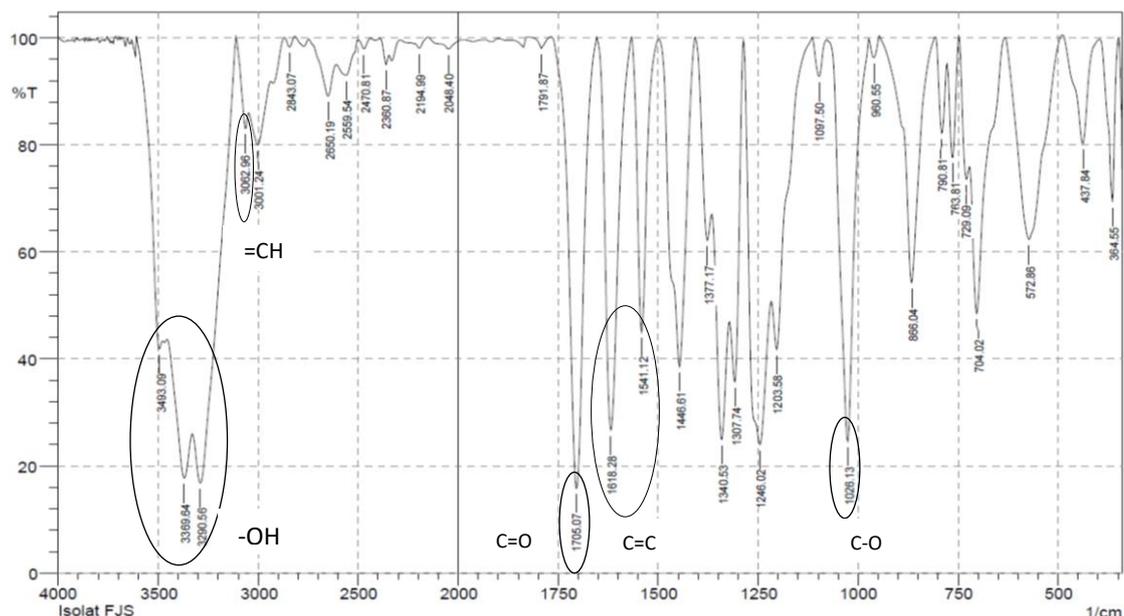
## Lampiran 7. Spektrum MS senyawa A



## Lampiran 8. Fragmentasi senyawa A



# Lampiran 9. Spektrum FT IR senyawa A

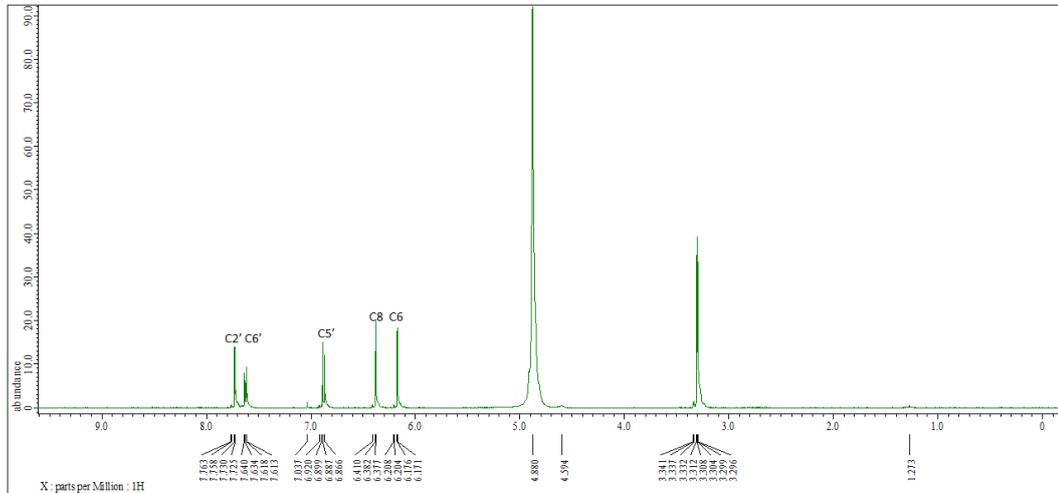


	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	364.55	69.34	30.54	395.41	349.12	2.84	2.81
2	437.84	80.25	19.81	487.99	397.34	3.26	3.3
3	572.86	62.31	37.97	632.65	489.92	13.67	13.87
4	704.02	48.51	32.25	721.38	634.58	11.34	6.28
5	729.09	73.55	7.83	748.38	723.31	2.23	0.63
6	763.81	77.63	19.63	777.31	750.31	1.74	1.43
7	790.81	82.19	14.85	806.25	779.24	1.34	1.01
8	866.04	54.28	33.48	887.26	808.17	8.44	5.39
9	960.55	96.28	3.78	974.05	947.05	0.25	0.25
10	1026.13	24.65	75.07	1078.21	974.05	18.93	18.81
11	1097.5	92.77	7.12	1114.86	1078.21	0.58	0.56
12	1203.58	41.77	15.6	1217.08	1116.78	13.69	1.92
13	1246.02	24.03	46.25	1284.59	1219.01	27.71	17.48
14	1307.74	35.75	31.64	1321.24	1286.52	9.35	3.95
15	1340.53	24.96	30.08	1365.6	1323.17	17.44	6.59
16	1377.17	62.14	13.06	1406.11	1367.53	4.75	1.31
17	1446.61	38.6	61.22	1496.76	1408.04	16.04	15.96
18	1541.12	45.09	54.91	1566.2	1498.69	7.82	7.8
19	1618.28	26.73	73.31	1653	1568.13	17.05	17.05
20	1705.07	15.82	83.95	1766.8	1654.92	24.68	24.59
21	1791.87	98.01	2.17	1820.8	1766.8	0.13	0.17
22	2048.4	97.91	1.93	2150.63	1986.68	0.76	0.69
23	2194.99	98.06	1.27	2216.21	2150.63	0.29	0.16
24	2360.87	95	2.82	2389.8	2345.44	0.56	0.22
25	2470.81	97.94	1.76	2499.75	2436.09	0.29	0.21
26	2559.54	92.99	4.03	2607.76	2499.75	2.36	1.07
27	2650.19	89.09	7.29	2746.63	2609.69	3.47	1.84
28	2843.07	98.27	1.9	2868.15	2816.07	0.18	0.22
29	3001.24	79.98	8.36	3045.6	2937.59	7.9	2.37
30	3062.96	83.03	6.42	3109.25	3047.53	2.98	0.88
31	3290.56	16.84	21.7	3327.21	3111.18	82.56	20
32	3369.64	17.77	13.94	3454.51	3329.14	72.13	12.74
33	3493.09	41.92	8.19	3606.89	3477.66	21.35	1.65

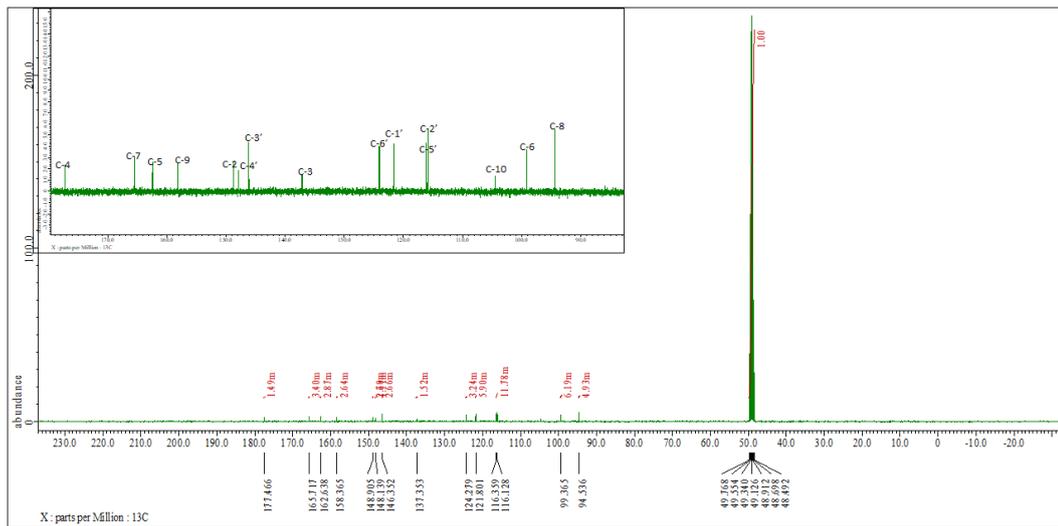
Date/Time; 5/13/2019 12:45:15 PM  
No. of Scans;

Lampiran 10. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$  NMR senyawa **B**

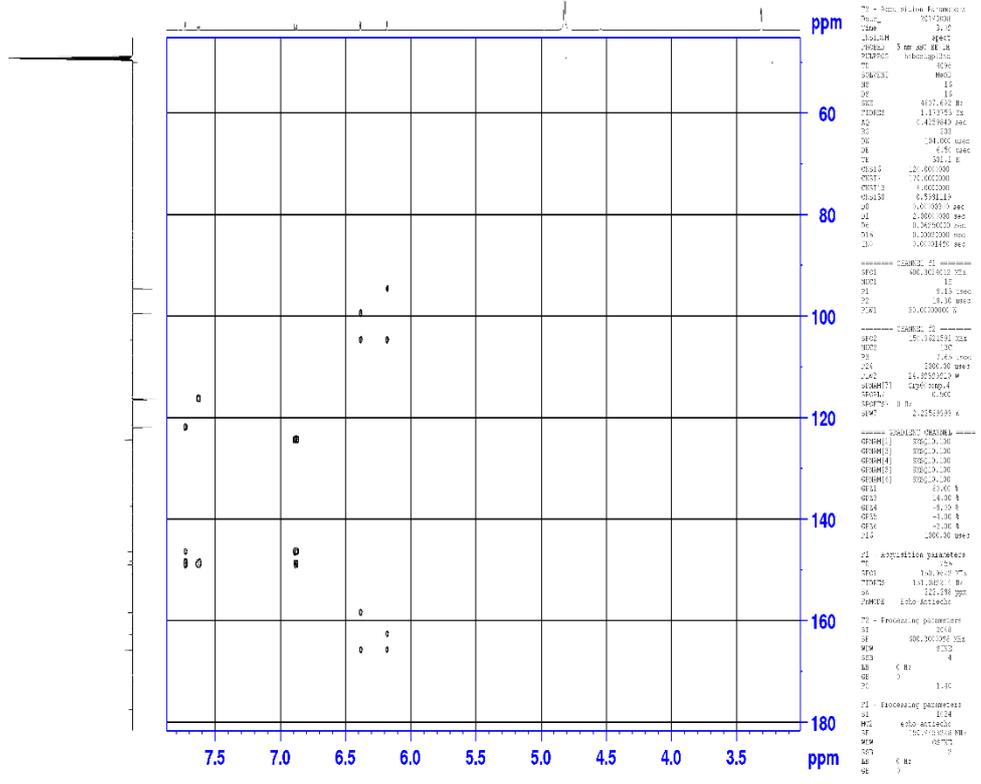
$^1\text{H}$ -NMR ( $\text{CD}_3\text{OD}$ , 400 MHz)



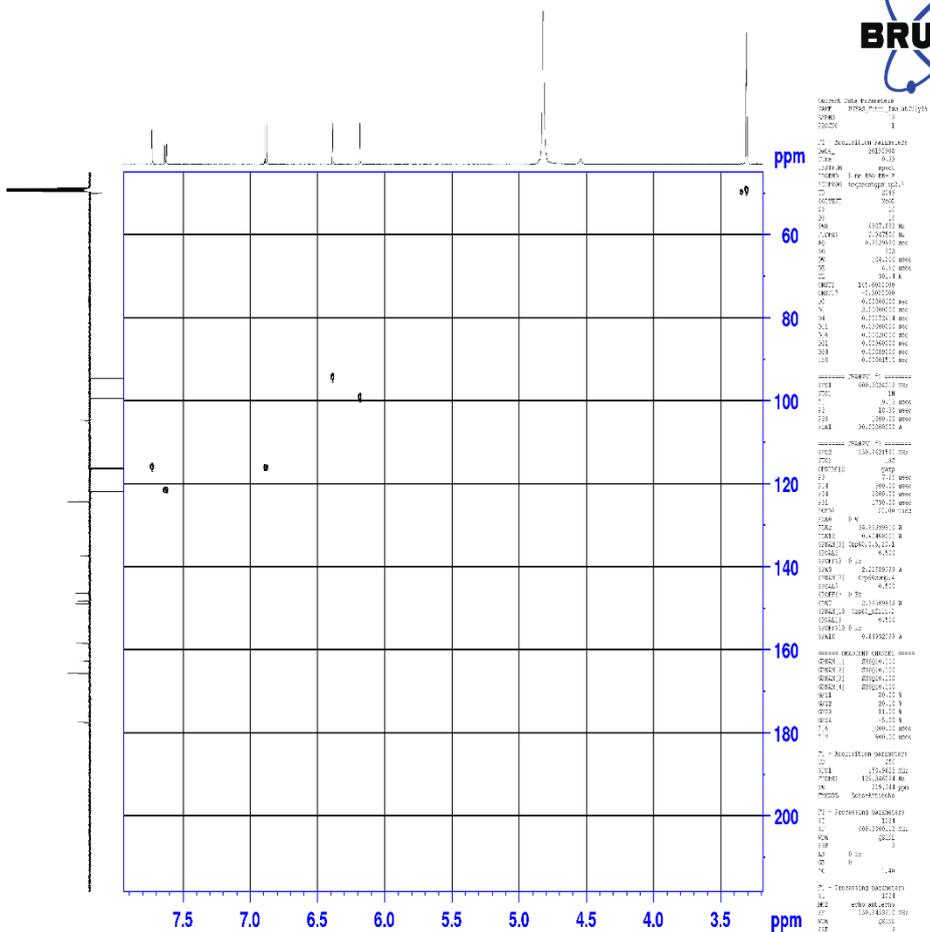
$^{13}\text{C}$ -NMR ( $\text{CD}_3\text{OD}$ , 125 MHz)



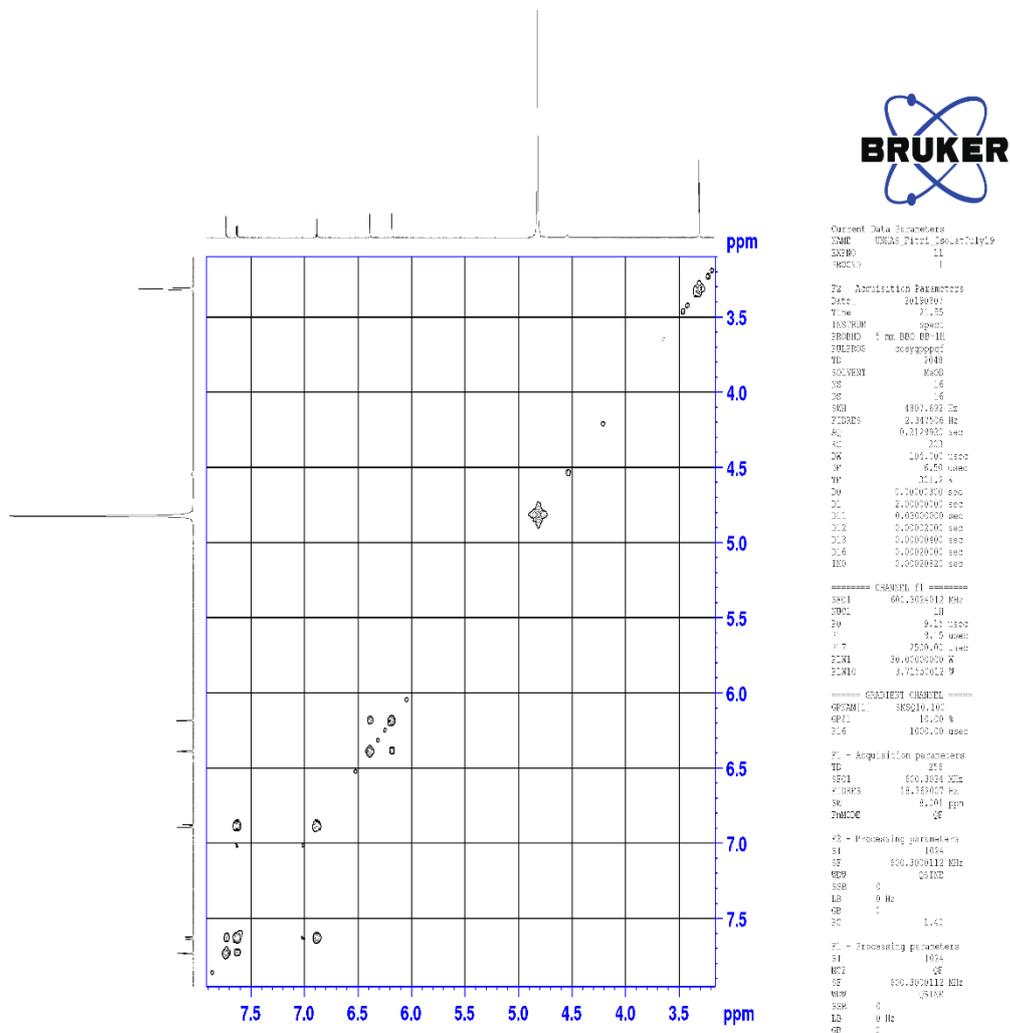
Lampiran 11. Spektrum HMBC senyawa B



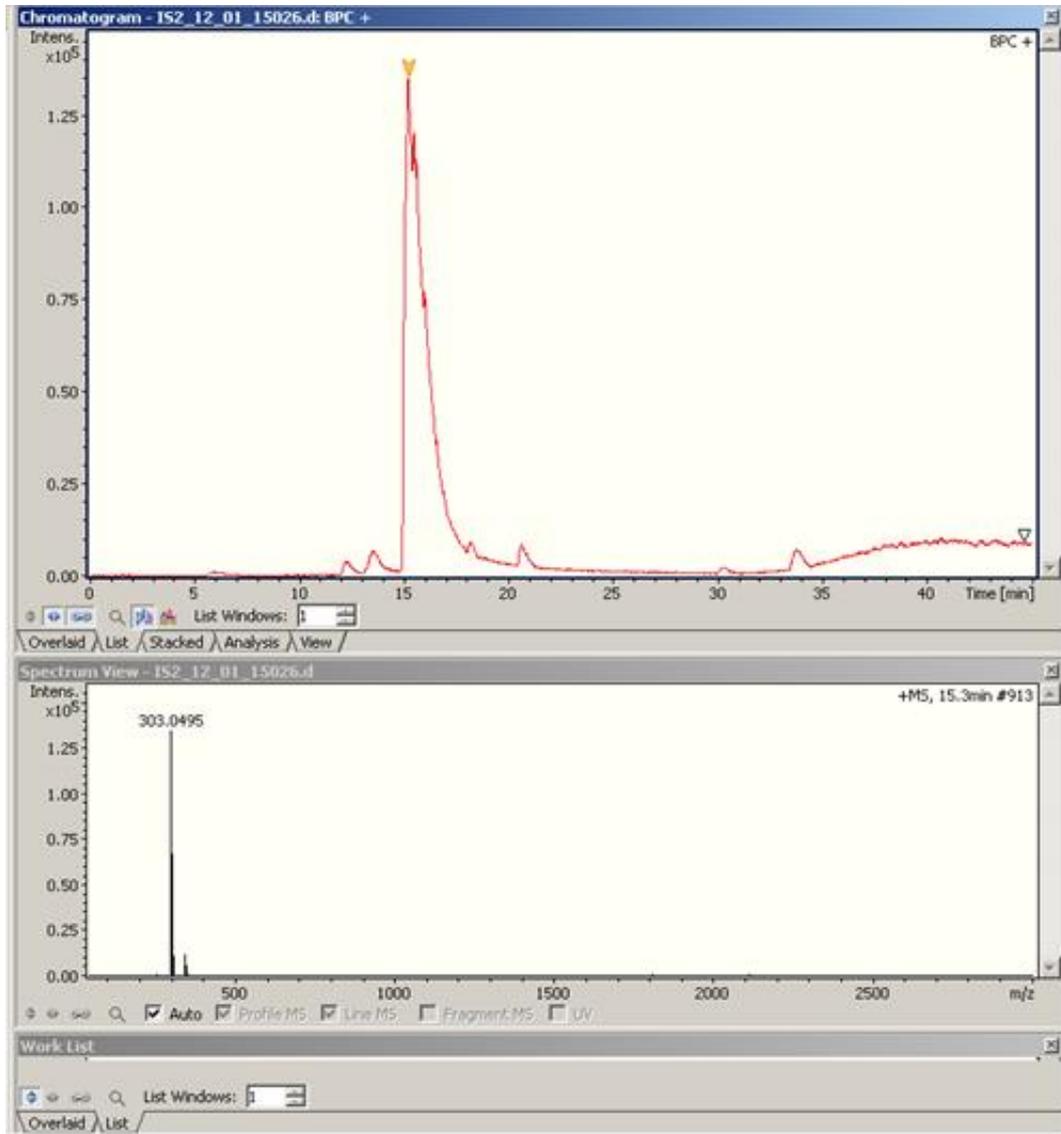
Lampiran 12. Spektrum HSQC senyawa B



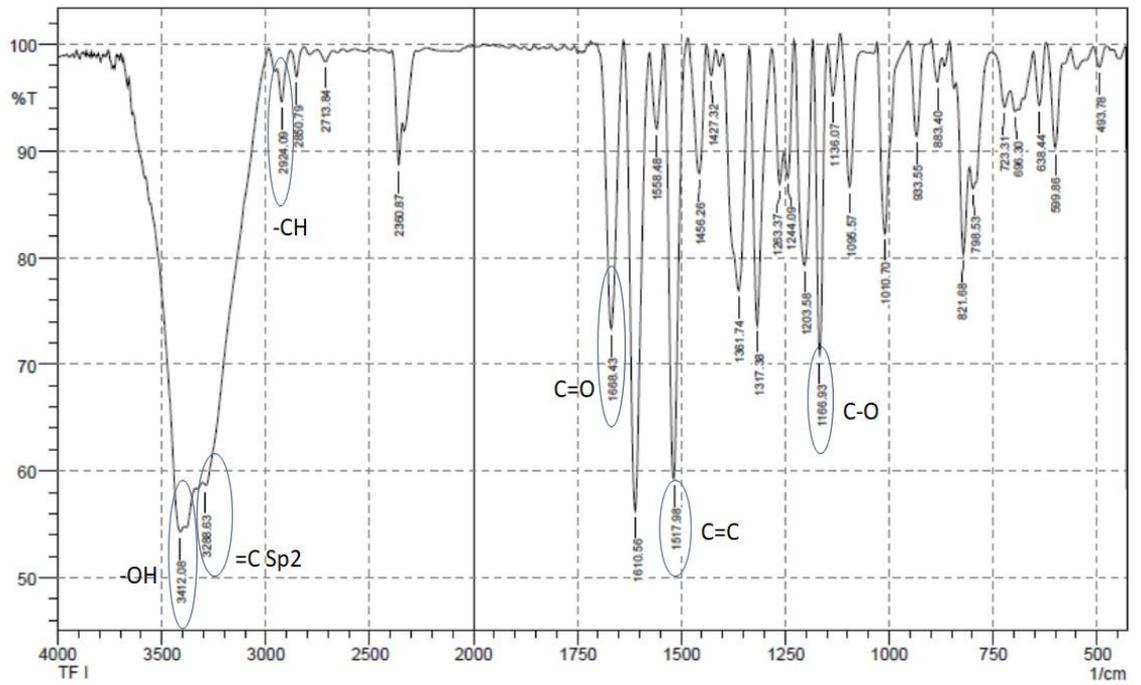
### Lampiran 13. Spektrum COSY senyawa B



Lampiran 14. Spektrum LCMS senyawa **B**

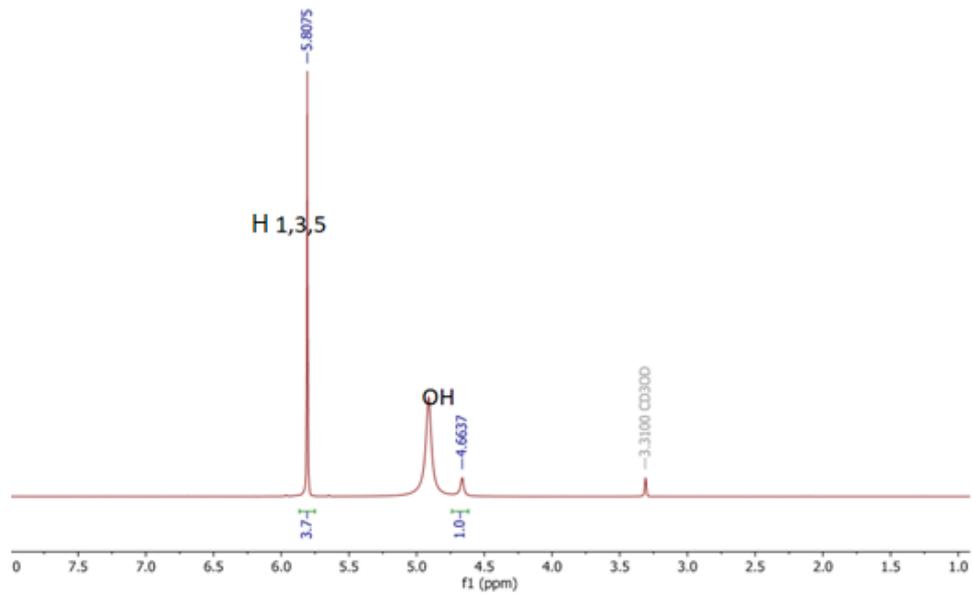


Lampiran 15. Spektrum FT IR senyawa B

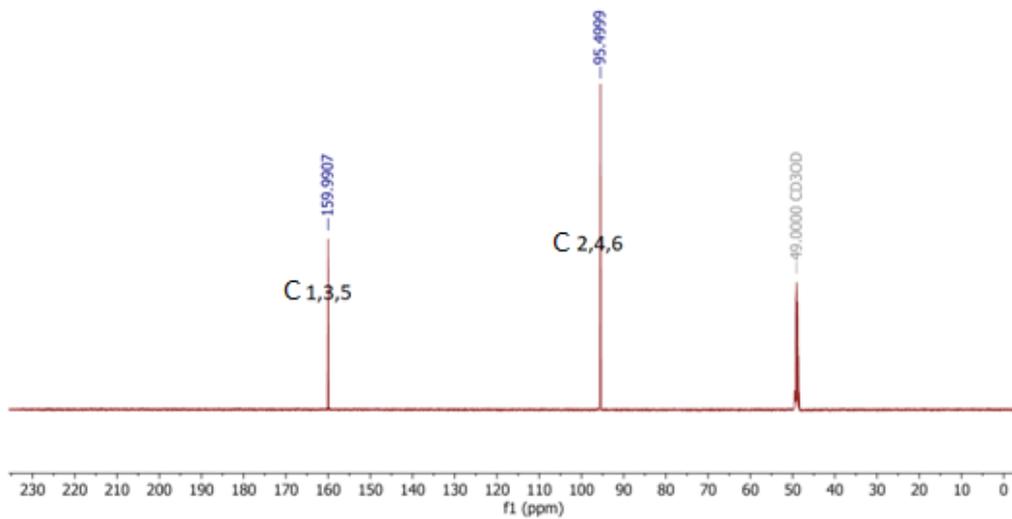


Lampiran 16. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$  senyawa **C**

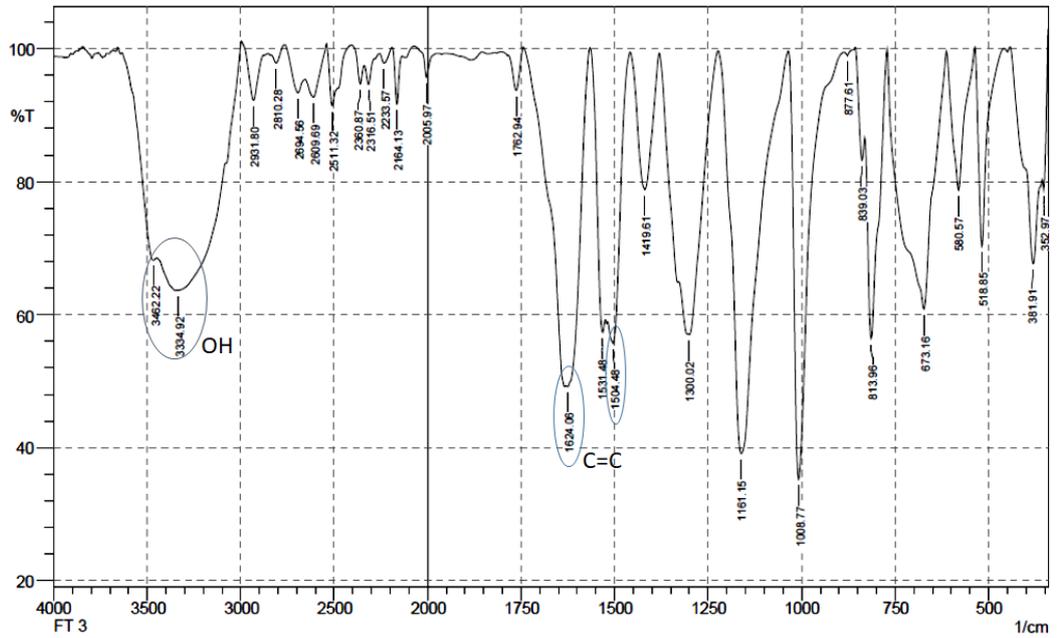
$^1\text{H}$ -NMR ( $\text{CDCl}_3$ , 500 MHz)



$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz)

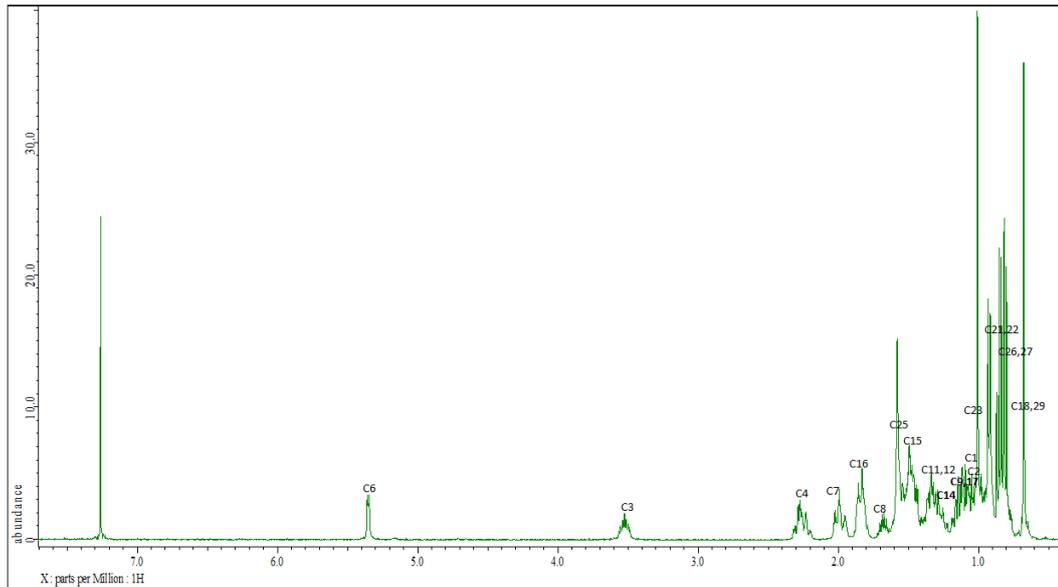


Lampiran 17. Spektrum FT IR senyawa C

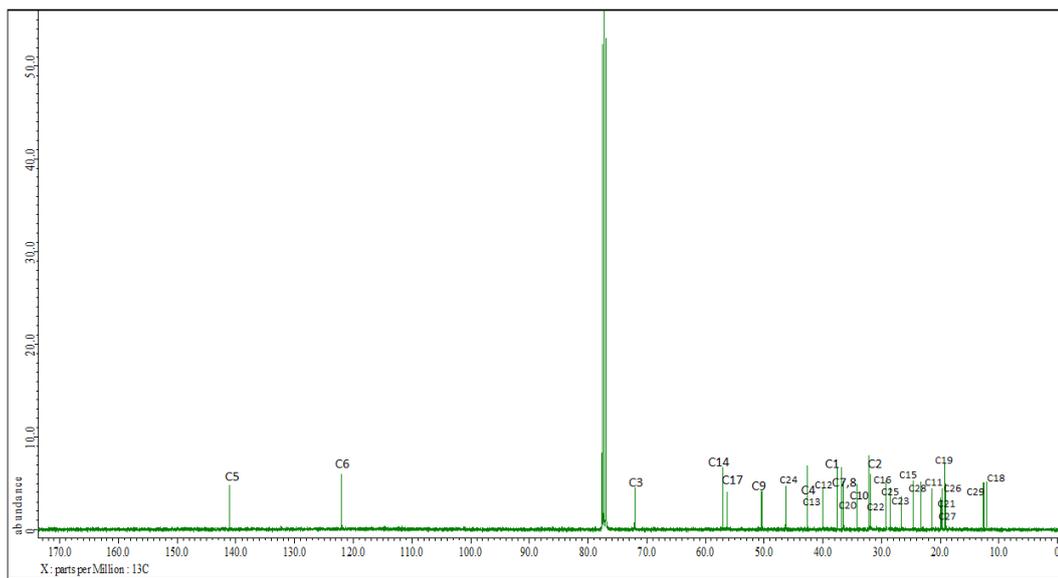


Lampiran 18. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$  senyawa **D**

$^1\text{H}$ -NMR ( $\text{CDCl}_3$ , 400 MHz)

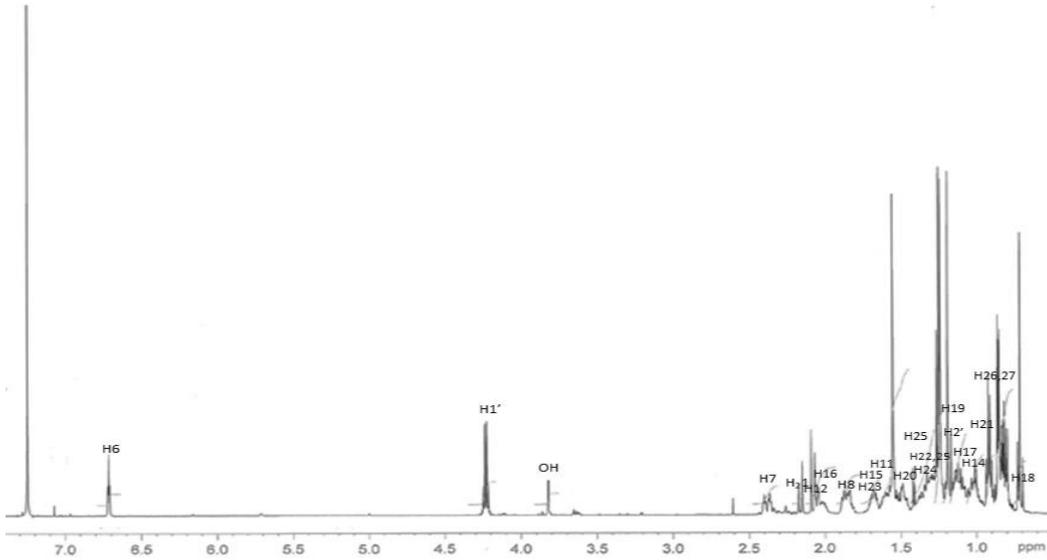


$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz)

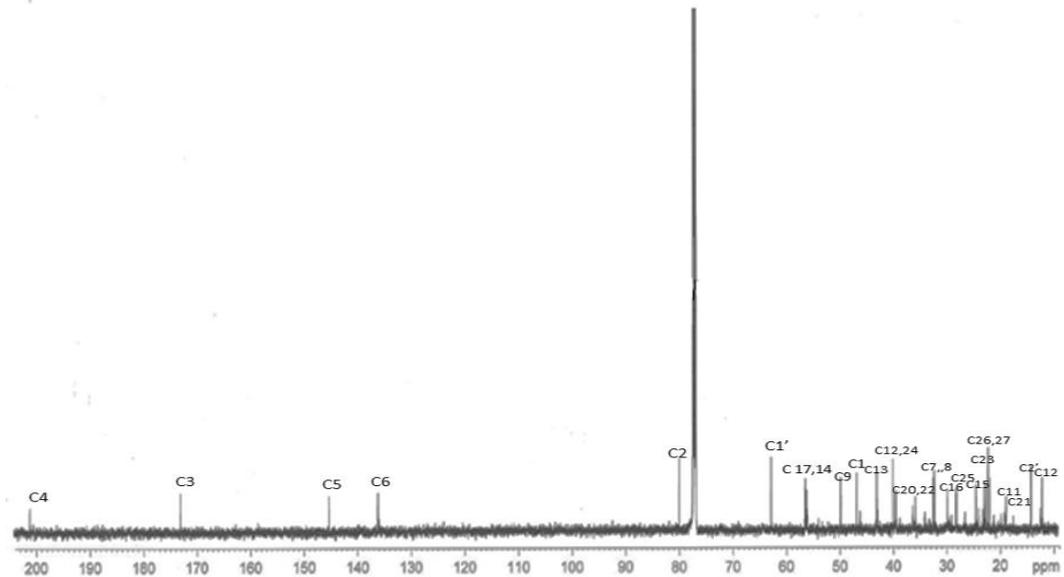


Lampiran 19. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$  senyawa **E**

$^1\text{H}$ -NMR ( $\text{CDCl}_3$ , 500 MHz)

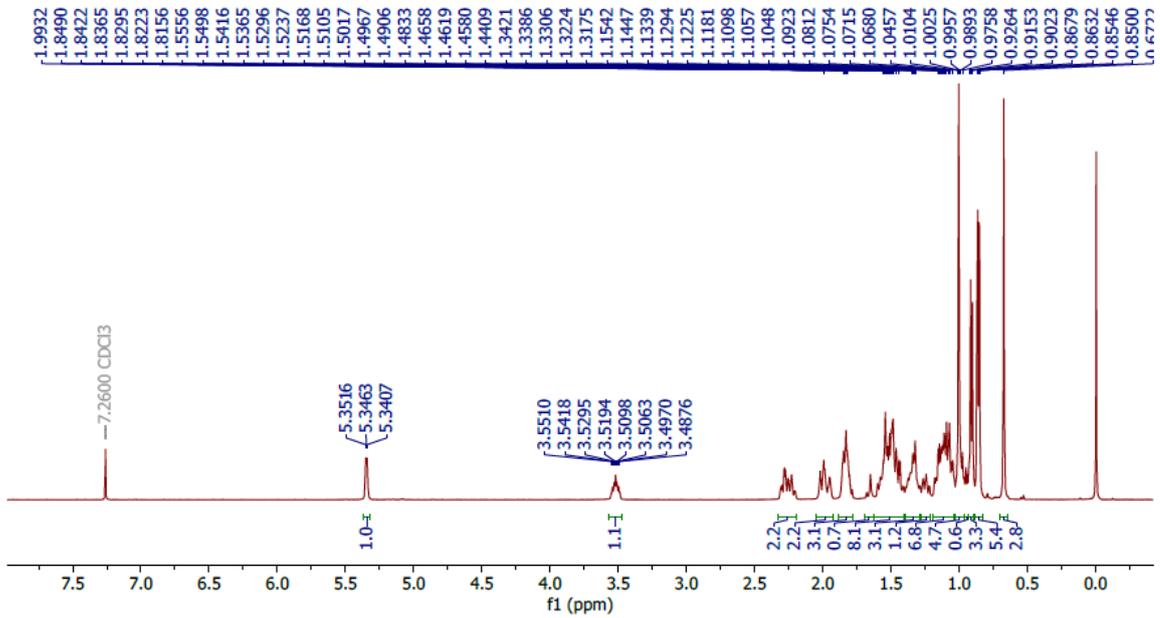


$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 150 MHz)

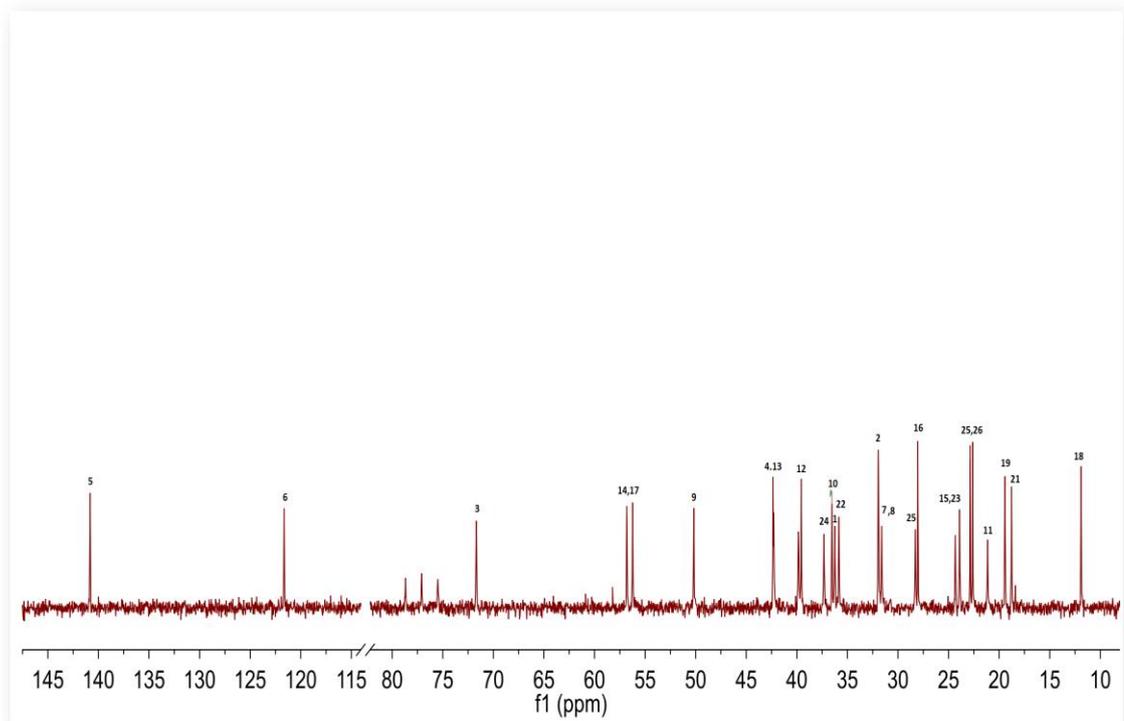


Lampiran 20. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$  NMR senyawa **F**

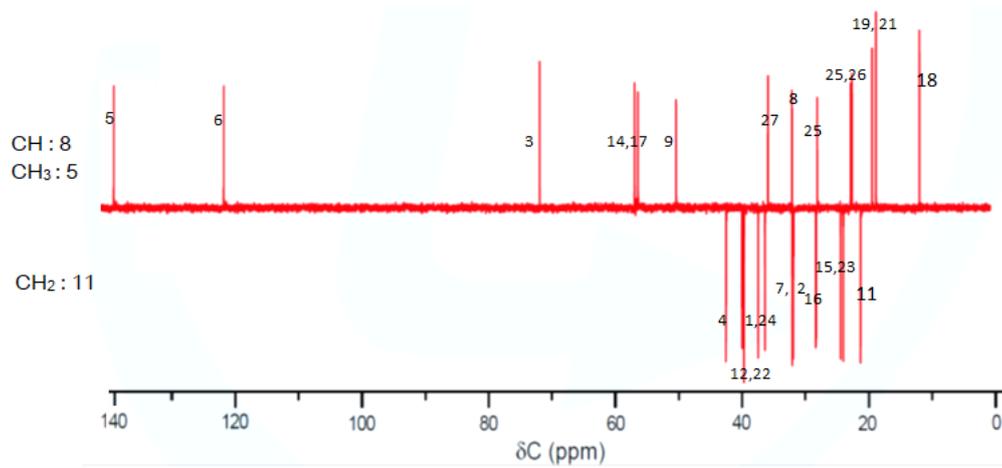
$^1\text{H}$ -NMR ( $\text{CDCl}_3$ , 500 MHz)



$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz)



Lampiran 21. Spektrum 135 DEPT NMR senyawa F



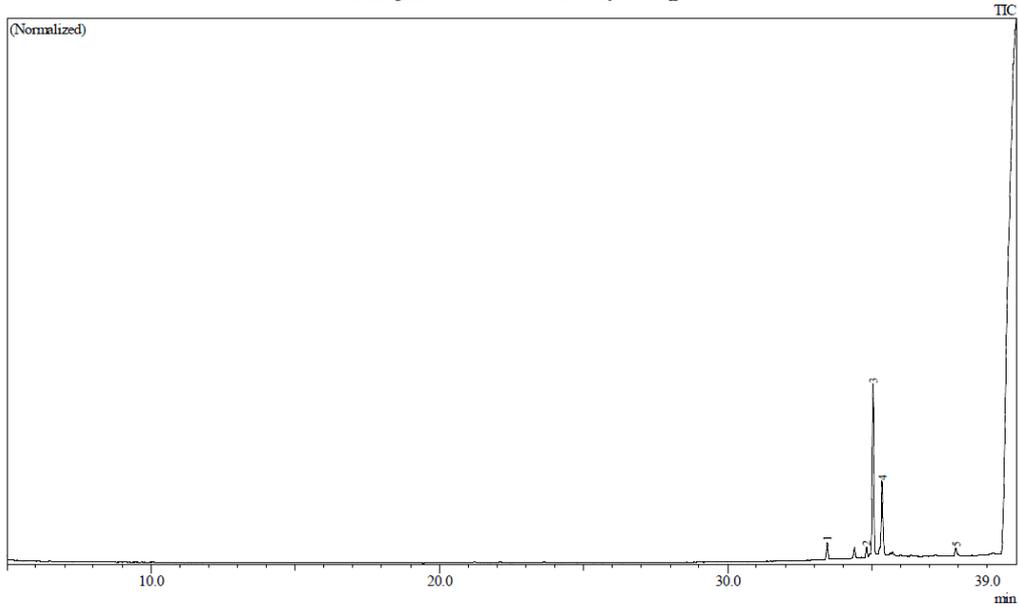
## Lampiran 22. Spektrum GC-MS senyawa F

### DATA REPORT GCMS-QP2010 ULTRA SHIMADZU

Analyzed by : Admin  
 Analyzed : 5/10/2020 7:49:17 PM  
 Sample Type : Unknown  
 Level # : 1  
 Sample Name : IS3  
 Sample ID :  
 IS Amount : [1]=1  
 Sample Amount : 1

#### Sample Information

Chromatogram IS3 C:\GCMSsolution\Data\Project1\IS3.qgd



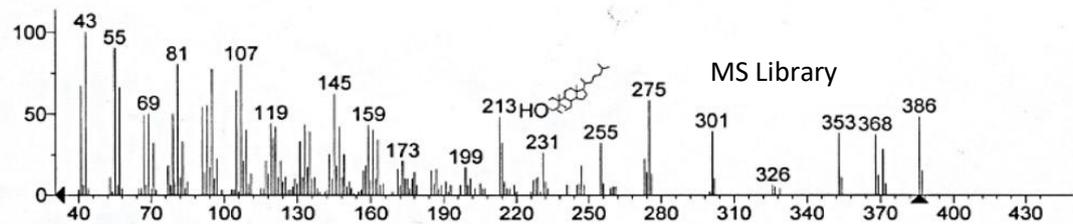
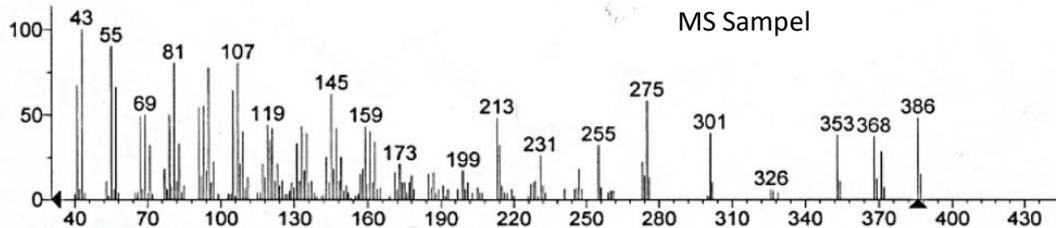
Peak#	R.Time	Area	Area%	A/H Name
1	33.441	1528730	4.63	3.28 Cholesteryl formate
2	34.810	973272	2.94	3.40 CHOLEST-5-EN-3-YLACETATE
3	35.037	20022963	60.58	4.09 Cholesterol
4	35.353	9621702	29.11	4.59 CHOLEST-5-EN-3-YLACETATE
5	37.910	906601	2.74	4.46 3-Dehydroxysterol
		33053268	100.00	

<< target >>

Line#:3 R.Time:35.033(Scan#:3605) MassPeaks:464

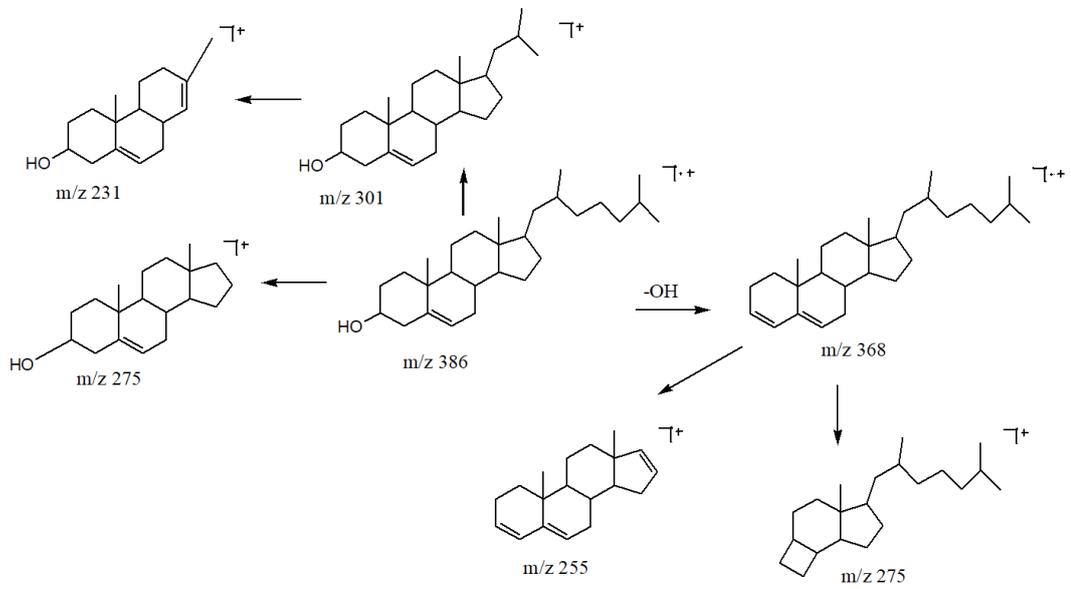
RawMode:Averaged 35.025-35.042(3604-3606) BasePeak:366.25(384877)

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

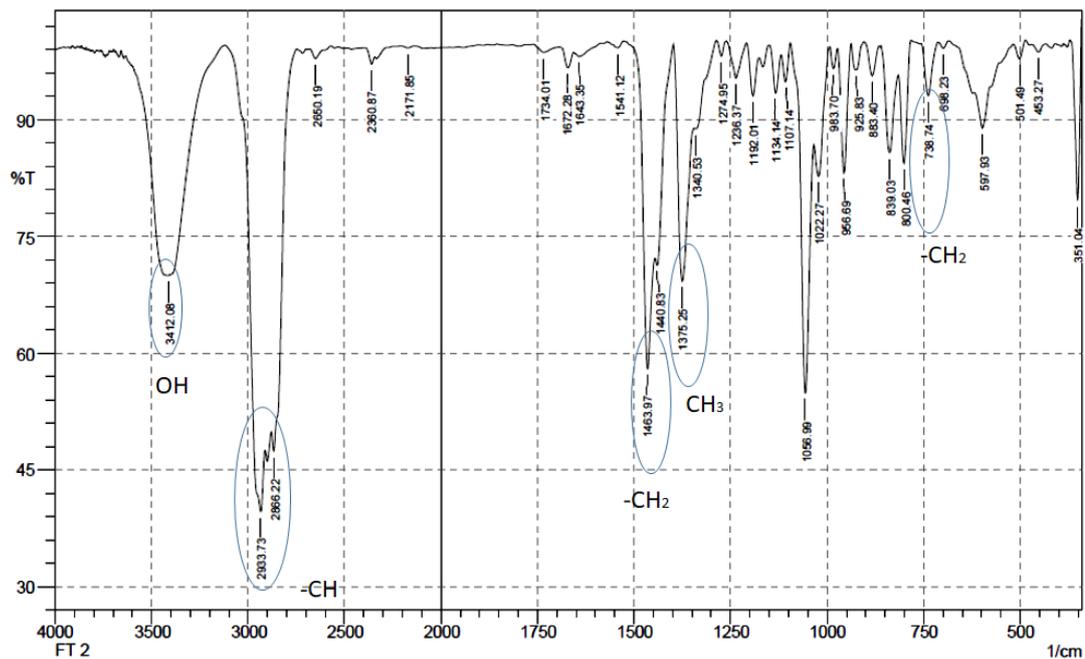


Hit 1. MW: 386 C27H46O (mainlib) Cholesterol

Lampiran 23. Fragmentasi senyawa F

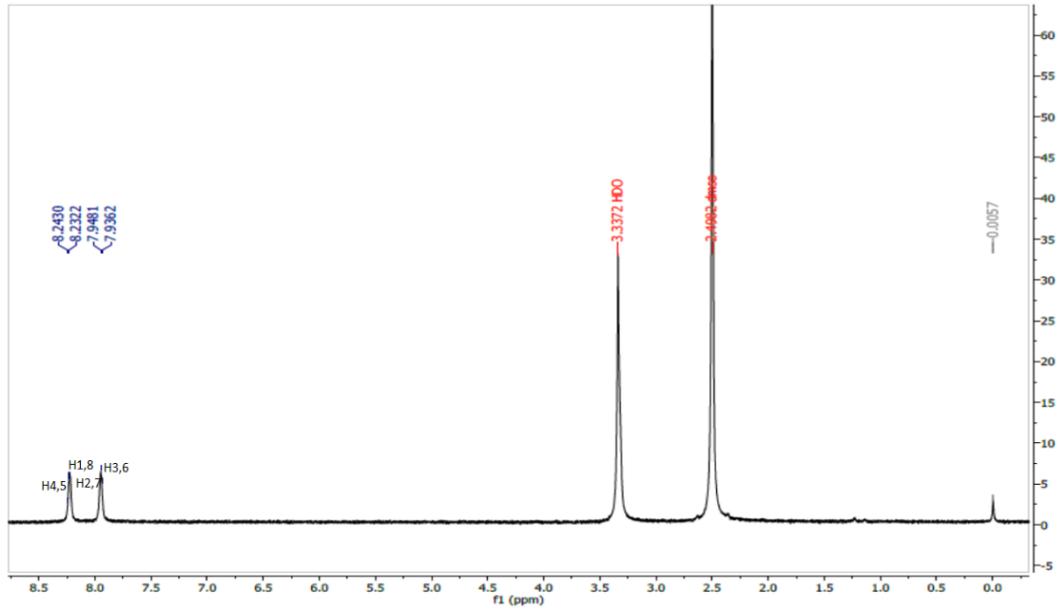


Lampiran 24. Spektrum FT IR senyawa F

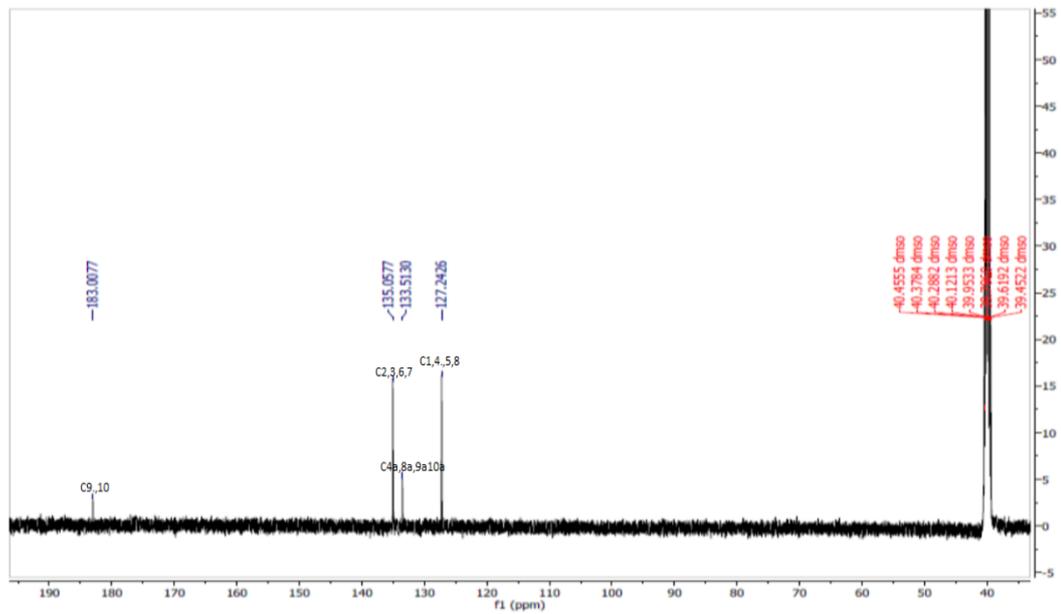


Lampiran 25. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$ -NMR senyawa **G**

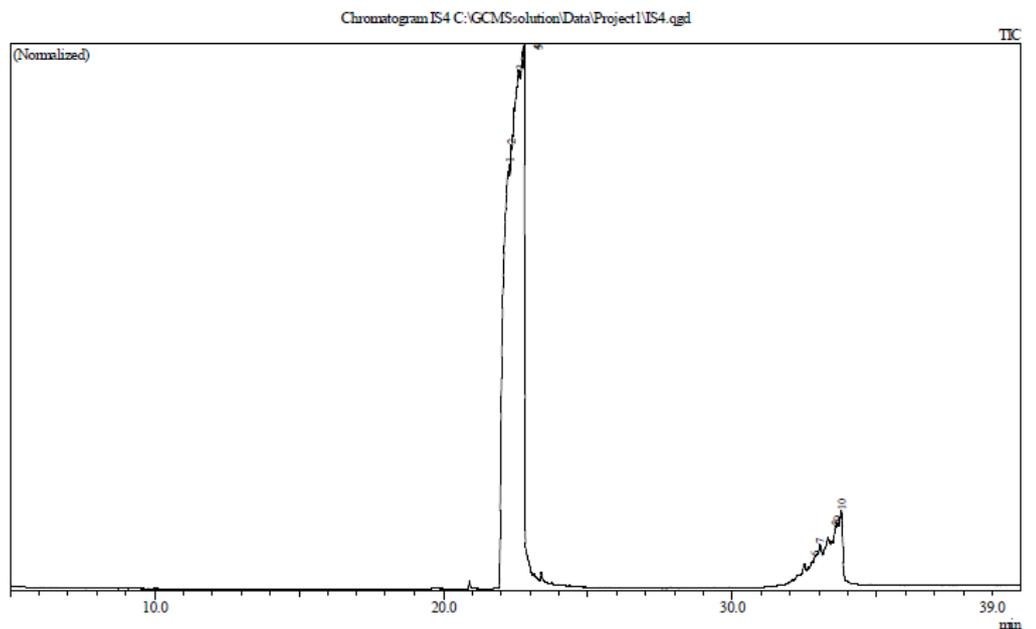
$^1\text{H}$ -NMR (DMSO, 500 MHz)



$^{13}\text{C}$ -NMR (DMSO, 125 MHz)



## Lampiran 26. Spektrum GCMS senyawa G



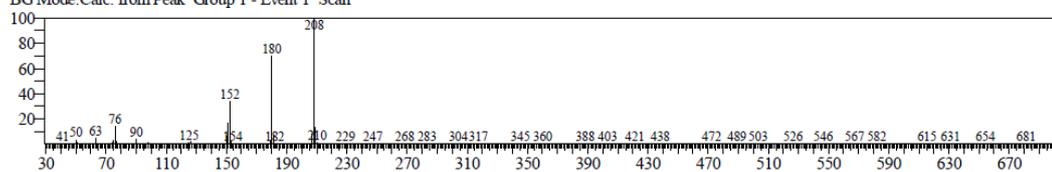
Peak Report TIC

Peak#	R. Time	Area	Area%	A/H Name
1	22.285	230248591	30.24	16.44 9,10-Anthracenedione
2	22.342	94598613	12.43	6.47 9,10-Anthracenedione
3	22.649	262007498	34.42	15.43 9,10-Anthracenedione
4	22.749	95287704	12.52	5.38 ANTHRAQUINONE-1-CARBOXYLIC ACID
5	22.804	52893953	6.95	2.97 9,10-Anthracenedione
6	32.867	1580759	0.21	9.69 9-Oxo-9H-5-AZA-NAPHTHO[3,2,1-DE]ANTHRACENE-8-CARBONITRILE
7	33.050	2312712	0.30	5.60 9-Oxo-9H-5-aza-naphtho[3,2,1-de]anthracene-8-carbonitrile
8	33.575	3958354	0.52	4.93 2-ANTHRACENEACETIC ACID, 4,5,10-TRIMETHOXY-3-(METHOXYCARBONY
9	33.642	6042194	0.79	5.34 2-ANTHRACENEACETIC ACID, 4,5,10-TRIMETHOXY-3-(METHOXYCARBONY
10	33.776	12369856	1.62	6.46 DI(1'H-CYCLOPROPA[B]NAPHTHALEN-1'-YL)-P-TOLYLMETHANOL
		761300234	100.00	

<< Target >>

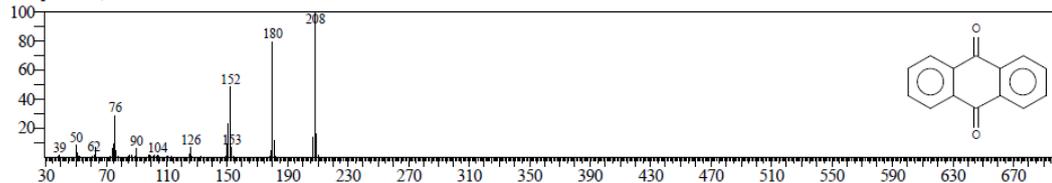
Line#1 R. Time:22.283(Scan#:2075) MassPeaks:328  
 RawMode:Averaged 22.275-22.292(2074-2076) BasePeak:208.00(397605)  
 BG Mode:Calc. from Peak Group 1 - Event 1 Scan

MS Sampel

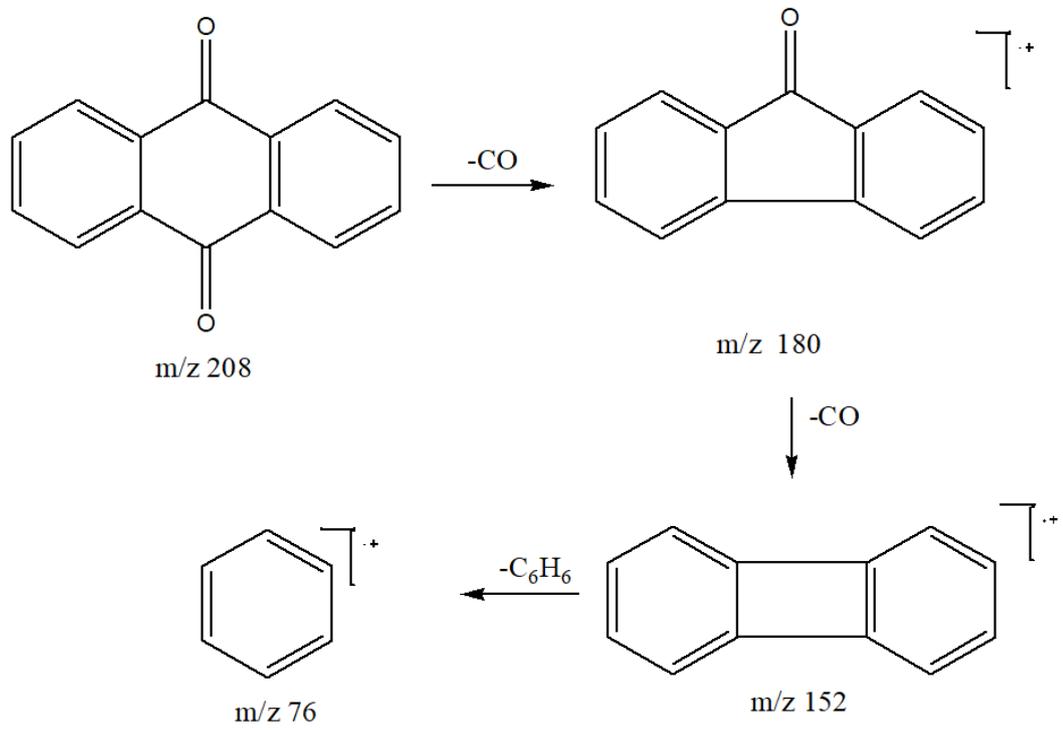


Hit#1 Entry:17212 Library:NIST27.LIB  
 SI:92 Formula:C14H8O2 CAS:84-65-1 MolWeight:208 RetIndex:0  
 CompName:9,10-Anthracenedione

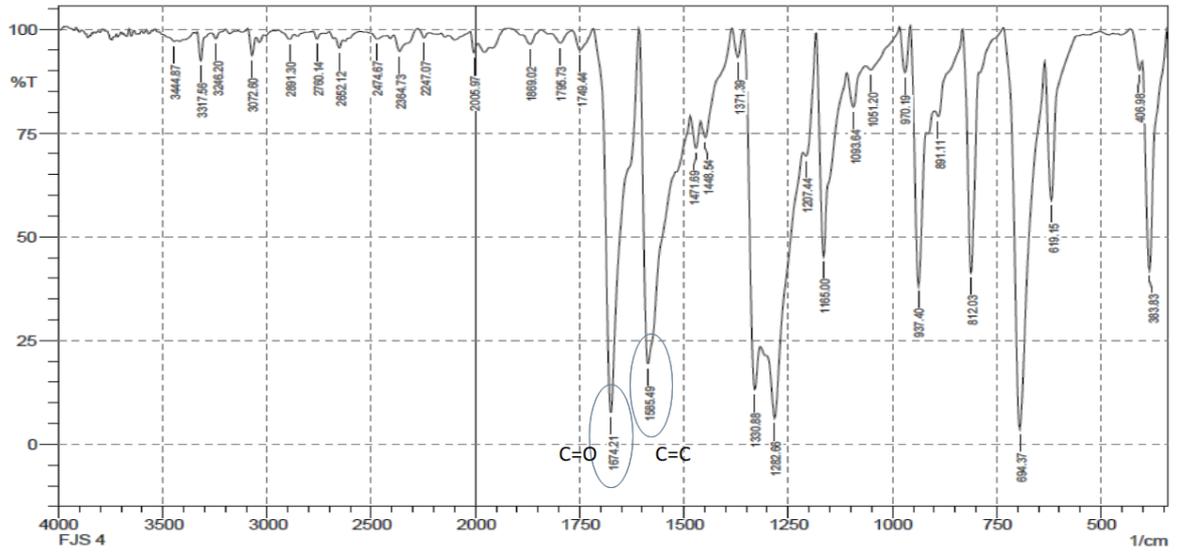
MS Library



Lampiran 27. Fragmentasi senyawa **G**

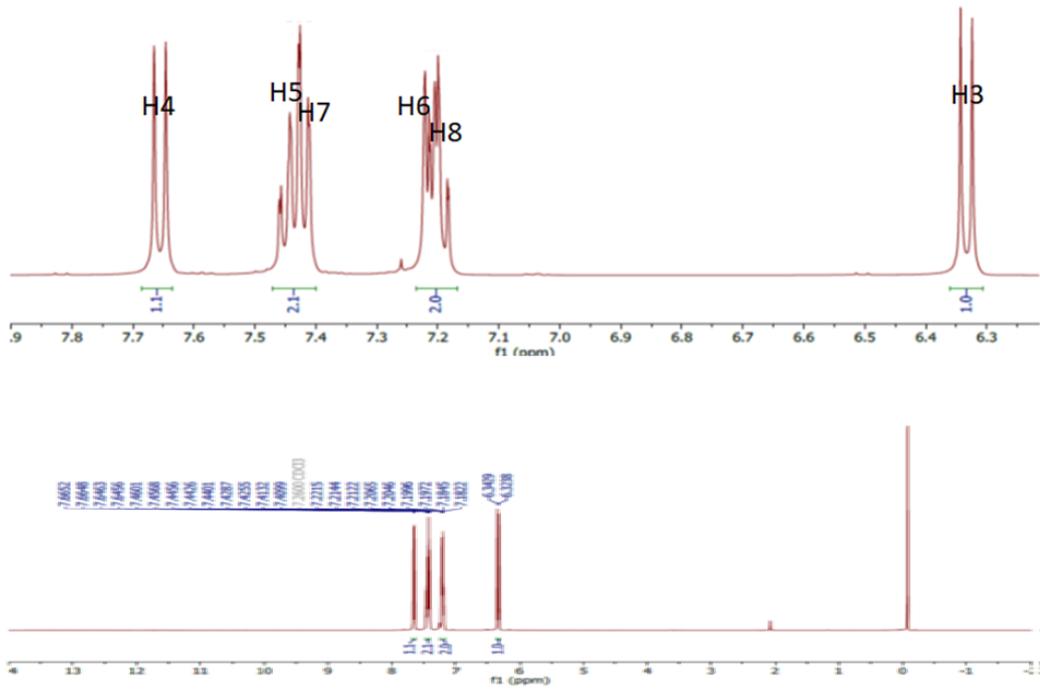


Lampiran 28. Spektrum FT IR senyawa **G**

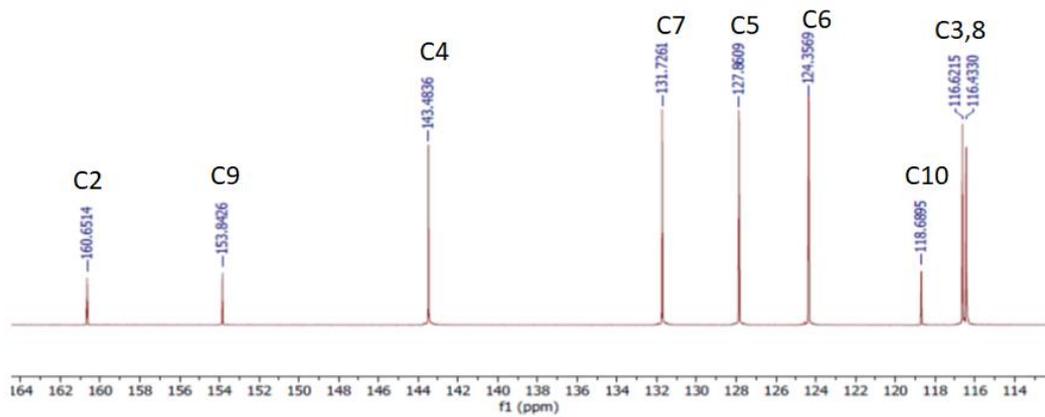


Lampiran 29. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$ -NMR senyawa **H**

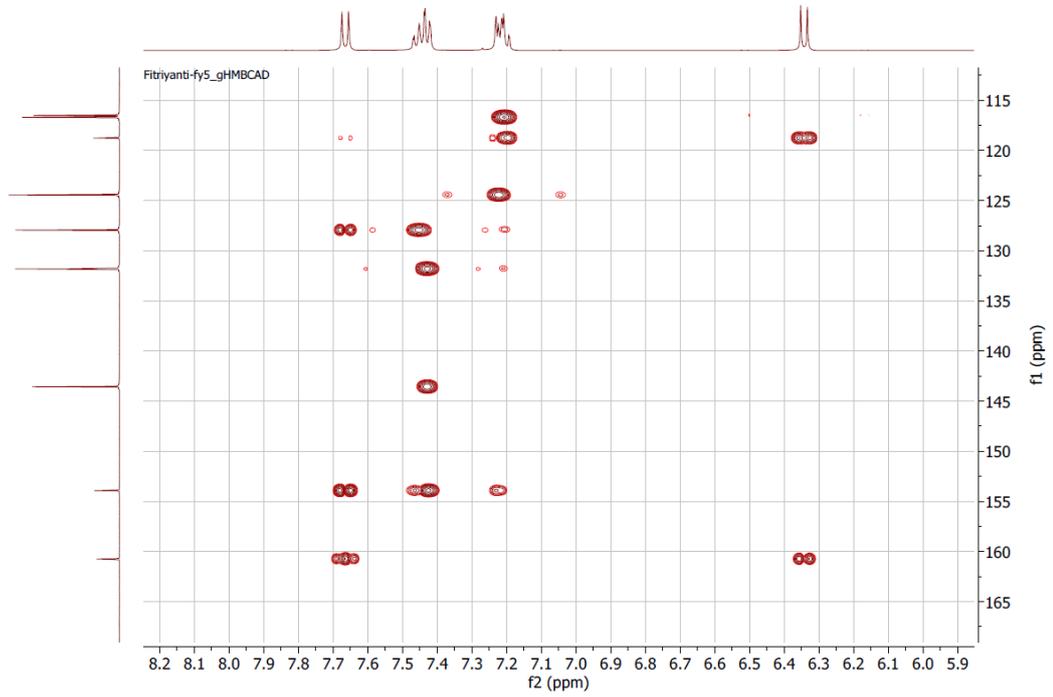
Spektrum  $^1\text{H}$  NMR



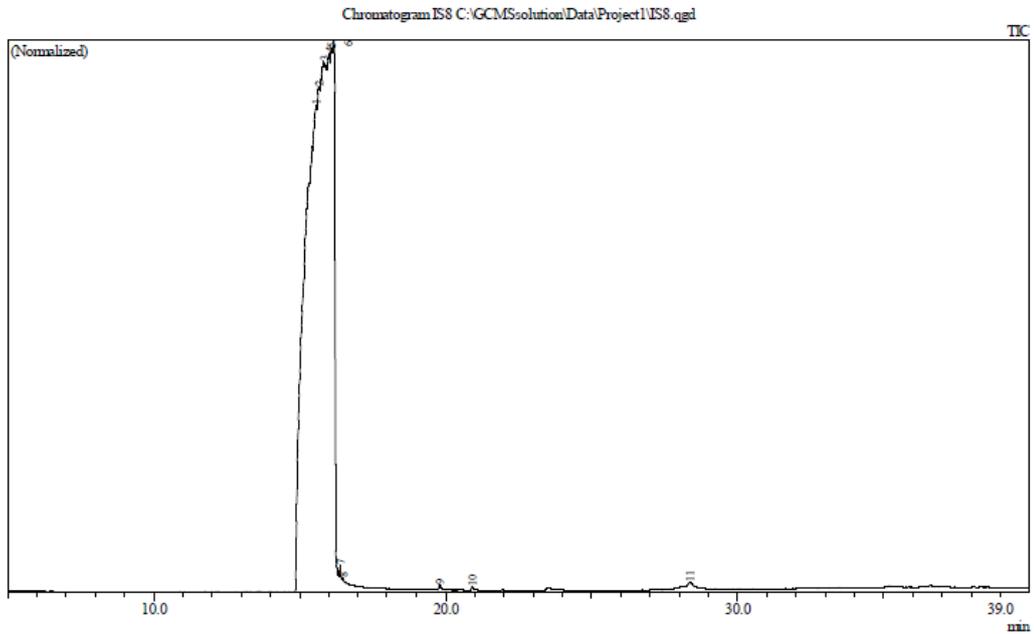
Spektrum  $^{13}\text{C}$ -NMR



### Lampiran 30. Spektrum HMBC senyawa H



## Lampiran 31. Spektrum GCMS senyawa H

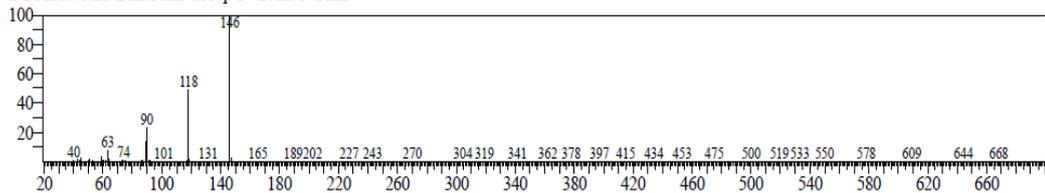


Peak#	R.Time	Area	Area%	A/H	Name
1	15.558	815620538	41.82	29.82	2H-1-Benzopyran-2-one
2	15.655	195632894	10.03	6.89	2H-1-Benzopyran-2-one
3	15.833	439891643	22.55	14.77	2H-1-BENZOPYRAN-2-ONE, 3,4-DIHYDRO-
4	16.012	164356078	8.43	5.44	2H-1-BENZOPYRAN-2-ONE
5	16.087	150877496	7.74	4.95	2H-1-BENZOPYRAN-2-ONE
6	16.171	178478007	9.15	5.77	2H-1-BENZOPYRAN-2-ONE, 3,4-DIHYDRO-
7	16.390	1256508	0.06	1.81	2H-1-Benzopyran-2-one, 3-methyl-
8	16.492	241389	0.01	1.85	2H-1-Benzopyran-2-one, 6-methyl-
9	19.792	1326543	0.07	4.82	DISALICYCLALDEHYDE
10	20.904	1035229	0.05	4.70	HEXADECANOIC ACID, METHYL ESTER
11	28.374	1809749	0.09	8.66	Cholesterol, 7-oxo-
		1950526074	100.00		

<< Target >>

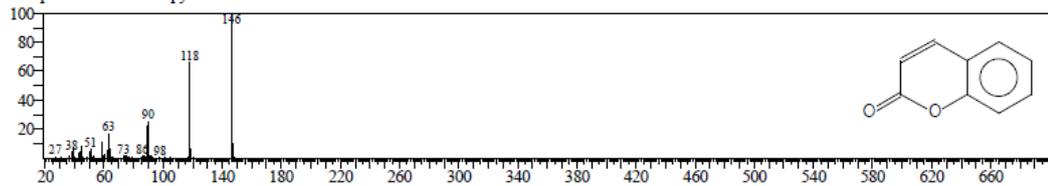
Line#1 R.Time:15.558(Scan#:1268) MassPeaks:358  
 RawMode:Averaged 15.550-15.567(1267-1269) BasePeak:146.05(552277)  
 BG Mode:Calc. from Peak Group 1 - Event 1 Scan

MS Sampel

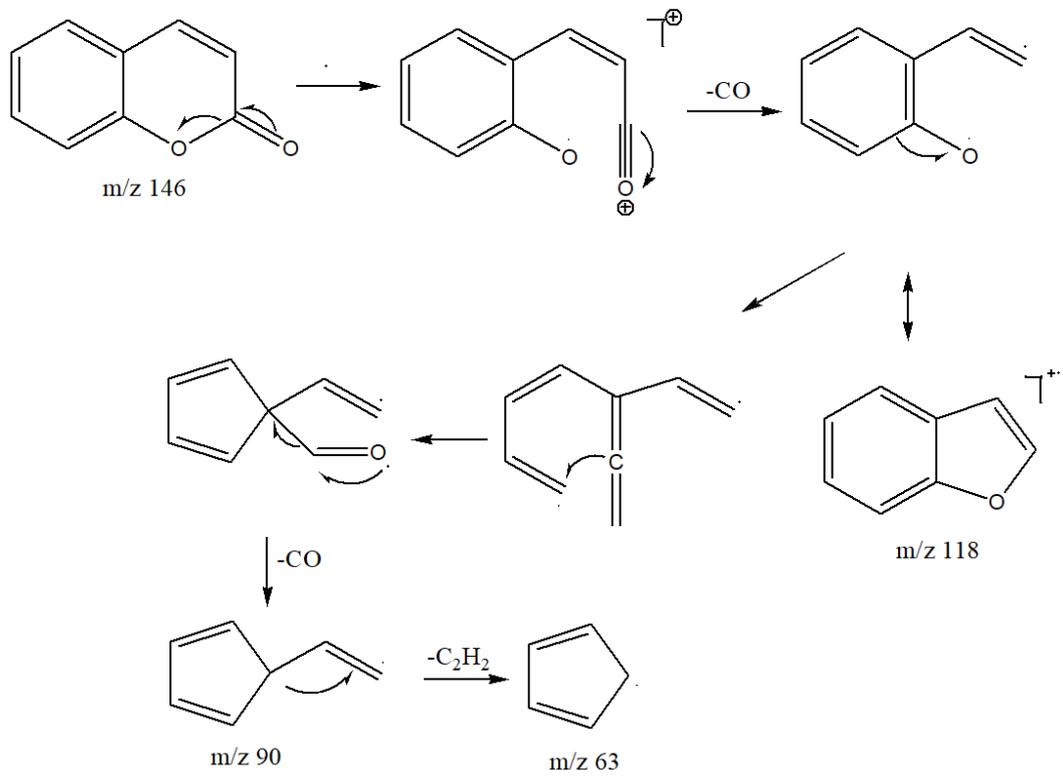


Hit#1 Entry:7851 Library:NIST27.LIB  
 SI:90 Formula:C9H6O2 CAS:91-64-5 MolWeight:146 RetIndex:0  
 CompName:2H-1-Benzopyran-2-one

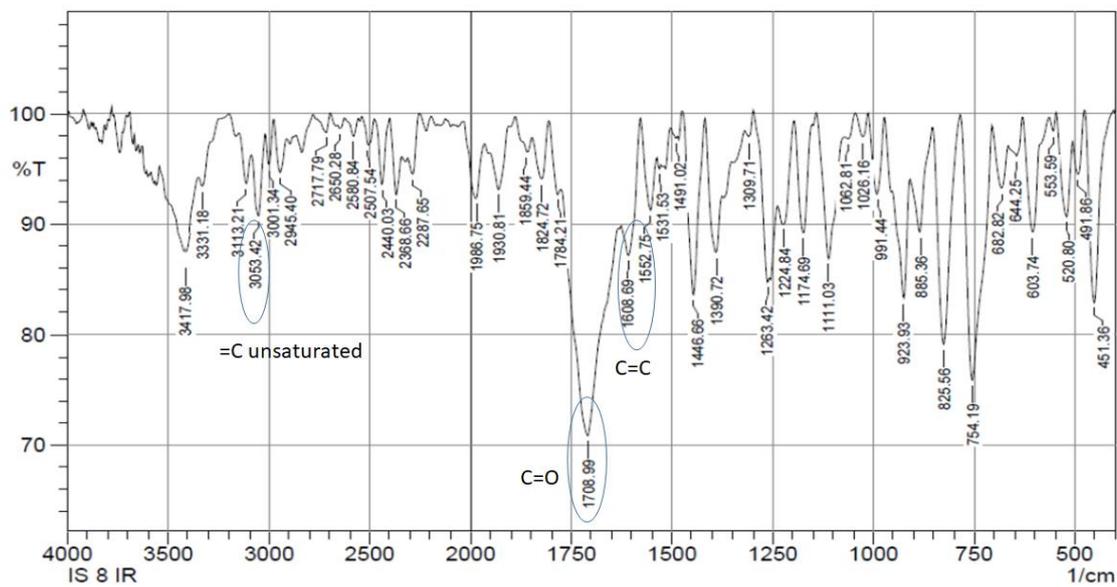
MS Library



Lampiran 32. Fragmentasi senyawa H

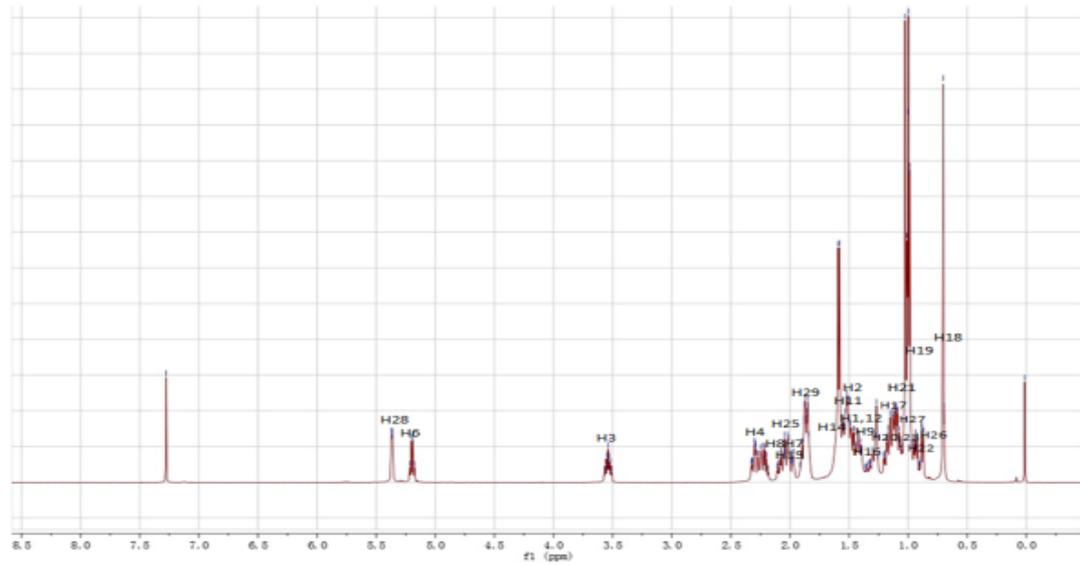


Lampiran 33. Spektrum FT IR senyawa H

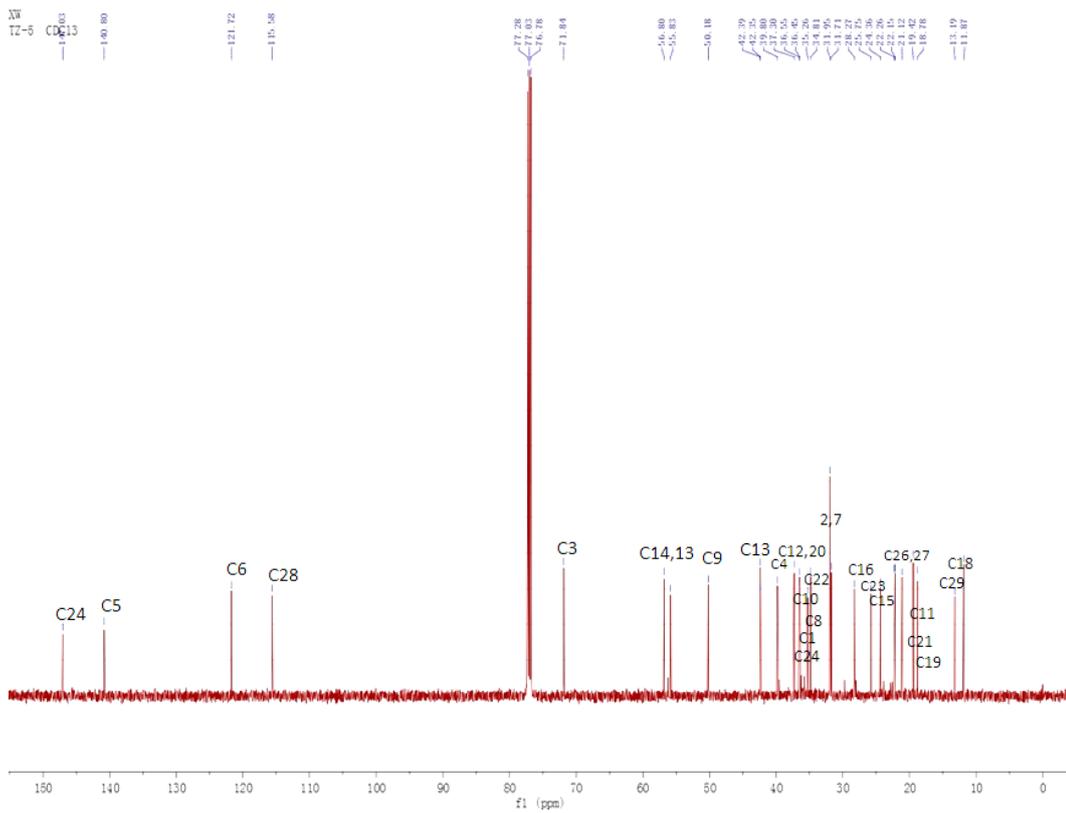


Lampiran 34. Spektrum  $^1\text{H}$  dan  $^{13}\text{C}$ -NMR senyawa fukosterol

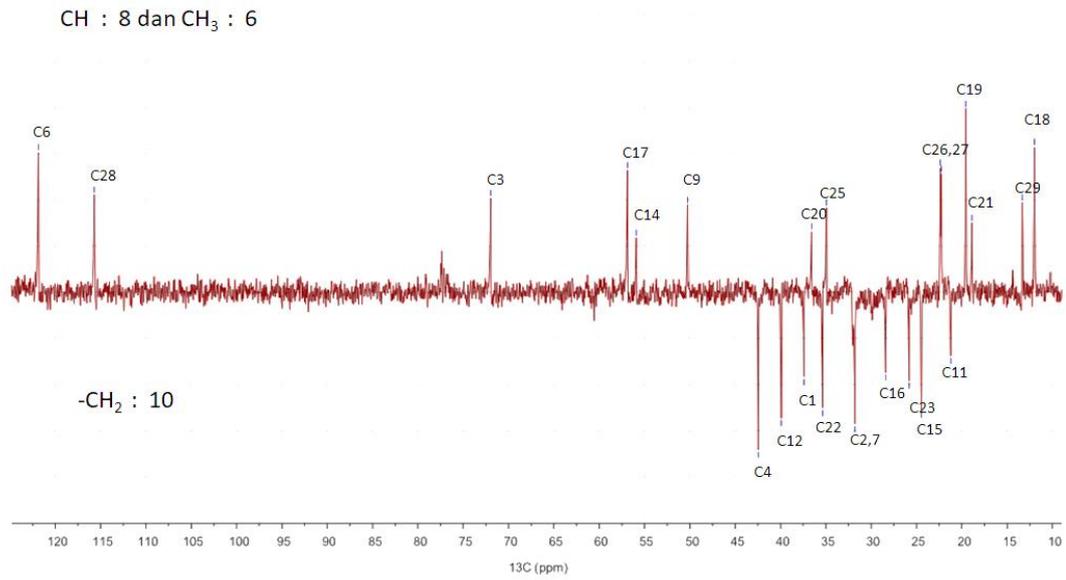
Spektrum  $^1\text{H}$  NMR



Spektrum  $^{13}\text{C}$  NMR

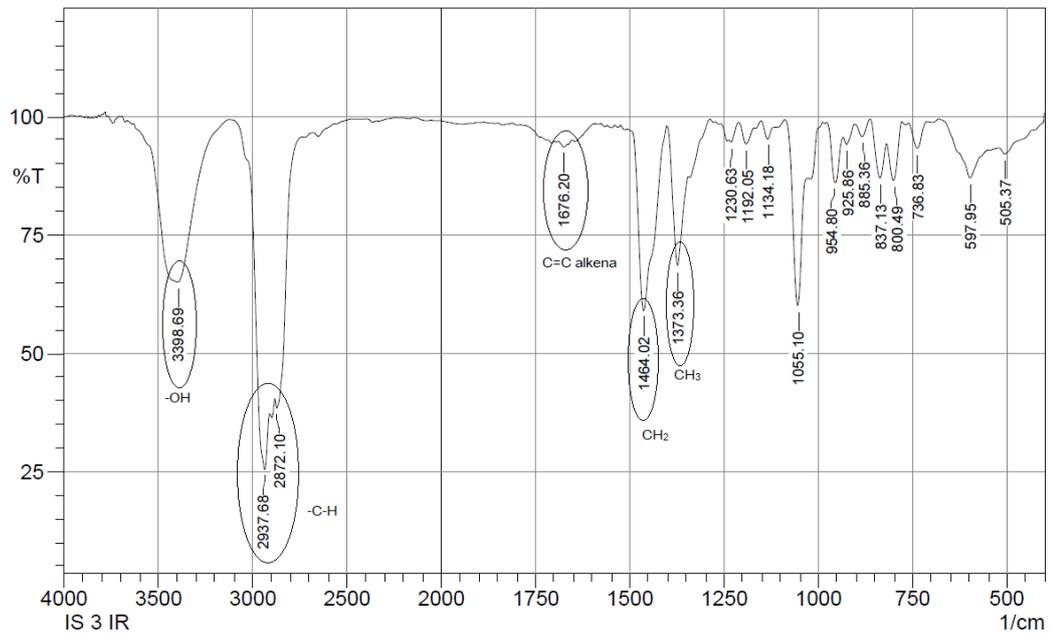


### Lampiran 35. Spektrum DEPT 135 NMR senyawa fukosterol



Lampiran 36. Spektrum FT-IR senyawa fukosterol

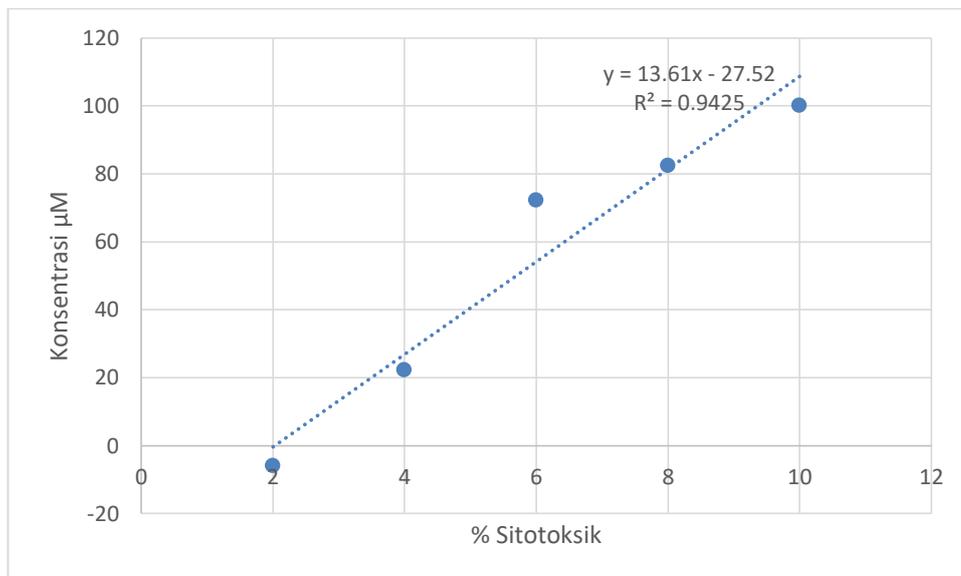
SHIMADZU



Lampiran 37. Hasil perhitungan  $IC_{50}$  Isolat terhadap sel paru-paru H-460

Senyawa 1:

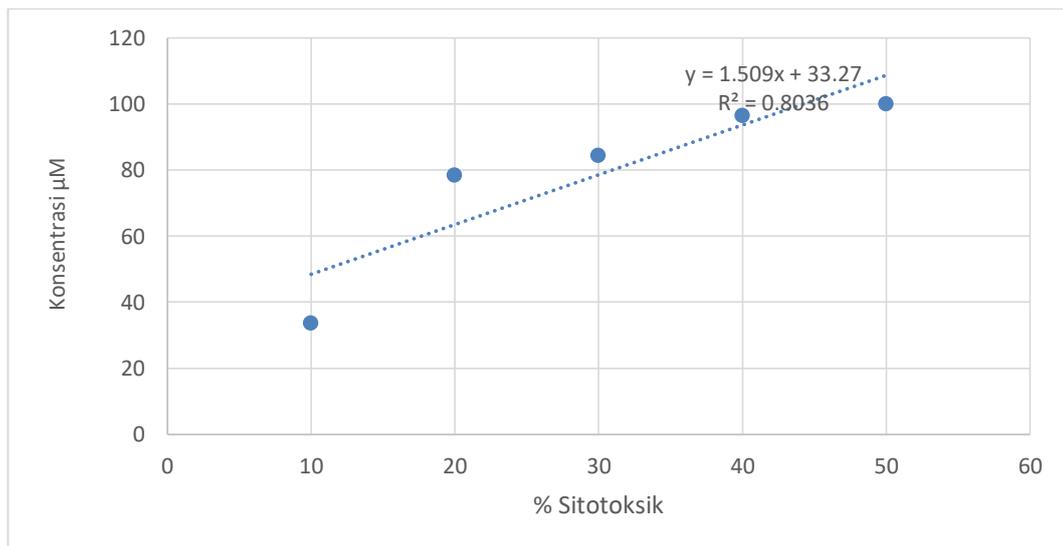
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
2	-6
4	22,2
6	72,1
8	82,4
10	100



$IC_{50} = 5,69 \mu\text{M}$

Senyawa 2:

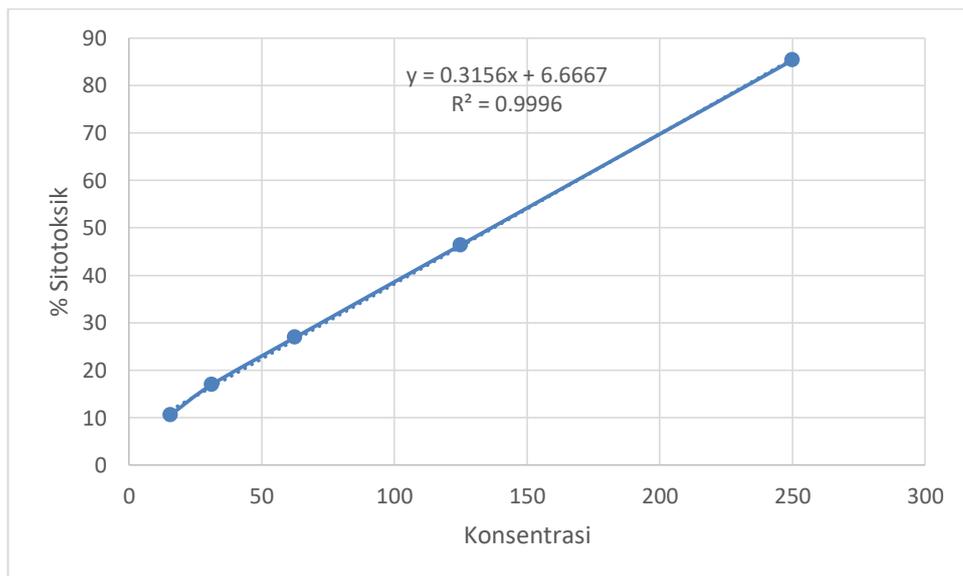
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
10	33,6
20	78,3
30	84,4
40	96,4
50	100



$\text{IC}_{50} = 11,08 \mu\text{M}$

Senyawa 3:

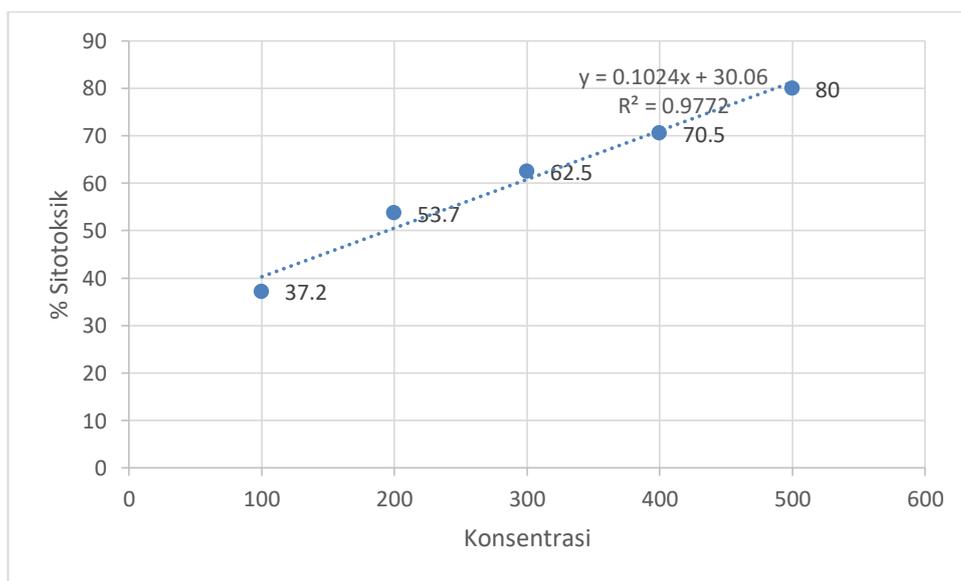
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
250	85,3
125	46,4
62.5	26,9
31.25	17,0
15.625	10,6



$\text{IC}_{50} = 137,31 \mu\text{M}$

Senyawa 4:

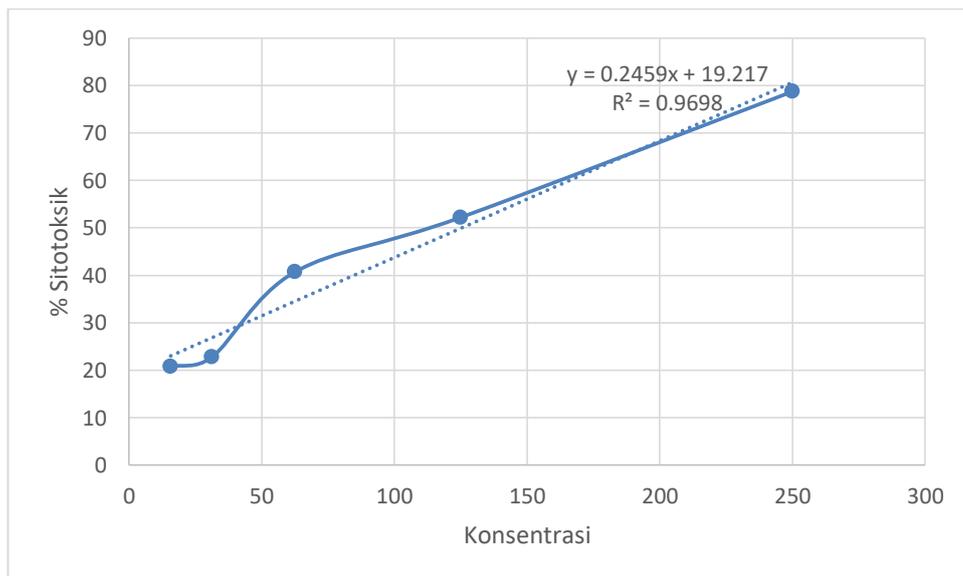
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
100	37,2
200	53,7
300	62,5
400	70,5
500	80,0



$\text{IC}_{50} = 194,73 \mu\text{M}$

Senyawa 5:

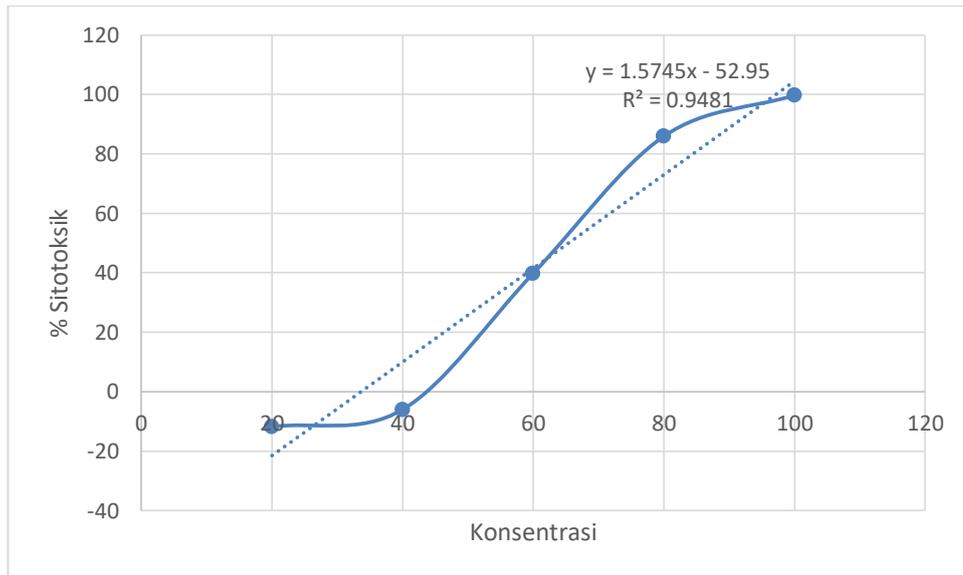
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
15.625	20,8
31.25	22,8
62.5	40,7
125	52,2
250	78,7



$\text{IC}_{50} = 125,18 \mu\text{M}$

Senyawa 6:

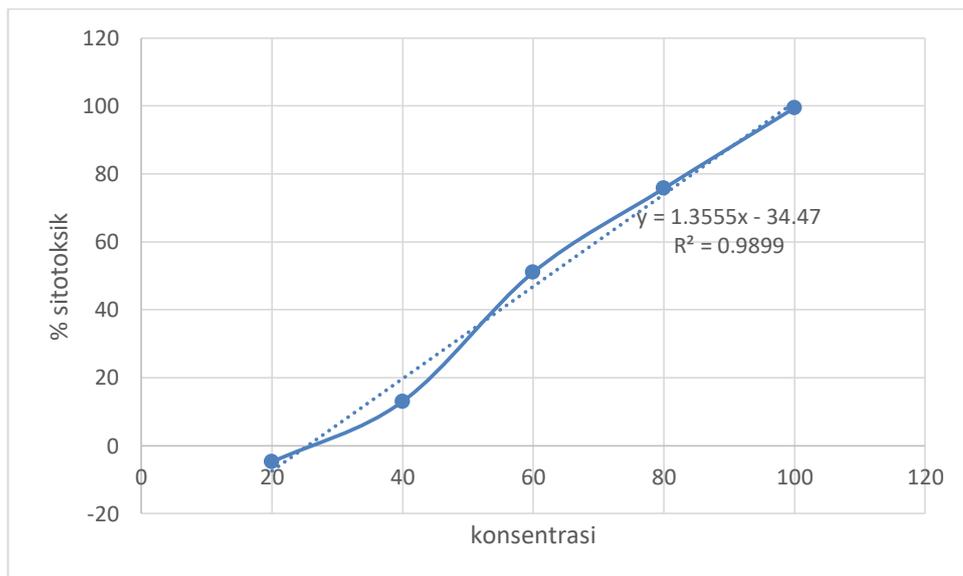
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
100	99,7
80	85,9
60	39,8
40	-6
20	-11,8



$\text{IC}_{50} = 65,38 \mu\text{M}$

Senyawa 7:

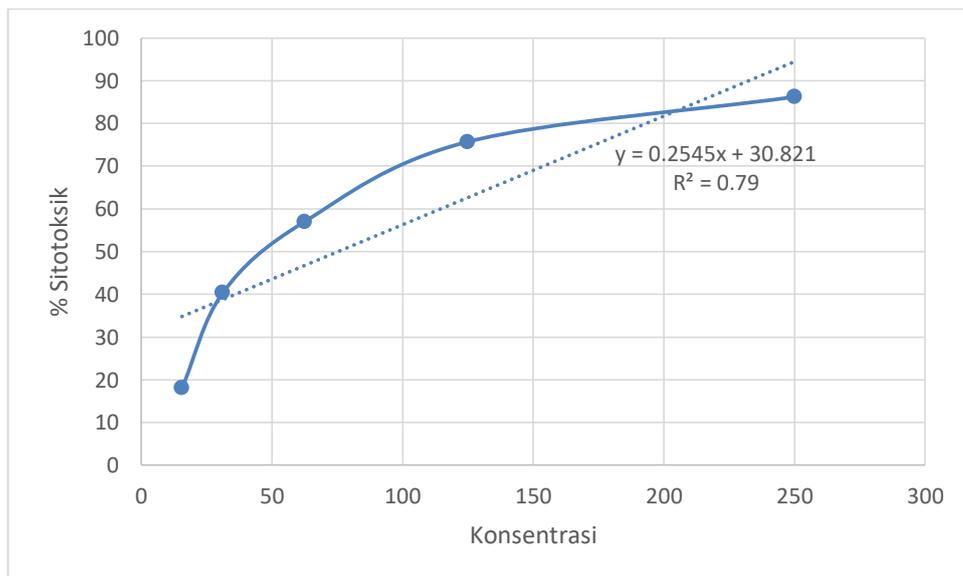
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
100	99,4
80	75,7
60	51,0
40	13,0
20	-4,8



$\text{IC}_{50} = 62,32 \mu\text{M}$

Senyawa 8:

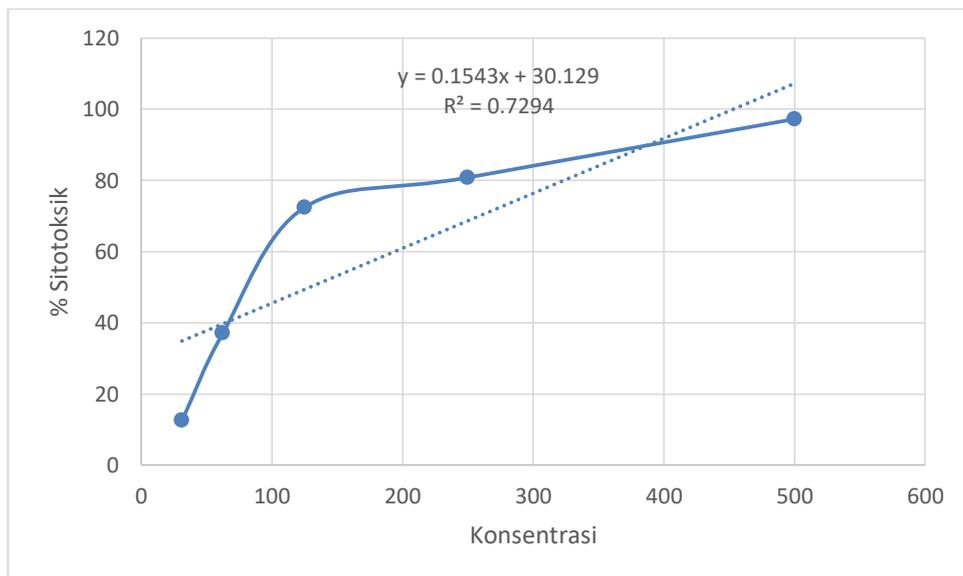
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
250	86,2
125	75,7
62.5	57,0
31.25	40,4
15.625	18,1



$\text{IC}_{50} = 75,36 \mu\text{M}$

Senyawa 1 (Fukosterol) terhadap sel H-460

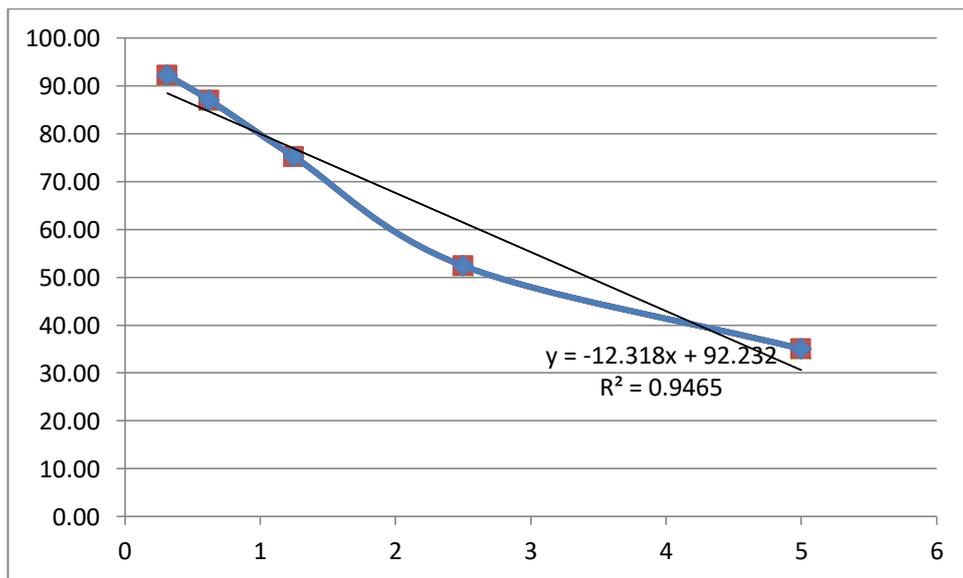
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	97,2
250	80,8
125	72,4
62.5	37,1
31.25	12,6



$\text{IC}_{50} = 128,78 \mu\text{M}$

Kontrol positif dxorubicin terhadap sel H-460

Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
5	35,03
2,5	52,39
1,25	75,19
0,625	86,98
0,3125	92,24

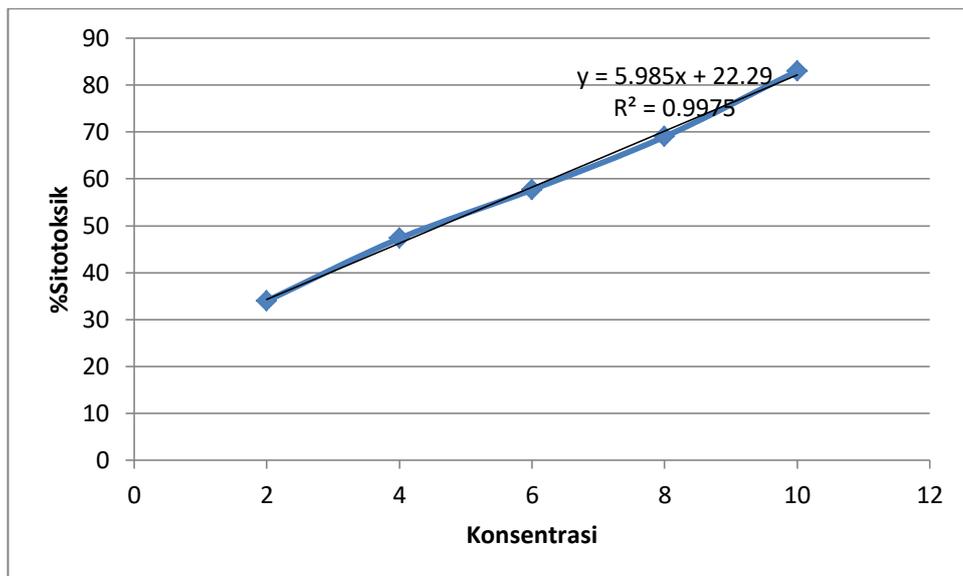


$\text{IC}_{50} = 3,42 \mu\text{M}$

Lampiran 38. Hasil perhitungan  $IC_{50}$  isolat terhadap sel MCF-7

Senyawa 1

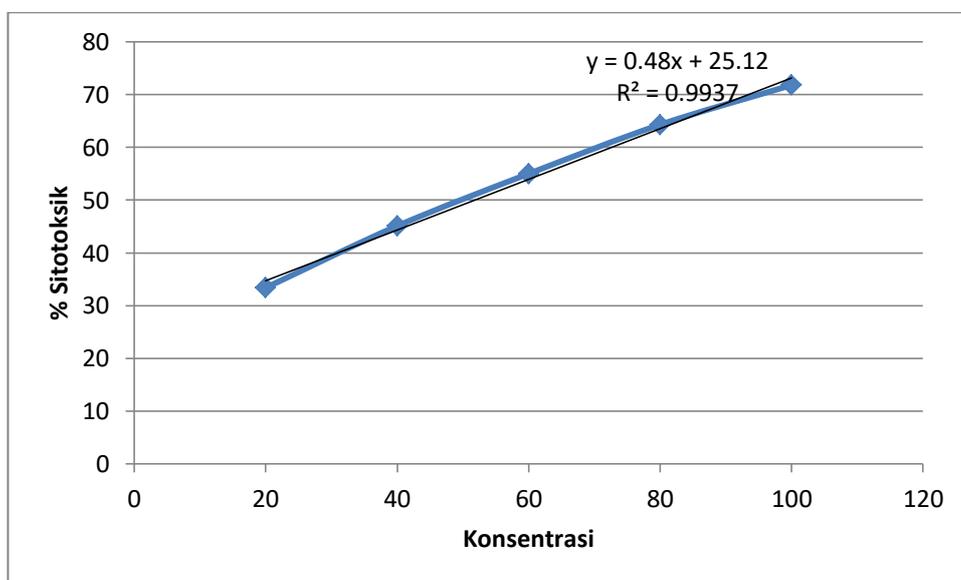
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
2	34,0
4	47,3
6	57,7
8	69,0
10	83,0



$IC_{50} = 4,63 \mu\text{M}$

## Senyawa 2

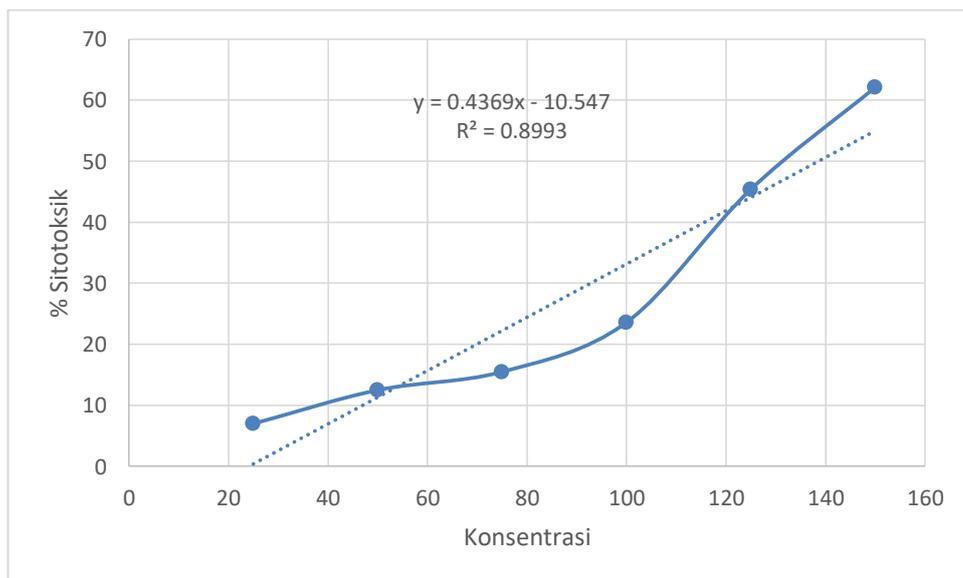
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
20	33,4
40	45,1
60	55,0
80	64,3
100	71,8



$\text{IC}_{50} = 51,83 \mu\text{M}$

Senyawa 3:

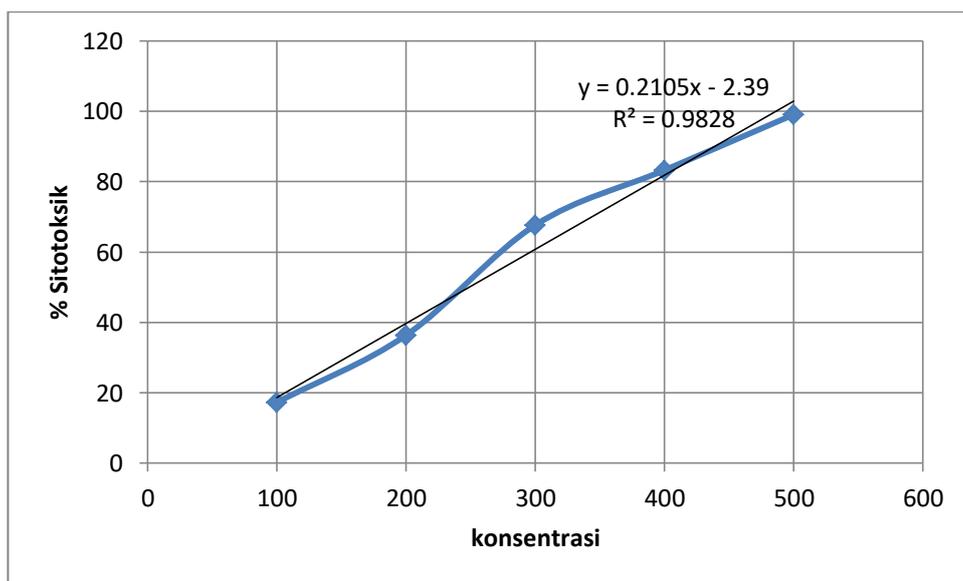
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
150	62,1
125	45,4
100	23,6
75	15,5
50	12,5
25	7,0



$\text{IC}_{50} = 138,58 \mu\text{M}$

Senyawa 4:

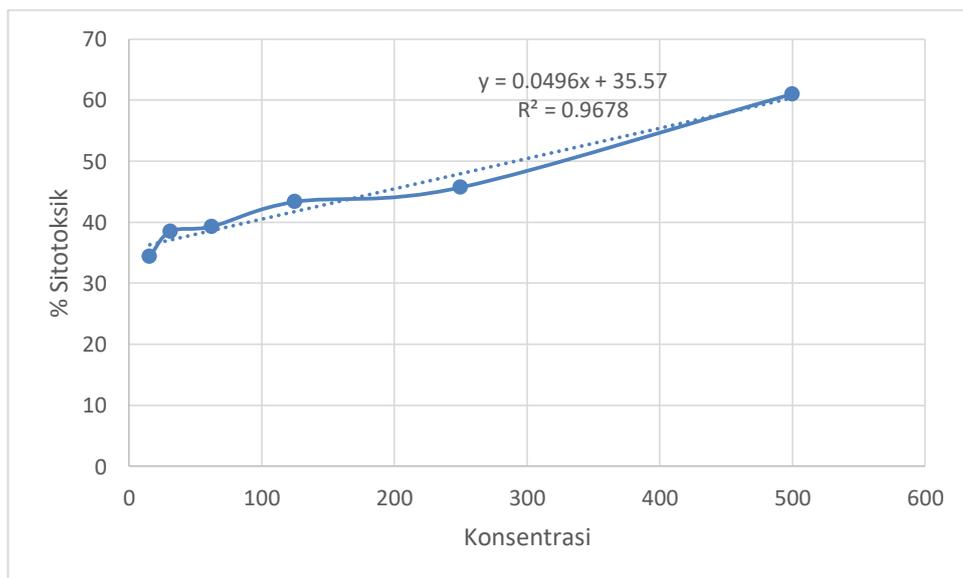
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
100	17,3
200	36,4
300	67,7
400	83,3
500	99,1



$\text{IC}_{50} = 248,88 \mu\text{M}$

Senyawa 5:

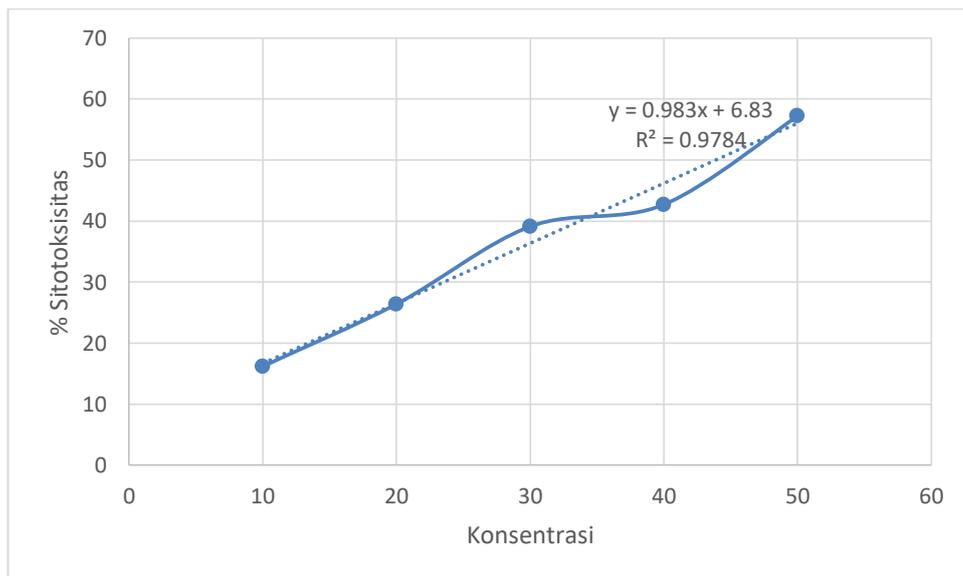
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	61,0
250	45,7
125	43,33
62,5	39,3
31,25	38,5
15,62	34,4



$\text{IC}_{50} = 290,92 \mu\text{M}$

Senyawa 6:

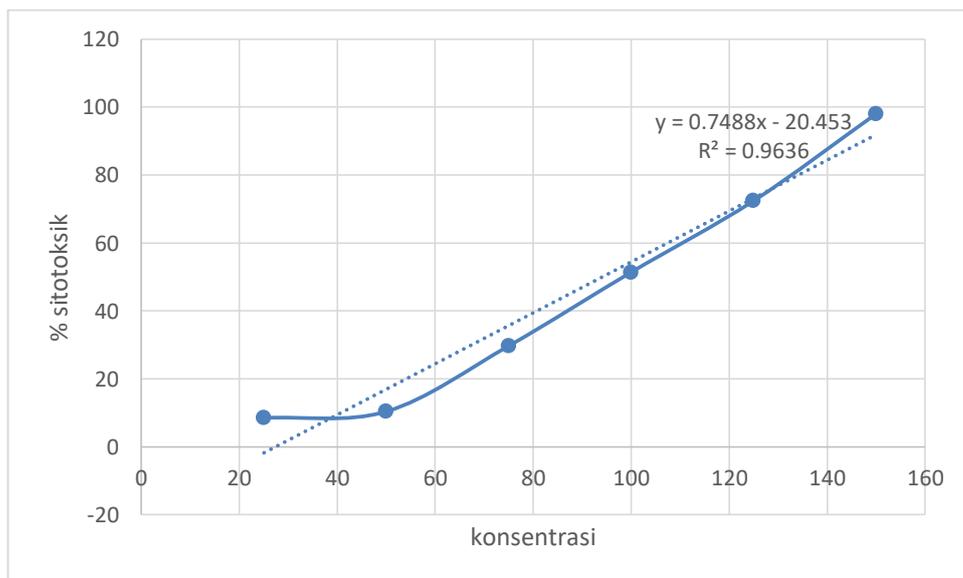
Konsentrasi ( $\mu\text{M}$ )	% sitotoksik
10	16,2
20	26,4
30	39,1
40	42,7
50	57,2



$\text{IC}_{50} = 43,91 \mu\text{M}$

Senyawa 7:

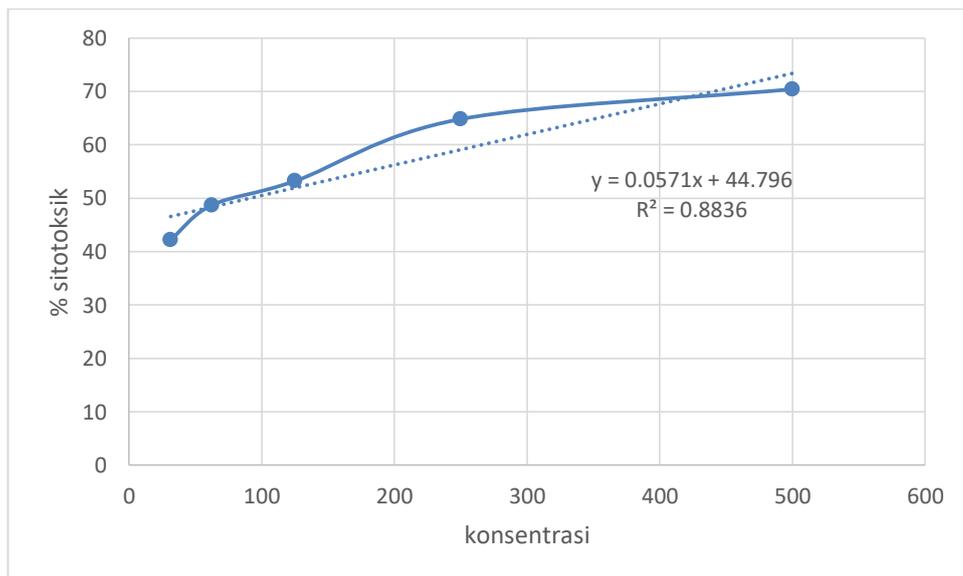
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
150	98,0
125	72,4
100	51,4
75	29,7
50	10,4
25	8,5



$\text{IC}_{50} = 94,08 \mu\text{M}$

Senyawa 8:

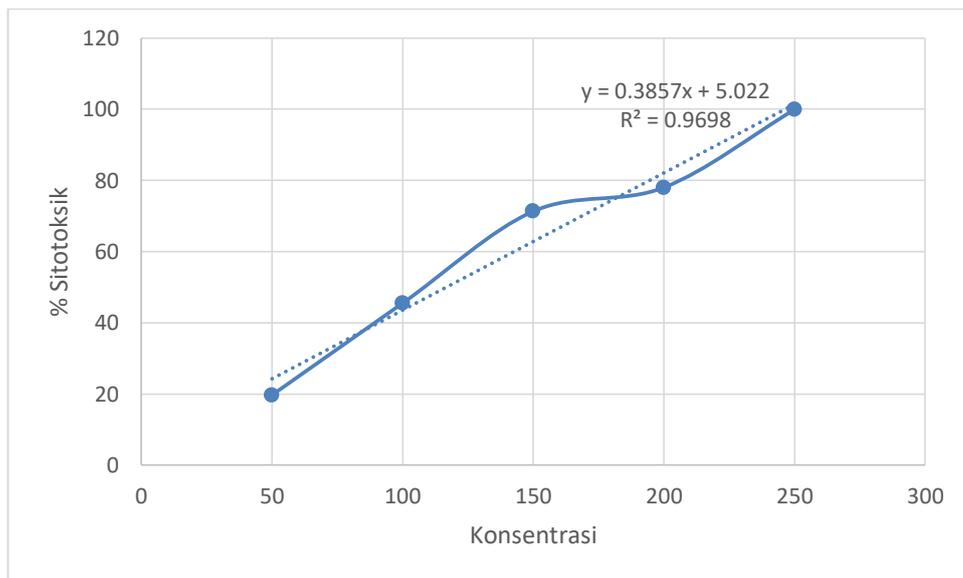
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	70,4
250	64,8
125	53,2
62,5	48,7
31,25	42,2



$\text{IC}_{50} = 91,13 \mu\text{M}$

Senyawa 1 (Fukosterol) terhadap sel MCF-7

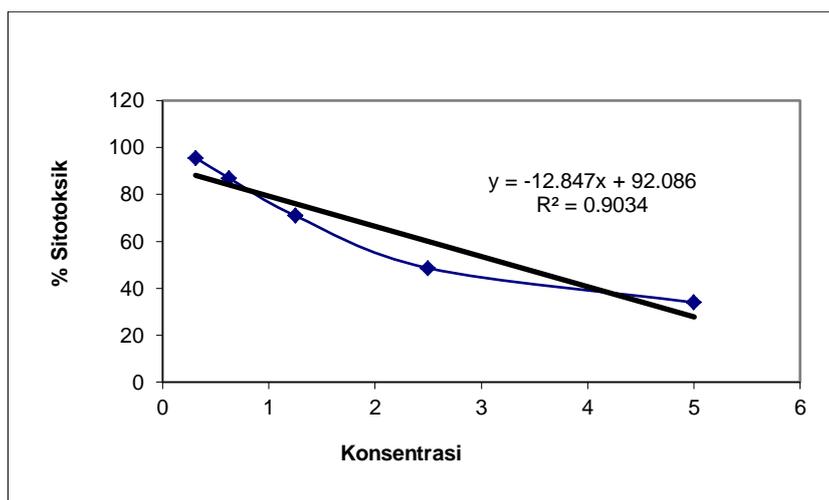
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
250	99,87
200	78,0
150	71,3
100	45,5
50	19,7



$\text{IC}_{50} = 116,61 \mu\text{M}$

Kontrol positif dxorubicin terhadap sel MCF-7

Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
5	33,98
2,5	48,62
1,25	70,91
0,625	86,95
0,3125	95,52

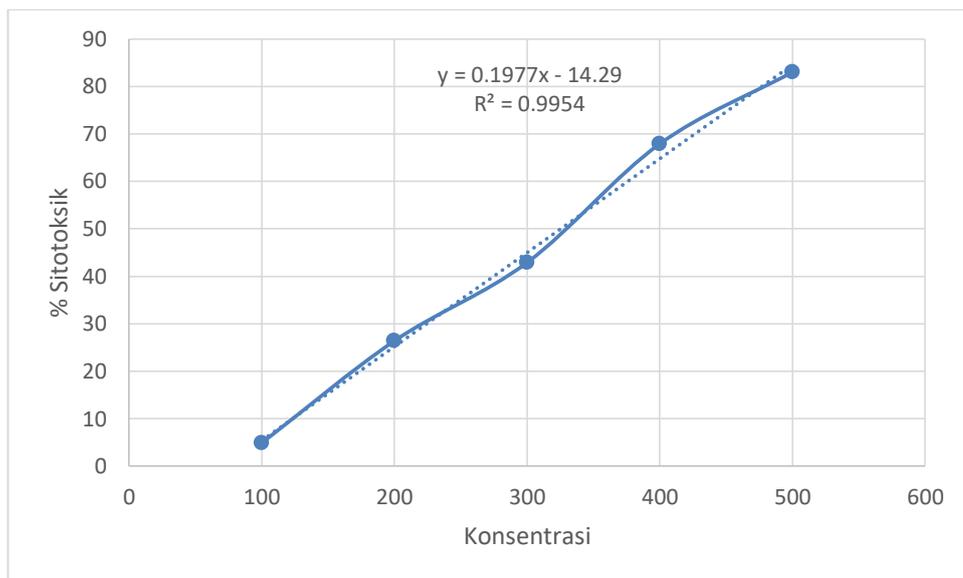


$\text{IC}_{50} = 3,27 \mu\text{M}$

Lampiran 39. Hasil perhitungan  $IC_{50}$  isolat terhadap sel vero

Senyawa A

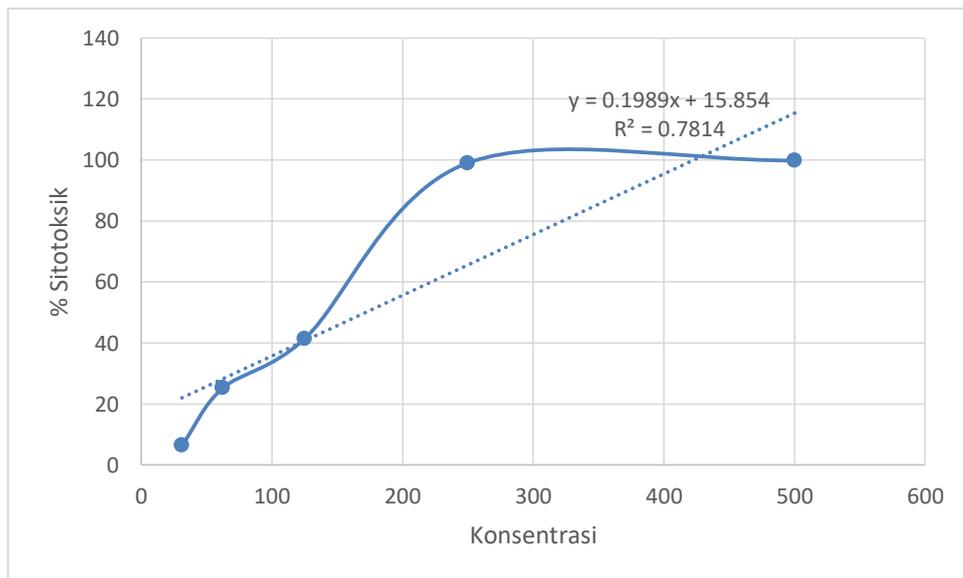
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	83,0
400	67,9
300	42,9
200	26,4
100	4,9



$IC_{50} = 325,19 \mu\text{M}$

## Senyawa B

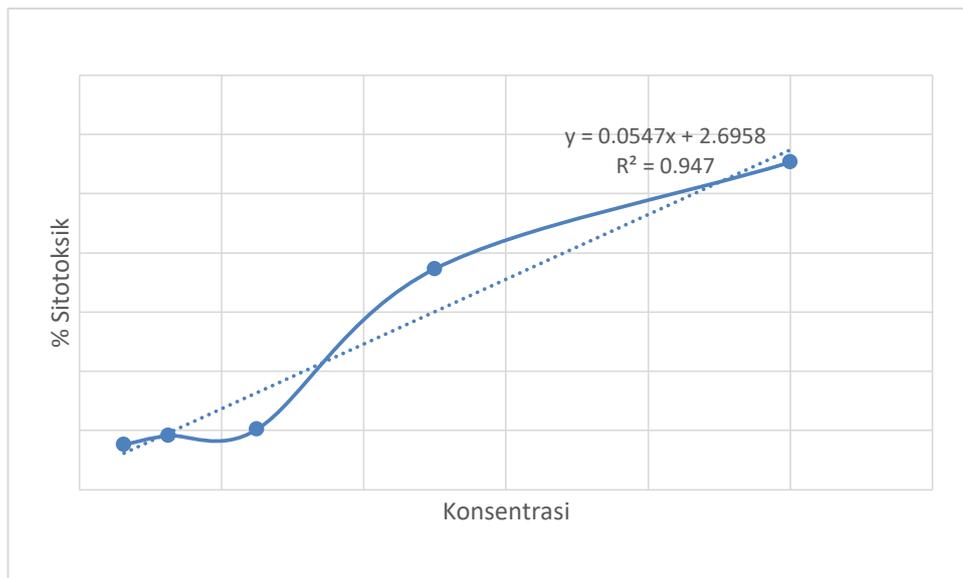
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	99,8
250	99,0
125	41,4
62,5	25,3
31,25	6,5



$\text{IC}_{50} = 171,67 \mu\text{M}$

### Senyawa C

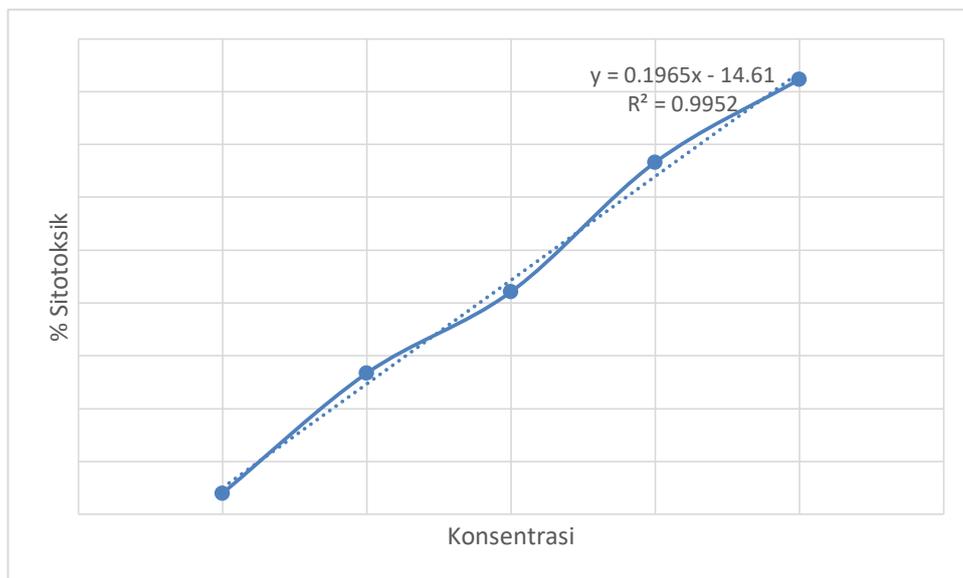
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
1000	55,3
500	37,3
250	10,2
125	9,1
62,5	7,6



$\text{IC}_{50} = 864,79 \mu\text{M}$

## Senyawa D

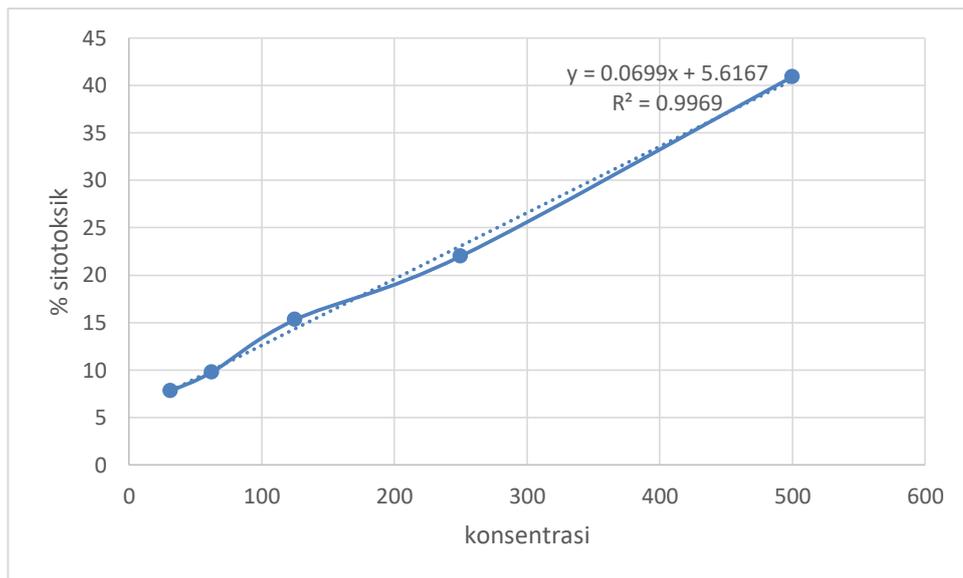
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	82,3
400	66,6
300	42,1
200	26,7
100	4,0



$\text{IC}_{50} = 328,80 \mu\text{M}$

## Senyawa E

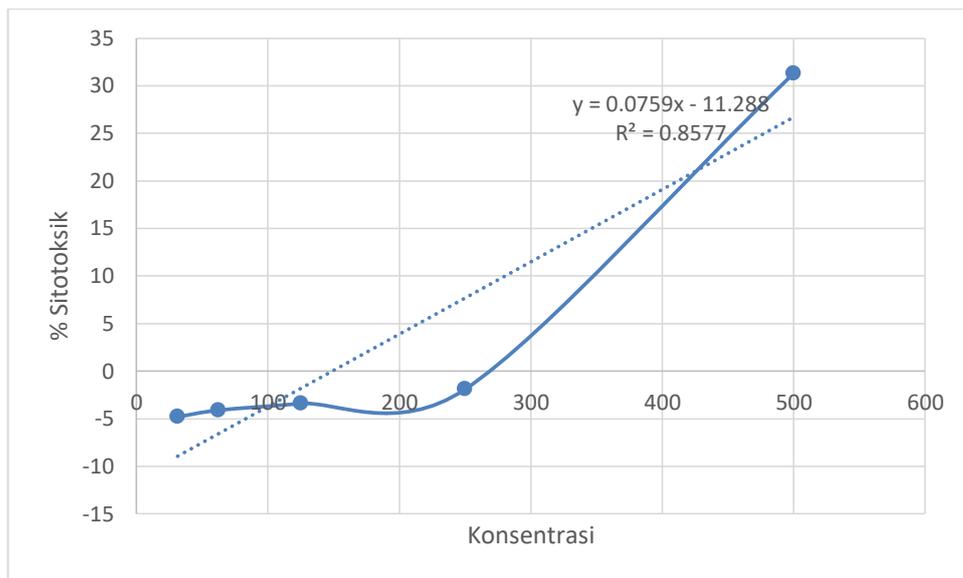
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	40,9
250	22,0
125	15,3
62,5	9,8
31,25	7,8



IC<sub>50</sub> : 634,95  $\mu\text{M}$

## Senyawa F

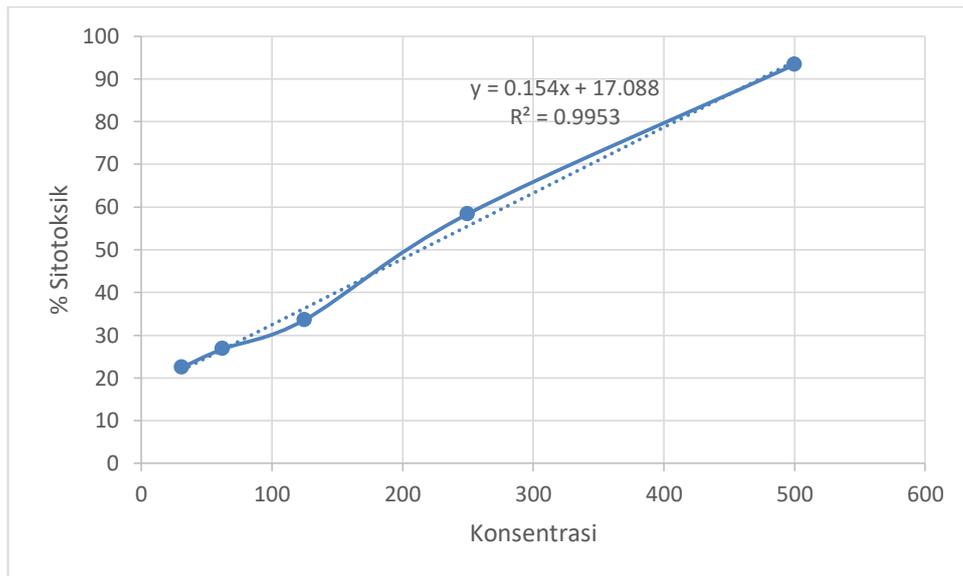
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	31,3
250	-1,9
125	-3,4
62,5	-4,1
31,25	-4,8



$\text{IC}_{50} = 807,48 \mu\text{M}$

## Senyawa G

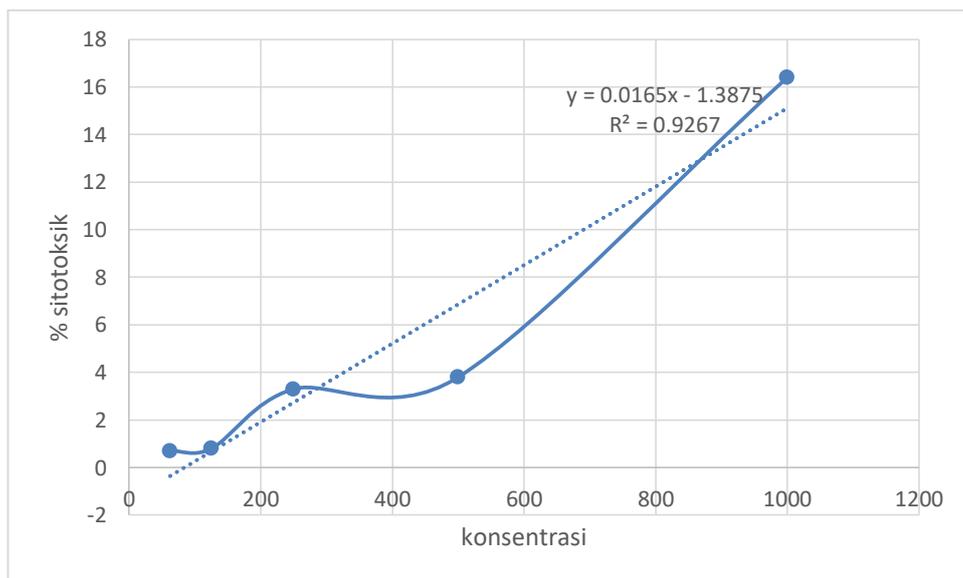
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
500	93,3
250	58,4
125	33,6
62,5	26,8
31,25	22,5



$\text{IC}_{50} = 213,71 \mu\text{M}$

## Senyawa H

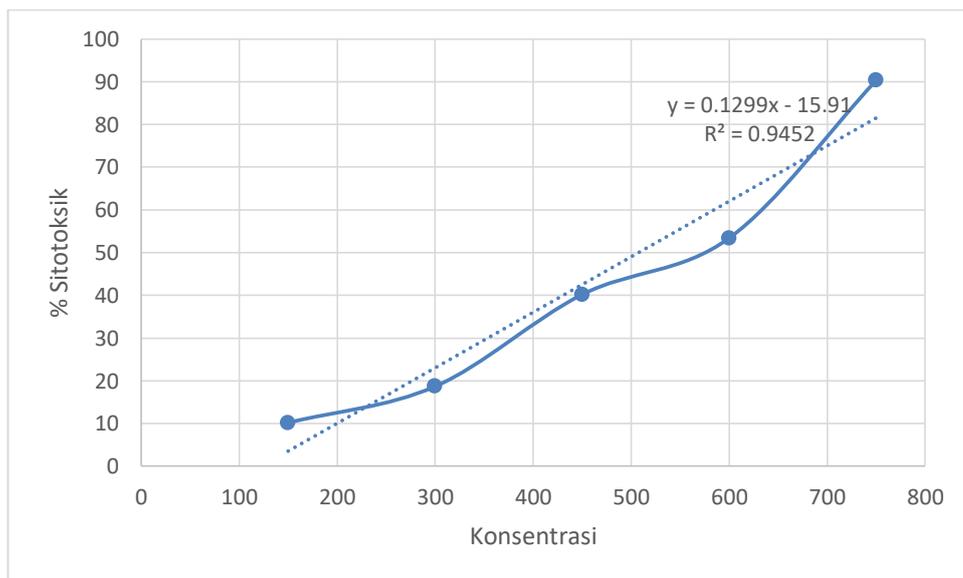
Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
1000	16,4
500	3,8
250	3,3
125	0,8
62,5	0,7



$\text{IC}_{50}$  3114,39  $\mu\text{M}$

### Senyawa fukosterol

Konsentrasi ( $\mu\text{M}$ )	% Sitotoksik
750	90,3
600	53,4
450	40,2
300	18,7
150	10,2



$\text{IC}_{50} = 507,39 \mu\text{M}$

## Lampiran 40. Hasil identifikasi sampel



### Laboratorium Biologi Molekuler dan Seluler Tanaman

Pusat Penelitian Sumberdaya Hayati dan Bioteknologi, IPB

Jl. Kampoer Gedung PAU, Kampus IPB Darmaga, Bogor (16680)

Tel. +62-251-8621257 Fax: +62-251-8621724

Email: ppsbipb@ipb.ac.id Web: <http://www.rcbio.ipb.ac.id>



Nomor Seri <i>Serial Number</i>	: PPSHB/BMST/11/2018	Kepada : <i>To</i>	Fitriyanti Jumaetri
------------------------------------	----------------------	-----------------------	---------------------

Berkaitan dengan/*regarding to*

Tanggal Surat / Permohonan Analisis <i>Date of Letter/Analysis Request</i>	: 18/05/2018	Nomor permohonan <i>Request Number</i>	: NON ISO/11/2018
		Tanggal Penerbitan <i>Date of issued</i>	: 16/04/2019

Dengan hormat kami sampaikan hasil pengujian  
*We kindly inform the test result*

Sampel/ <i>Sample(s)</i>	: K
Untuk pengujian/ <i>For analysing</i>	: Terlampir
Keterangan Sampel/ <i>Description of sample(s)</i>	: <i>thallus</i>
Tanggal penerimaan contoh/ <i>Date of sample receipt</i>	: 18 Mei 2018
Tanggal pelaksanaan analisis/ <i>Date of analysis</i>	: 22 Mei – 31 Juli 2018

Atas perhatian dan kerjasamanya kami ucapkan terima kasih.  
*Thank you for your attention and cooperation.*

Manajer Teknis/*Technic Manager*

Prof. Dr. Ir. Suharsono, DEA



## Laboratorium Biologi Molekuler dan Seluler Tanaman

Pusat Penelitian Sumberdaya Hayati dan Bioteknologi, IPB

Jl. Kamper Gedung PAU, Kampus IPB Darmaga, Bogor (16680)

Tel. +62-251-8621257 Fax: +62-251-8621724

Email: ppsbhpb@ipb.ac.id Web: <http://www.rcbio.ipb.ac.id>



### LAPORAN HASIL PENGUJIAN (LHP)

TEST RESULT

Nomor Permohonan/Request Number :

#### HASIL ANALISIS PENGUJIAN DNA BARCODE (\*)

Result for DNA Barcode Analysis

No	Nomor BMST	Kode dari Pelanggan	Parameter Analisis	Hasil**(*** )	Satuan	Metode Uji
1.	BMST/69/2018	K	Nilai E-value dan Max Score Pada Analisis BLAST	<i>Sargassum polycystum</i> (MG680739.1) Ident 99%	390 bp	PCR dengan primer spesifik 18S rRNA untuk DNA Barcode

Catatan/Note :

\* Hasil pengujian tidak boleh digandakan, tanpa persetujuan tertulis dari PPSHB.

\*\* Hasil pengujian hanya berlaku pada sampel yang diuji saat pengujian berlangsung.

\*\*\* Informasi Laboratorium Subkontrak jika memakai laboratorium mitra.

#### Opini dan Interpretasi Data (Diisi jika diminta oleh pelanggan):

Opinion and data interpretation will be provided if there is customer demand.

No	Opini	Reference



## Laboratorium Biologi Molekuler dan Seluler Tanaman

Pusat Penelitian Sumberdaya Hayati dan Bioteknologi, IPB

Jl. Kampoer Gedung PAU, Kampus IPB Darmaga, Bogor (16680)

Tel. +62-251-8621257 Fax: +62-251-8621724

Email: ppshbipb@ipb.ac.id Web: <http://www.rcbio.ipb.ac.id>



Nomor Seri Serial Number	: PPSHB/BMST/13/2018	Kepada To	: Fitriyanti Jumaetri
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Berkaitan dengan/*regarding to*

Tanggal Surat / Permohonan Analisis Date of Letter/Analysis Request	: 18/05/2018	Nomor permohonan Request Number	: NON ISO/13/2018
		Tanggal Penerbitan Date of issued	: 16/04/2019

Dengan hormat kami sampaikan hasil pengujian  
*We kindly inform the test result*

Sampel/Sample(s)	: B
Untuk pengujian/ <i>For analysing</i>	: Terlampir
Keterangan Sampel/ <i>Description of sample(s)</i>	: <i>thallus</i>
Tanggal penerimaan contoh/ <i>Date of sample receipt</i>	: 18 Mei 2018
Tanggal pelaksanaan analisis/ <i>Date of analysis</i>	: 22 Mei – 31 Juli 2018

Atas perhatian dan kerjasamanya kami ucapkan terima kasih.  
*Thank you for your attention and cooperation.*

Manajer Teknis/*Technic Manager*

Prof. Dr. Ir. Suharsono, DEA



## Laboratorium Biologi Molekuler dan Seluler Tanaman

Pusat Penelitian Sumberdaya Hayati dan Bioteknologi, IPB

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### LAPORAN HASIL PENGUJIAN (LHP)

TEST RESULT

Nomor Permohonan/*Request Number* :

#### HASIL ANALISIS PENGUJIAN DNA BARCODE (\*)

*Result for DNA Barcode Analysis*

No	Nomor BMST	Kode dari Pelanggan	Parameter Analisis	Hasil**(*** )	Satuan	Metode Uji
1.	BMST/71/2018	B	Nilai E-value dan Max Score Pada Analisis BLAST	<i>Turbinaria decurrens</i> Bory (KU086624.1) Ident 99%	389 bp	PCR dengan primer spesifik 18S rRNA untuk DNA Barcode

Catatan/*Note* :

\* Hasil pengujian tidak boleh digandakan, tanpa persetujuan tertulis dari PPSHB.

\*\* Hasil pengujian hanya berlaku pada sampel yang diuji saat pengujian berlangsung.

\*\*\* Informasi Laboratorium Subkontrak jika memakai laboratorium mitra.

**Opini dan Interpretasi Data** (*Diisi jika diminta oleh pelanggan*):

*Opinion and data interpretation will be provided if there is customer demand.*

No	Opini	Reference