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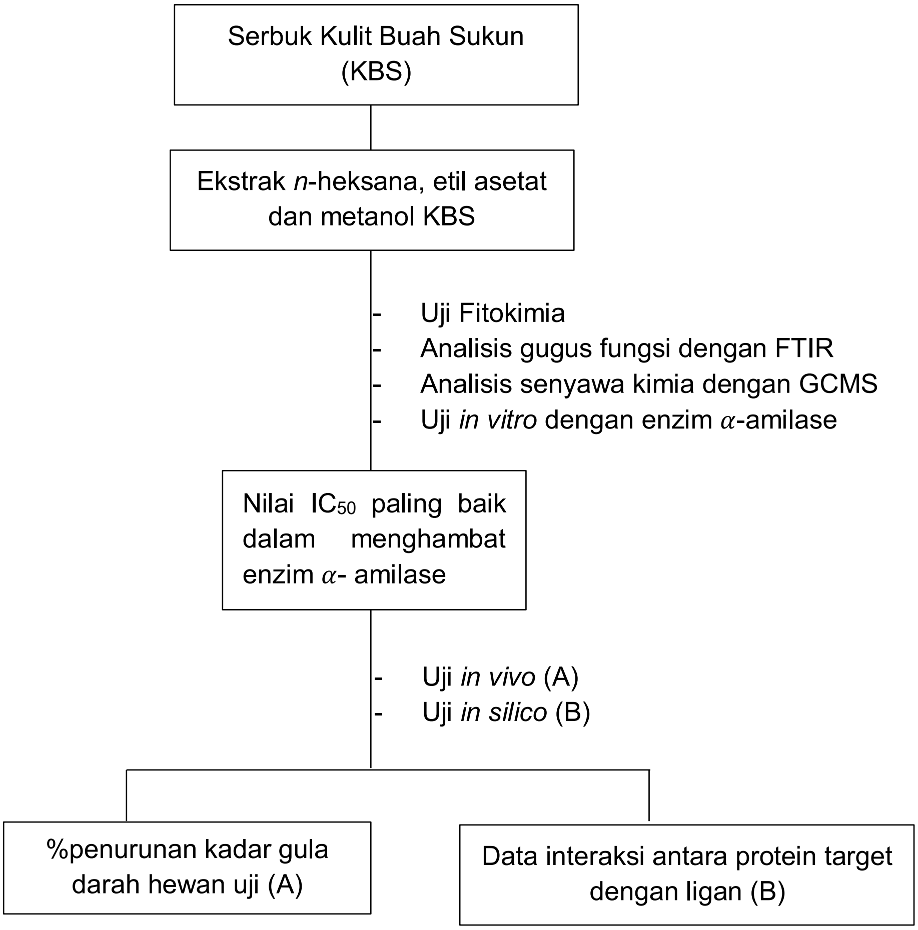
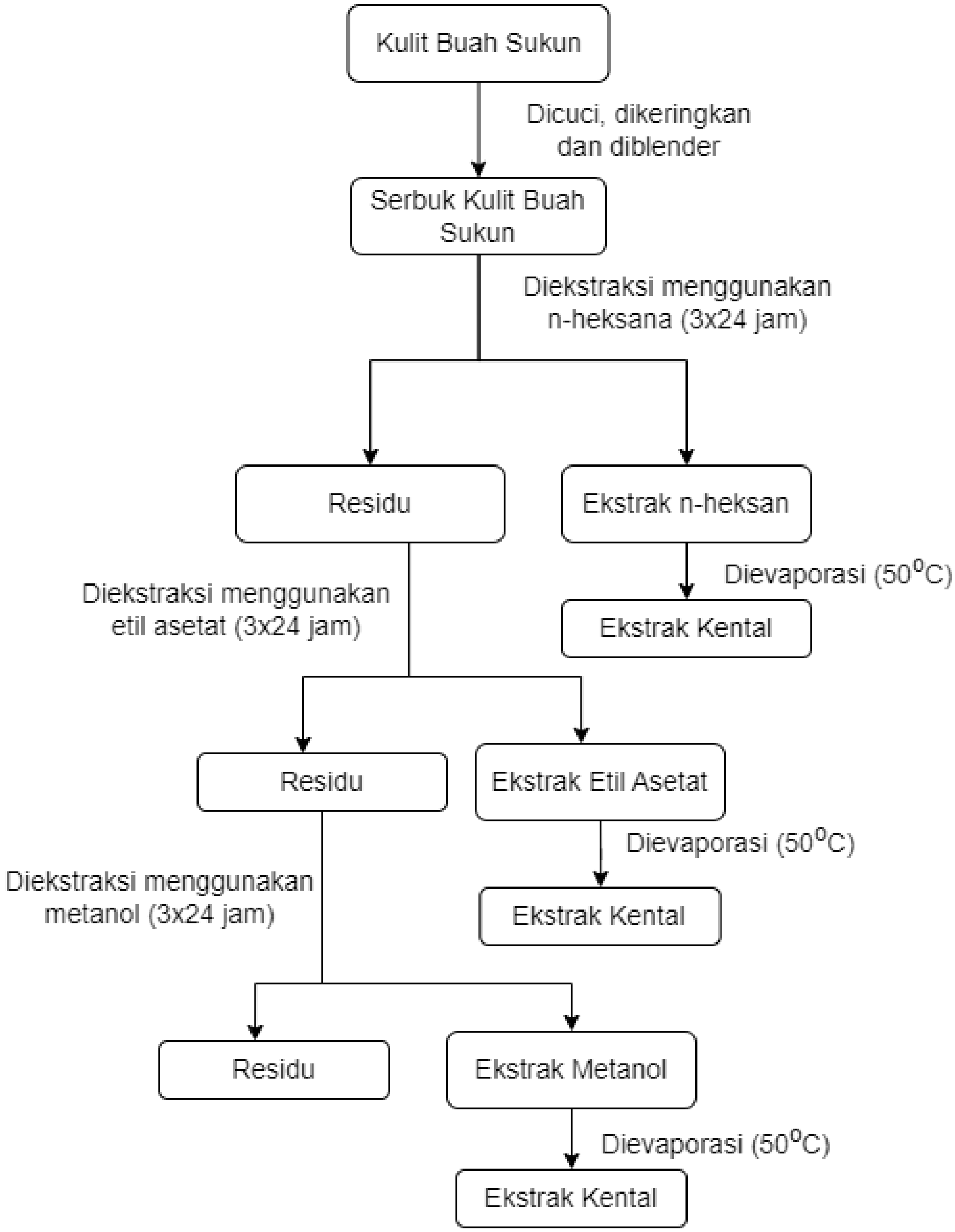
LAMPIRAN

Lampiran 1. Diagram Alir Penelitian



Lampiran 2. Bagan Kerja Penelitian

1. Ekstraksi Kulit Buah Sukun



2. Uji Fitokimia

a) Alkaloid

2 mL ekstrak

- ditambahkan 1 mL HCl 1%
- ditambahkan 2 mL pereaksi dragendorff dan pereaksi mayer (terbentuknya endapan kuning mengindikasikan sampel positif mengandung alkaloid)

Hasil

b) Flavonoid

2 mL ekstrak

- ditambahkan 1 g serbuk Mg
- ditambahkan 1 mL HCl 1% (perubahan larutan menjadi warna merah, kuning atau jingga mengindikasikan sampel positif mengandung flavonoid)

Hasil

c) Steroid/terpenoid

2 mL ekstrak

- ditambahkan 1 mL pereaksi Lieberman-Buchard
- dikocok perlahan dan dibiarkan selama beberapa menit (perubahan larutan menjadi warna merah mengindikasikan sampel positif steroid dan warna hijau mengindikasikan sampel positif mengandung terpenoid

Hasil

3. Uji GC-MS

Ekstrak

↓ - dipipet sebanyak 0,2 µL
- diinjeksi ke dalam instrumen

Kromatogram

4. Uji FT-IR

Ekstrak

↓ - diteteskan pada pelet KBR
- diinjeksi ke dalam instrumen

Spektrum

5. Uji Bioaktivitas *secara In Vitro*

a. Pembuatan larutan akarbosa

1 mg serbuk akarbosa

↓ dilarutkan dengan 10 mL buffer posfat pH 6,8

Larutan akarbosa 10000 ppm

↓ diencerkan

Larutan akarbosa 5000, 3000 dan 1000 ppm

b. Pembuatan larutan ekstrak *n*-heksana, etil asetat, metanol kulit buah sukun

0,01 g ekstrak

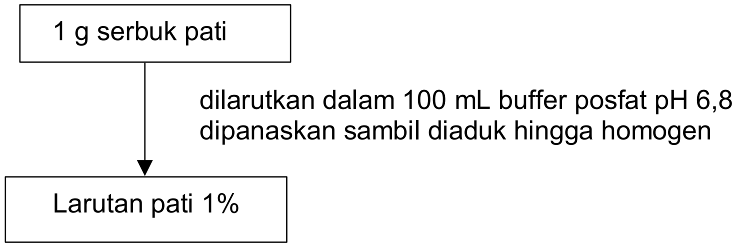
↓ dilarutkan dengan 10 mL buffer fosfat pH 6,8

Larutan ekstrak 10000 ppm

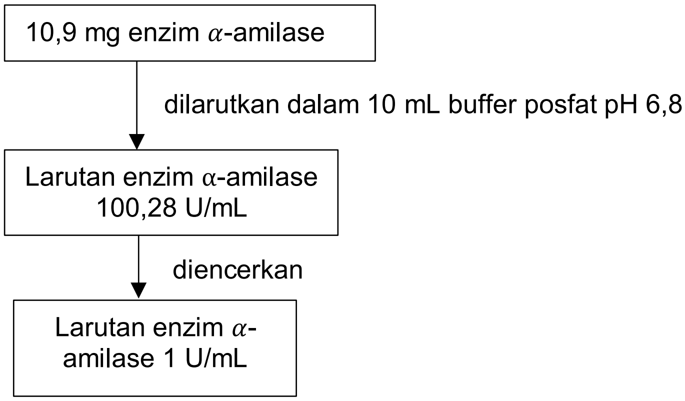
↓ diencerkan

Larutan ekstrak 5000, 3000 dan 1000 ppm

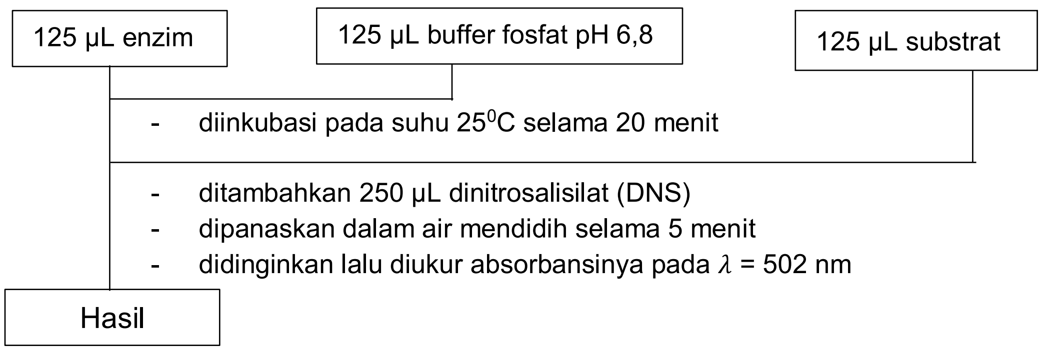
c. Pembuatan larutan pati 1%



d. Pembuatan larutan enzim α-amilase



e. Uji Aktivitas enzim α-amilase



f. Uji Inhibisi enzim α-amilase

125 µL enzim | 125 µL buffer fosfat pH 6,8 | 125 µL sampel | 125 µL substrat

- diinkubasi pada suhu 25°C selama 20 menit

- diinkubasi kembali pada suhu 25°C selama 5 menit
- ditambahkan 250 µL DNS
- dipanaskan dalam air mendidih selama 5 menit
- didinginkan lalu diukur absorbansinya pada λ = 502 nm

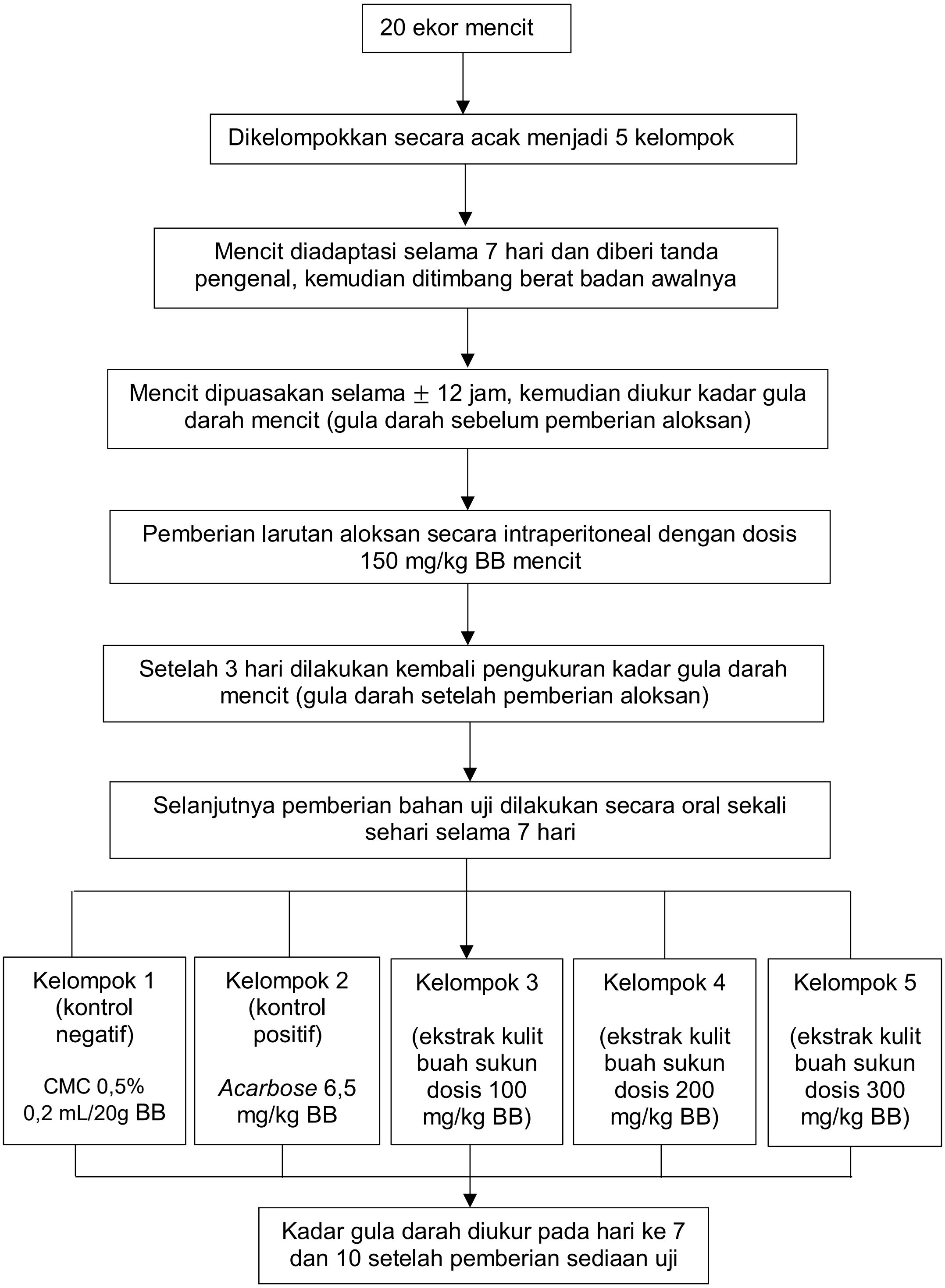
Hasil

Catatan:
- Perlakuan yang sama pada ekstrak tiap konsentrasi.
- Perlakuan yang sama pada *acarbose* untuk tiap konsentrasi

Tabel Uji Perlakuan Enzim α-amilase

Sampel	Buffer Fosfat (µL)	Substrat (µL)	Akarbosa (µL)	Enzim (µL)	DNS (µL)	Ekstrak (µL)
Blanko	500	-	-	-	250	-
Kontrol (pengujian aktivitas enzim)	125	125	-	125	250	-
Akarbosa	125	125	125	125	250	-
Ekstrak	125	125	-	125	250	125

6. Uji Bioaktivitas Secara *In Vivo*



7. Uji Penghambat Enzim α-Amilase secara *In Silico*

a. Preparasi Protein

Struktur 3D Protein

- diunduh dalam format SDF
- dihilangkan residunya
- dipreparasi menggunakan *software Discovery Studio Visualizer*
- disimpan dalam format.pdb

Protein.pdb

b. Preparasi Ligan

Ligan

- diunduh dalam format SDF
- disimpan dalam format.pdb dengan *software Discovery Studio Visualizer*

Ligan.pdb

Catatan:

- Dilakukan prosedur yang sama untuk ligan kontrol

c. Proses penambatan molekul

Protein.pdb

Ligan.pdb

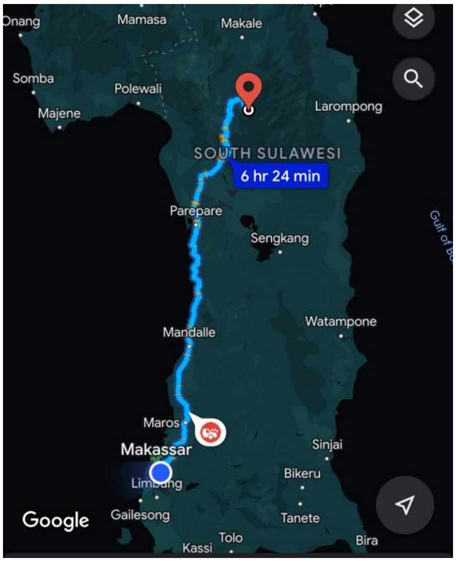
- dibuka dengan program *PyRx*
- dibuat parameter *docking* dengan mengatur Grid Box 40 x40 x40 Ǻ
- disimpan dalam format.gpf
- dilakukan *docking* dengan jumlah konformasi sebanyak 10 dan algorima sampling *Lamarckian genetik algorithm*

Hasil *docking*

- diamati dengan software *Discovery Studio visualizer*

Visualisasi hasil *docking*
2D *dan* 3D

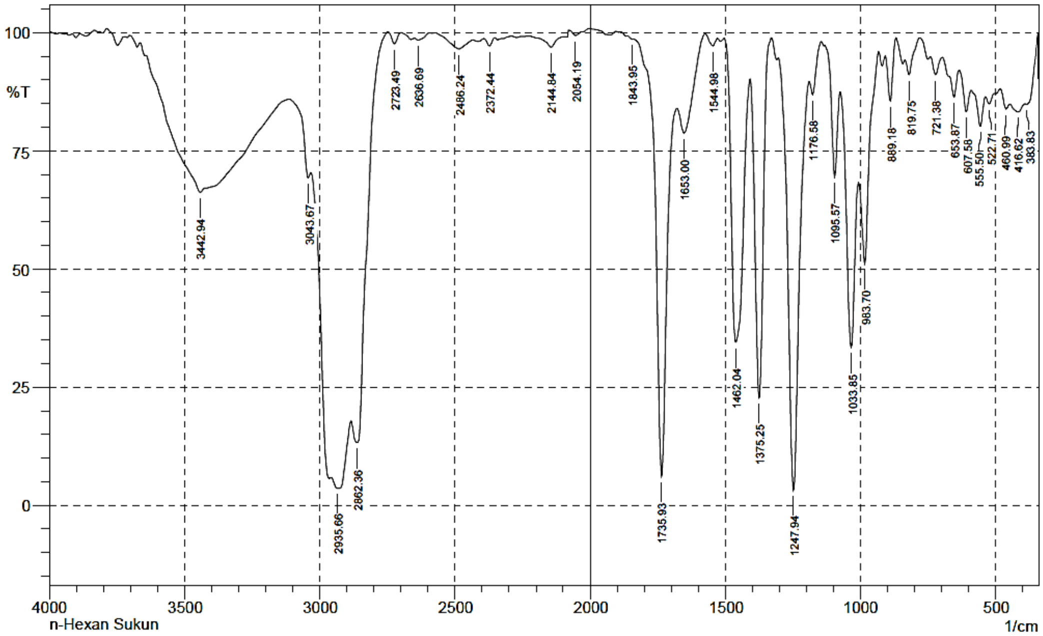
Lampiran 3. Tempat Pengambilan Sampel



Lampiran 4. Data Hasil Penelitian

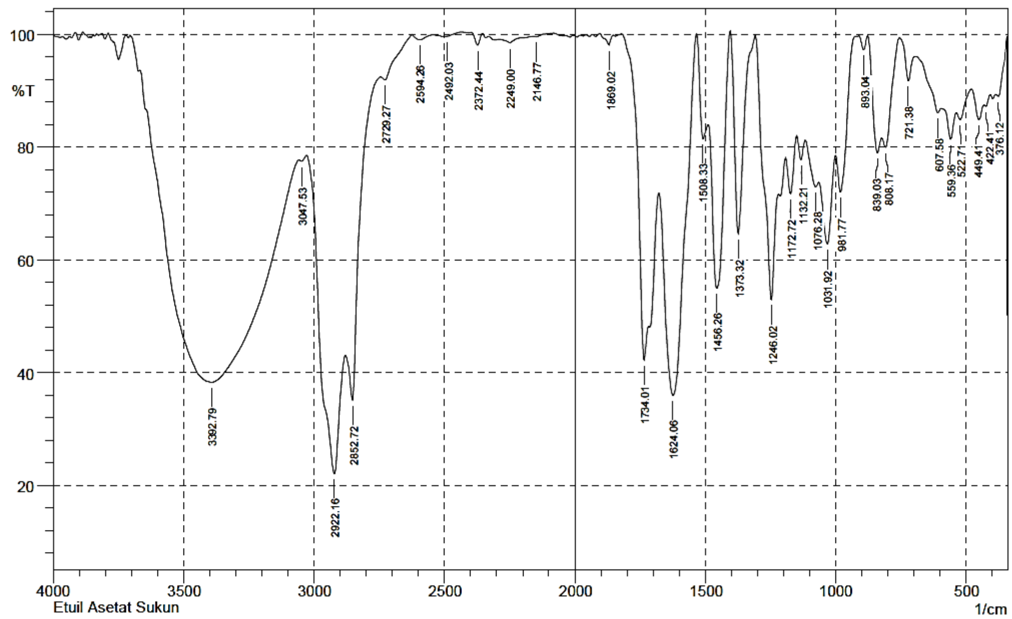
1. Data Hasil Spektrum Ekstrak Kulit Buah Sukun Menggunakan Fourier Transform Infra-Red

a. Spektrum Ekstrak *n*-Heksana Kulit Buah Sukun Menggunakan FTIR



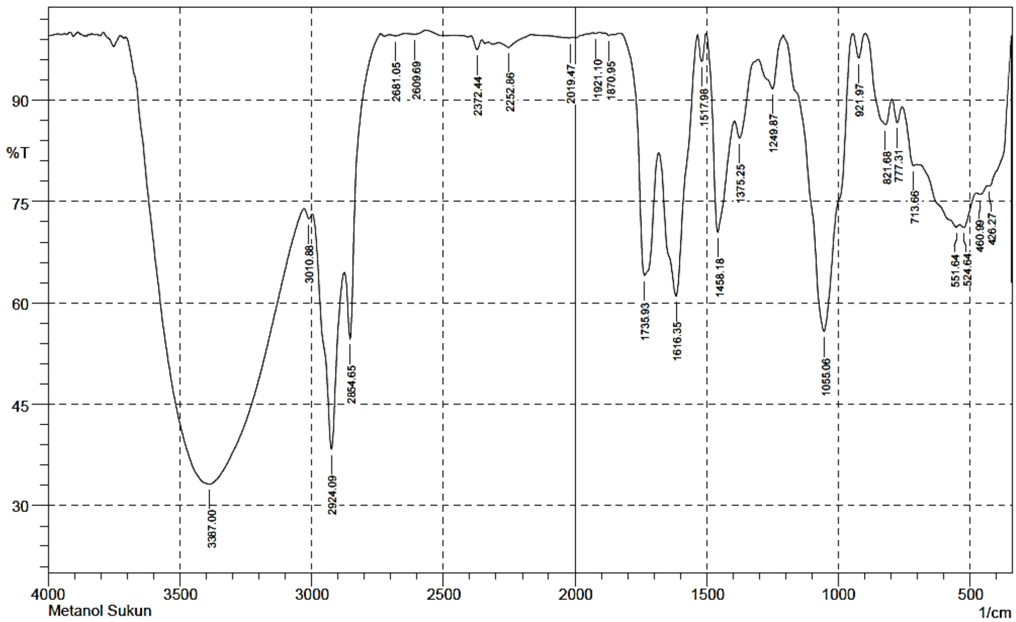
No.	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	383.83	84.823	1.904	389.62	345.26	2.203	0.574
2	416.62	83.196	1.675	445.56	391.55	4.11	0.262
3	460.99	83.83	2.304	482.2	447.49	2.401	0.197
4	522.71	84.948	1.807	536.21	505.35	2.041	0.147
5	555.5	80.215	6.681	588.29	538.14	3.721	0.704
6	607.58	83.277	6.251	632.65	590.22	2.59	0.605
7	653.87	86.335	5.056	671.23	634.58	1.829	0.408
8	721.38	91.102	3.727	740.67	698.23	1.328	0.348
9	819.75	91.108	4.23	833.25	781.17	1.174	0.383
10	889.18	85.528	11.226	906.54	869.9	1.464	0.968
11	983.7	51.088	25.882	1006.84	933.55	10.544	3.947
12	1033.85	33.457	41.991	1074.35	1008.77	16.987	9.487
13	1095.57	69.515	21.355	1130.29	1076.28	4.219	2.271
14	1176.58	86.895	5.029	1188.15	1145.72	1.548	0.411
15	1247.94	3.209	88.961	1303.88	1190.08	42.382	38.289
16	1375.25	22.746	71.087	1408.04	1330.88	18.092	16.194
17	1462.04	34.509	60.421	1502.55	1409.96	20.908	18.5
18	1544.98	97.192	1.936	1573.91	1529.55	0.345	0.206
19	1653	78.762	9.045	1678.07	1575.84	6.03	2.187
20	1735.93	6.213	82.846	1840.09	1680	36.816	30.254
21	1843.95	98.591	0.162	1863.24	1840.09	0.112	0.008
22	2054.19	99.389	1.246	2079.26	2004.04	-0.033	0.195
23	2144.84	96.939	2.272	2227.78	2094.69	0.904	0.453
24	2372.44	97.194	1.629	2393.66	2353.16	0.345	0.136
25	2486.24	96.541	2.464	2573.04	2434.17	1.218	0.723
26	2636.69	98.419	0.657	2650.19	2594.26	0.253	0.099
27	2723.49	97.632	2.418	2748.56	2700.34	0.218	0.229
28	2862.36	13.299	17.443	2883.58	2748.56	42.071	6.418
29	2935.66	3.584	5.832	2956.87	2885.51	85.014	14.803
30	3043.67	69.247	3.041	3113.11	3034.03	7.843	0.22
31	3442.94	66.209	3.376	3643.53	3423.65	24.508	2.991

b. Spektrum Ekstrak Etil Asetat Kulit Buah Sukun Menggunakan FTIR



No.	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	376.12	89.001	2.55	385.76	345.26	1.429	0.356
2	422.41	87.238	0.827	430.13	406.98	1.277	0.044
3	449.41	84.863	3.638	478.35	432.05	2.81	0.42
4	522.71	84.879	2.216	536.21	480.28	3.305	0.267
5	559.36	81.399	4.972	594.08	538.14	4.072	0.536
6	607.58	86.083	1.88	690.52	596	3.837	0.196
7	721.38	91.775	5.815	754.17	692.44	1.231	0.589
8	808.17	79.975	5.237	821.68	756.1	3.548	0.692
9	839.03	78.971	7.993	875.68	823.6	3.573	1.165
10	893.04	97.26	2.467	910.4	877.61	0.221	0.182
11	981.77	72.019	11.469	999.13	925.83	5.76	2.057
12	1031.92	62.813	13.282	1062.78	1001.06	9.932	2.622
13	1076.28	72.93	2.521	1114.86	1064.71	6.077	0.448
14	1132.21	77.786	3.775	1147.65	1116.78	3.069	0.333
15	1172.72	71.763	8.106	1192.01	1149.57	5.075	0.989
16	1246.02	52.983	26.713	1307.74	1220.94	13.077	6.591
17	1373.32	64.662	35.618	1404.18	1309.67	6.743	6.792
18	1456.26	54.968	35.224	1487.12	1406.11	12.174	9.234
19	1508.33	81.434	9.525	1533.41	1489.05	2.796	1.052
20	1624.06	35.971	46.152	1676.14	1535.34	34.985	24.918
21	1734.01	42.269	13.718	1820.8	1718.58	13.82	1.857
22	1869.02	98.093	1.821	1905.67	1853.59	0.184	0.178
23	2146.77	99.58	0.15	2160.27	2081.19	0.025	-0.004
24	2249	98.467	0.779	2289.5	2204.64	0.384	0.108
25	2372.44	98.096	2.119	2397.52	2355.08	0.141	0.183
26	2492.03	99.659	0.092	2499.75	2436.09	0.001	0.007
27	2594.26	99.027	0.917	2625.12	2544.11	0.193	0.17
28	2729.27	91.919	1.484	2744.71	2625.12	2.2	0.197
29	2852.72	35.151	17.91	2879.72	2746.63	24.43	3.36
30	2922.16	22.053	30.779	3028.24	2881.65	57.624	22.974
31	3047.53	77.487	0.483	3057.17	3030.17	2.937	0.041
32	3392.79	38.27	48.152	3666.68	3059.1	166.097	123.967

c. Spektrum Ekstrak Metanol Kulit Buah Sukun Menggunakan FTIR



	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	426.27	77.287	1.48	432.05	345.26	7.202	2.159
2	460.99	76.051	0.578	474.49	433.98	4.712	0.078
3	524.64	71.145	1.451	538.14	476.42	8.335	0.264
4	551.64	71.229	1.012	690.52	540.07	18.882	0.838
5	713.66	80.324	1.738	756.1	704.02	4.058	0.263
6	777.31	86.68	2.917	796.6	758.02	2.116	0.27
7	821.68	86.36	6.048	896.9	798.53	4.113	1.834
8	921.97	96.252	3.6	945.12	898.83	0.371	0.341
9	1055.06	55.821	43.858	1207.44	947.05	28.46	28.066
10	1249.87	91.691	6.399	1303.88	1209.37	2.185	1.294
11	1375.25	84.394	4.301	1392.61	1305.81	3.894	0.678
12	1458.18	70.471	24.084	1502.55	1394.53	9.52	6.146
13	1517.98	95.756	4.022	1533.41	1502.55	0.338	0.309
14	1616.35	61.032	28.951	1681.93	1535.34	18.097	11.811
15	1735.93	64.074	24.533	1826.59	1683.86	12.826	6.849
16	1870.95	99.548	0.272	1888.31	1861.31	0.03	0.012
17	1921.1	99.866	0.144	1932.67	1905.67	0.006	0.008
18	2019.47	99.208	0.092	2036.83	2005.97	0.1	0.005
19	2252.86	97.746	1.135	2289.5	2167.99	0.703	0.236
20	2372.44	97.48	1.698	2395.59	2353.16	0.291	0.144
21	2609.69	99.769	0.323	2644.41	2571.11	0.033	0.066
22	2681.05	99.511	0.244	2704.2	2644.41	0.088	0.029
23	2854.65	54.701	15.294	2875.86	2738.92	11.556	1.995
24	2924.09	38.376	29.454	2997.38	2877.79	31.42	11.851
25	3010.88	72.447	1.011	3028.24	2999.31	3.955	0.088
26	3387	33.169	54.195	3705.26	3030.17	197.189	151.831

2. Data Hasil Kromatogram Ekstrak KBS Menggunakan GCMS

Tabel 1. Hasil analisis senyawa dalam ekstrak *n*-heksana KBS

No. Puncak	Waktu Retensi	Nama Senyawa	Area (%)
1	10.467	phenol, 2-methoxy-3-(2-propenyl)- (cas)	0,32
2	10.708	4-isopropyl-3,7-dimethyl-3a,3b,4,5,6,7-hexahydro-1h-cyclopenta[2,3]cyclopropa	0,10
3	10.817	1-tetradecene	0,05
4	10.933	tetradecane	0,02
5	11.358	caryophyllene	0,078
6	11.849	alpha-humulene (cas)	0,07
7	12.453	phenol, 2,4-bis(1,1-dimethylethyl)- (cas)	0,57
8	13.477	1-pentadecene	0,06
9	13.567	hexadecane	0,04
10	15.009	pentadecanal-	0,04
11	15.078	tetradecanoic acid, methyl ester (cas)	0.08
12	15.933	1-octadecene	0.09
13	16.025	hexacosane	0.02
14	16.381	pentadecanoic acid, methyl ester (cas)	0.08
15	16.543	neophytadiene	0.05
16	17.650	9-hexadecenoic acid, methyl ester, (z)-	0.09
17	18.108	hexadecanoic acid, methyl ester	7.44
18	19.126	n-hexadecanoic acid	5.19
19	19.445	hexadecanoic acid, ethyl ester	0.84
20	20.228	heptadecanoic acid, methyl ester (cas)	0.11
21	21.901	9,12-octadecadienoic acid (z,z)-, methyl ester	3.08
22	22.086	6-octadecenoic acid, methyl ester, (z)-	4.90
23	22.647	methyl stearate	1.02
24	23.263	7-tetradecenal, (z)-	6.03
25	23.546	ethyl oleate	0.41
26	23.670	octadecanoic acid	0.59
27	23.967	hexadecanoic acid, butyl ester (cas)	0.10
28	24.152	1-octadecanethiol (cas)	0.15
29	25.833	stigmast-5-en-3-ol, (3.beta.,24s)-	0.57
30	26.117	.gamma.-sitosterol	0.62
31	26.469	stigmast-5-en-3-ol, (3.beta.,24s)-	0.75
32	26.633	.gamma.-sitosterol	0.57
33	26.963	emicymarin	1.83
34	27.176	.gamma.-sitosterol	0.89
35	27.560	.gamma.-sitosterol	2.15
36	37.821	.gamma.-sitosterol	2.31
37	28.926	eicosanal-	0.21
38	29.199	lanosterol	0.29
39	30.133	olean-12-en-3-ol, acetate, (3.beta.)-	0.28
40	30.367	trans-geranylgeranio	0.20
41	30.496	hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester (cas)	0.53
42	30.722	triacontanoic acid, methyl ester	0.85
43	31.329	meadowlactone	0.20

Lanjutan Tabel 1

44	31.835	cis-1-chloro-9-octadecene	0.41
45	32.298	3,7,11,15-tetramethyl-2,6,10,14-hexadecatetraenyl acetate	0.06
46	32.499	1-heptatriacotanol	0.50
47	32.867	.delta.-guaiene (cas)	0.05
48	33.390	9,19-cyclolanost-24-en-3-ol, acetate, (3.beta.)-	3.44
49	33.841	lupan-3-ol, acetate	0.68
50	54.033	tetracosanoic acid, methyl ester (cas)	0.32
51	34.250	9,19-cyclolanost-24-en-3-ol, acetate, (3.beta.)-	0.12
52	34.533	docosa-2,6,10,14,18-pentaen-22-al,2,6,10,15,18-pentamethyl-, all-trans	0.04
53	34.797	6-nonadecyltetrahydro-2h-pyran-2-one	0.74
54	35.083	1-hexacosanol	0.65
55	35.428	squalene	16.75
56	35.681	1,6,10,14,18,22-tetracosahexaen-3-ol,2,6,10,15,19,23-hexamethyl-, (all-e)-(.+/-.)-	1.43
57	35.798	.gamma.-sitostenone	1.67
58	36.202	1-cycloheptene,1,4-dimethyl-3-(2-methyl-1-propene-1-yl)-4-vinyl-	0.64
59	36.583	tetratetracontane	0.33
60	36.895	solanesol	0.70
61	37.086	oxirane,2,2-dimethyl-3-(3,7,12,16,20-pentamethyl-	0.57
62	37.301	hexadeca-2,6,10,14-tetraen-1-ol, 3,7,11,16-tetramethyl-	1.24
63	38.129	9,19-cyclolanost-24-en-3-ol, acetate	16.03
64	38.808	(2e,6e,10e)-3,7,11,15-tetramethylhexadeca-2,6,10,14-tetraen-1-yl formate	0.60
65	38.933	.beta.-tocopherol	0.32
66	39.990	cis-3,14-clerodadien-13-ol	4.71
67	40.886	vitamin e	0.49
68	41.642	lup-20(29)-ene-3,28-diol, (3.beta.)-	0.37
69	42.213	phytyl stearate	1.39
70	42.959	tris(2,4-di-tert-butylphenyl) phosphate	0.58
71	43.308	ergost-5-en-3-ol, (3.beta.)- (cas)	0.59

Tabel 2. Hasil analisis senyawa dalam ekstrak etil asetat KBS

No. Puncak	Waktu Retensi	Nama Senyawa	Area (%)
1	3.111	p-xylene	0.29
2	3.411	butane,1,1-dimethoxy-	0.40
3	3.492	3-methylcyclopentyl acetate	0.03
4	3.611	ethanol, 2-butoxy-	0.18
5	3.775	butanoyl chloride, 4-chloro- (cas)	0.05
6	7.975	dodecane (cas)	0.03
7	8.112	benzoic acid,2-hydroxy-,methyl ester	0.36
8	9.494	tridecane	0.04
9	10.837	1-tetradecene	0.08
10	10.937	tetradecane	0.18
11	12.300	pentadecane	0.07
12	12.480	phenol,2,4-bis(1,1-dimethylethyl)- (cas)	0.96
13	13.487	1-hexadecene	0.20
14	13.575	hexadecane (cas)	0.10
15	13.642	2-undecene, 3-methyl-, (z)-	0.04
16	14.130	pentadecane,2,6,10-trimethyl-	0.08
17	14.717	decanoic acid, ethyl ester (cas)	0.14
18	14.797	pentadecane, 2,6,10,14-tetramethyl-	0.34
19	15.026	tridecanal	0.10
20	15.087	methyl tetradecanoate	0.17
21	15.275	1,4-di-iso-propylnaphthalene	0.09
22	15.542	2-propanone,1-(3,5,5-trimethyl-2-cyclohexen-1-ylidene)-, (z)-	0.13
23	15.678	tetradecanoic acid	0.18
24	15.933	1-octadecene	0.26
25	16.099	pentadecane, 4-methyl-	0.05
26	16.387	pentadecanoic acid, methyl ester	0.11
27	16.539	neophytadiene	0.96
28	16.658	2-pentadecanone,6,10,14-trimethyl- (cas)	0.07
29	16.913	2-hexadecen-1-ol, 3,7,11,15-tetramethyl-, [r-[r*,r*-(e)]]-	0.15
30	17.075	pentadecanoic acid (cas)	0.07
31	17.216	2-hexadecen-1-ol, 3,7,11,15-tetramethyl-, [r-[r*,r*-(e)]]-	0.27
32	17.659	9-hexadecenoic acid, methyl ester, (z)- (cas)	0.08
33	18.033	hexadecanoic acid, methyl ester (cas)	7.50
34	18.525	palmitoleic acid	0.06
35	18.764	dibutyl phthalate	0.12
36	19.032	n-hexadecanoic acid	14.85
37	19.325	5-eicosene, (e)-	0.02

Lanjutan Tabel 2

38	19.430	hexadecanoic acid, ethyl ester	0.90
39	19.575	eicosane	0.10
40	20.114	hexadecanoic acid,1-methylethyl ester	0.07
41	20.216	heptadecanoic acid, methyl ester (cas)	0.10
42	20.752	hexadecanoic acid, 2-hydroxy-, methyl ester	0.08
43	21.837	9,12-octadecadienoic acid (z,z)-, methyl ester	2.32
44	21.995	8,11,14-docosatrienoic acid,methyl ester	4.06
45	22.130	11-octadecenoic acid, methyl ester	0.41
46	22.255	phytol	0.27
47	22.615	methyl stearate	0.91
48	22.945	9,12-octadecadienoic acid (z,z)-	2.76
49	23.128	dichloroacetic acid, tridec-2-ynyl ester	7.46
50	23.377	linoleic acid ethyl ester	0.09
51	23.601	octadecanoic acid	1.30
52	24.136	1-hexacosene	0.26
53	24.436	iron iodide complex i	0.18
54	24.550	3,7,11,15-tetramethylhexadec-2-en-1-yl acetate	0.09
55	26.579	e,e,z-1,3,12-nonadecatriene-5,14-diol	0.08
56	26.800	oleyl alcohol, chlorodifluoroacetate	0.08
57	26.947	eicosanoic acid, methyl ester	0.15
58	27.375	4,8,12,16-tetramethylheptadecan-4-olide	0.05
59	28.241	octacosanol	0.12
60	30.175	bis-o-(hexadecyl)trimetthylsilylglycerol	0.46
61	30.497	hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester (cas)	0.99
62	30.740	1,2-benzenedicarboxylic acid	0.59
63	31.334	meadowlactone	0.06
64	31.817	octacosanol	0.10
65	31.905	silicone oil	0.08
66	32.171	hexadecanoic acid, 2,3-bis(acetyloxy)propyl ester	0.11
67	32.392	tricosanoic acid, methyl ester (cas)	0.01
68	32.836	9,19-cyclolanost-24-en-3-ol, acetate, (3.beta.)-	3.05
69	33.533	7-hexadecenal, (z)-	1.54
70	33.836	lupan-3-yl acetate	0.37
71	34.013	tetracosanoic acid, methyl ester (cas)	0.52
72	34.225	1,4-benzenedicarboxylic acid, bis(2-ethylhexyl) ester	0.27
73	34.774	6-nonadecyltetrahydro-2h-pyran-2-one	1.16
74	35.025	eicosyl trifluoroacetate	0.62
75	35.275	squalene	7.36
76	35.699	.alpha.-tocospiro a	0.78

Lanjutan Tabel 2			
77	36.034	1h-cycloprop[e]azulen-4-ol, decahydro-1,1,4,7-tetramethyl-, [1ar-(1a.alpha.,	1.25
78	36.628	9,19-cyclolanost-24-en-3-ol, acetate, (3.beta.)-	1.03
79	36.942	c(14a)-homo-27-nor-14.beta.-gammaceran-3.alpha.-ol	0.26
80	37.627	1-(1,5-dimethyl-4-hexenyl)-3a,6,6,12a-tetramethyltetradecahydro-1h-cyclope	19.22
81	38.217	03027205002 flavone 4'-oh,5-oh,7-di-o-glucoside	1.55
82	38.907	(r)-6-methoxy-2,8-dimethyl-2-((4r,8r)-4,8,12-trimethyltridecyl)chroman	0.99
83	39.433	9,19-cyclolanost-23-ene-3,25-diol, 3-acetate, (3.beta.,23e)-	1.44
84	39.921	cis-3,14-clerodadien-13-ol	2.61
85	40.483	9,19-cycloergost-24(28)-en-3-ol, 4,14-dimethyl-, acetate, (3.beta.,4.alpha.,5.alpha.)-	0.37
86	40.848	vitamin e	1.77
87	41.675	1-heptatriacotanol	0.30
88	43.254	campesterol	0.47

Tabel 3. Hasil analisis senyawa dalam ekstrak metanol KBS

No. Puncak	Waktu Retensi	Nama Senyawa	Area (%)
1	3.987	1,2cyclopentanedione	0.10
2	5.854	1,2,3-propanetriol	0.40
3	7.533	4h-pyran-4-one, 2,3-dihydro-3,5-dihydroxy-6-methyl- (cas	0.22
4	12.474	phenol, 2,4-bis(1,1-dimethylethyl)-	0.44
5	12.625	dodecanoic acid, methyl ester (cas	0.25
6	13.292	dodecanoic acid	0.09
7	13.477	1-hexadecene (cas)	0.11
8	13.560	3,5-octanedione, 2,2,7-trimethyl-	0.07
9	14.350	.beta.-d-glucopyranoside, methyl	0.17
10	14.488	methyl 5,7-hexadecadiynoate	0.06
11	14.744	1,3,4,5-tetrahydroxy-cyclohexanecarboxylic acid	0.42
12	14.825	e5-dodecenylacetate	0.13
13	15.010	e-2-tetradecen-1-ol	0.52
14	15.073	8 tetradecanoic acid, methyl ester (cas)	0.48
15	15.208	3-deoxy-d-mannoic lactone	0.11
16	15.630	tetradecanoic acid	0.23
17	15.927	1-octadecene (cas)	0.10
18	16.010	2-methyltetracosane	0.04
19	16.160	5-octadecenoic acid, methyl ester (cas)	0.07
20	16.375	pentadecanoic acid, methyl ester	0.19
21	16.532	neophytadiene	0.10
22	17.049	pentadecanoic acid	0.17
23	17.217	2-hexadecen-1-ol, 3,7,11,15-tetramethyl-, [r-[r*,r*-(e)]]- (cas)	0.07
24	17.296	1-octadecanol	0.06
25	17.641	9-hexadecenoic acid, methyl ester, (z)-	0.39
26	17.917	z-2-tetradecen-1-ol acetate	0.06
27	18.085	hexadecanoic acid, methyl ester	18.11
28	18.504	palmitoleic acid	0.43
29	18.749	1,2-benzenedicarboxylic acid, butyl octyl ester	0.13
30	19.141	n-hexadecanoic acid	17.85
31	19.424	hexadecanoic acid, ethyl ester	0.68
32	19.625	cis-10-heptadecenoic acid, methyl ester	0.18
33	19.845	cyclopropaneoctanoic acid, 2-hexyl-, methyl ester	0.21
34	20.113	isopropyl palmitate	0.13
35	20.212	heptadecanoic acid, methyl ester (cas)	0.25
36	20.738	hexadecanoic acid, 2-hydroxy-, methyl ester	0.10
37	21.067	.beta.-d-mannofuranoside, 1-o-(10-undecenyl)-	0.05

Lanjutan Tabel 3

No. Puncak	Waktu Retensi	Nama Senyawa	Area (%)
38	21.873	9,12-octadecadienoic acid (z,z)-, methyl ester (cas)	6.71
39	22.051	8,11,14-docosatrienoic acid, methyl ester (cas)	10.03
40	22.146	11-octadecenoic acid, methyl ester	1.28
41	22.245	2-hexadecen-1-ol, 3,7,11,15-tetramethyl-, [r-[r*,r*-(e)]]- (cas	0.25
42	22.615	methyl stearate	1.33
43	23.054	9,12-octadecadienoic acid (z,z)-	6.33
44	23.235	9,12,15-octadecatrienoic acid, (z,z,z)-	9.31
45	23.630	octadecanoic acid	1.34
46	24.132	1-octadecanethiol (cas)	0.09
47	24.447	2-nonyl-1-ol, diethyl acetal	0.45
48	25.561	methyl 4,7,10,13-hexadecatetraenoate	0.22
49	26.147	2-(dimethylamino)ethyl (9z,12z)-octadeca-9,12-dienoate	0.70
50	26.387	2-nonyl-1-ol, diethyl acetal	0.47
51	26.540	(-)-caryophyllene oxide	0.77
52	26.792	oxazole, 2-(8z,11z,14z)-8,11,14-heptadecatrien-1-yl-4,5-dihydro-	0.18
53	26.947	methyl 18-methylnonadecanoate	0.74
54	27.268	7-tetradecenal, (z)-	0.34
55	27.378	z,z,z-8,9-epoxyeicosa-5,11,14-trienoic acid, methyl ester	0.42
56	27.618	methyl parinarate or 9c,11t,13t,15c-18:4	0.22
57	27.808	aspidospermidin-17-ol, 1-acetyl-16-methoxy- (cas)	0.25
58	28.008	naphthalene, decahydro-1,6-dimethyl- (cas)	0.18
59	28.325	dotriacontane	0.30
60	28.695	8,11,14-docosatrienoic acid, methyl ester (cas)	0.35
61	28.892	heneicosanoic acid, methyl ester	0.12
62	29.058	(e)-((3e,6e)-nona-3,6-dienyl) 2-methylbut-2-enoate	0.09
63	29.372	2h-benzo[f]oxireno[2,3-e]benzofuran-8(9h)-one, 9-[[[2-(dimethylamino)eth	0.21
64	29.508	3-cyclopentylpropionic acid, 2-dimethylaminoethyl ester	0.08
65	30.175	ethyl 3-hydroxyoctadecanoate	0.67
66	30.517	hexadecanoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester (cas)	5.38
67	30.747	1,2-benzenedicarboxylic acid, bis(2-ethylhexyl) ester (cas)	1.00

Lanjutan Tabel 3.

No. Puncak	Waktu Retensi	Nama Senyawa	Area (%)
68	32.165	hexadecanoic acid, 1-[[[(2-aminoethoxy)hydroxyphosphinyl]oxy]methyl]-1,2-ethanediyl	0.08
69	33.208	.delta.1,.delta.-cyclohexanebutanol, .alpha.-ethynyl-	0.63
70	33.464	9,12-octadecadienoic acid (z,z)-, 2,3-dihydroxypropyl ester	4.12
71	34.008	tetracosanoic acid, methyl ester	0.20
72	35.252	2,6,10,14,18,22-tetracosahexaene, 2,6,10,15,19,23-hexamethyl-, (all-e)-	0.46
73	35.550	pentacosanoic acid, methyl ester	0.09
74	36.056	methyl 2-hydroxy-tetracosanoate	0.11
75	37.347	9,19-cyclolanost-24-en-3-ol, (3.beta.)-	0.17
76	38.886	.beta.-tocopherol	0.09
77	39.577	cholesta-4,6-dien-3-ol, benzoate, (3.beta.)-(cas)	0.08
78	39.912	cis-3,14-clerodadien-13-ol	0.16
79	40.831	vitamin e	0.68
80	43.242	campesterol	0.15

Lampiran 5. Perhitungan Data Hasil Penelitian

1. Nilai absorbansi inhibisi *acarbose* dan ekstrak kulit buah sukun terhadap enzim α-amilase secara *in vitro*

a. Nilai absorbansi *acarbose* terhadap terhadap enzim α-amilase

Konsentrasi *acarbose* (ppm)	Absorbansi
1000	2,395
3000	2,204
5000	1,925
10000	1,638

b. Nilai absorbansi ekstrak *n*-heksana kulit buah sukun (EHKS) terhadap terhadap enzim α-amilase

Konsentrasi EHKS (ppm)	Absorbansi
1000	2,516
3000	2,292
5000	2,164
10000	2,106

c. Nilai absorbansi ekstrak etil asetat kulit buah sukun (EEAKS) terhadap terhadap enzim α-amilase

Konsentrasi EEAKS (ppm)	Absorbansi
1000	2,254
3000	1,909
5000	1,851
10000	1,554

d. Nilai absorbansi ekstrak metanol kulit buah sukun (EMKS) terhadap terhadap enzim α-amilase

Konsentrasi EMKS (ppm)	Absorbansi
1000	2,210
3000	2,154
5000	1,225
10000	1,151

2. Perhitungan Rendemen Ekstrak Kulit Buah Sukun

a. Rendemen ekstrak *n*-heksana

% rendemen $= \frac{berat\ ekstrak\ (g)}{berat\ sampel\ (g)}$ x 100%

$= \frac{32,8366}{1000\ g}$ x 100%

= 3,28 %

b. Rendemen ekstrak etil asetat

% rendemen $= \frac{berat\ ekstrak\ (g)}{berat\ sampel\ (g)}$ x 100%

$= \frac{17,605}{1000\ g}$ x 100%

= 1,76 %

c. Rendemen ekstrak metanol

% rendemen $= \frac{berat\ ekstrak\ (g)}{berat\ sampel\ (g)}$ x 100%

$= \frac{82,5107}{1000\ g}$ x 100%

= 8,25 %

3. Pembuatan Larutan

a. Buffer Fosfat pH 6,8

1) Larutan stok

- Ditimbang KH_2PO_4 sebanyak 2,72 g lalu dilarutkan ke dalam 100 mL akuades (A)
- Ditimbang K_2HPO_4 sebanyak 3,48 g lalu dilarutkan ke dalam 100 mL akuades (B)
- Larutan stok A dan B kemudian dicukupkan volumenya hingga 100 mL

2) Larutan enzim α-amilase

- Larutan induk

  V_1 x M_1 = V_2 x M_2

  V_1 x 100,28 U/mL = 10 mL x 20 U/mL

  V_1 = 1,994 mL

  = 1994 μL

- Larutan enzim 1 U/mL

  V_1 x M_1 = V_2 x M_2

  V_1 x 20 U/mL = 10 mL x 1 U/mL

  V_1 = 2 mL

3) Larutan CMC 0,5%

% (b/v) $= \frac{m}{v}$ x 100%

m $= \frac{\%\left(\frac{g}{mL}\right) x\ v}{100\%}$

m $= \frac{0,5\ \%\left(\frac{g}{mL}\right) x\ 250\ mL}{100\%}$

m = 1,25 g

4. Perhitungan persentase inhibisi (%)

a. Perhitungan persentase inhibisi (%) ekstrak *n*-heksana kulit buah sukun

1) Ekstrak *n*-heksana kulit buah sukun 1000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616 - 2,516}{2,616}$ x 100%

= 3,82%

2) Ekstrak *n*-heksana kulit buah sukun 3000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-2,292}{2,616}$ x 100%

= 12,38%

3) Ekstrak *n*-heksana kulit buah sukun 5000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-2,164}{2,616}$ x 100%

= 17,27%

4) Ekstrak *n*-heksana kulit buah sukun 10000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-2,106}{2,616}$ x 100%

= 19,49%

b. Perhitungan persentase inhibisi (%) ekstrak etil asetat kulit buah sukun

1) Ekstrak etil asetat kulit buah sukun 1000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-2,254}{2,616}$ x 100%

= 13,38%

2) Ekstrak etil asetat kulit buah sukun 3000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-1,909}{2,616}$ x 100%

= 27,02%

3) Ekstrak etil asetat kulit buah sukun 5000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-1,851}{2,616}$ x 100%

= 29,24%

4) Ekstrak etil asetat kulit buah sukun 10000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-1,554}{2,616}$ x 100%

= 40,59%

c. Perhitungan persentase inhibisi (%) ekstrak metanol kulit buah sukun

1) Ekstrak metanol kulit buah sukun 1000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-2,210}{2,616}$ x 100%

= 15,51%

2) Ekstrak metanol kulit buah sukun 3000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2,616-2,154}{2,616}$ x 100%

= 17,66%

3) Ekstrak metanol kulit buah sukun 5000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2{,}616 - 1{,}225}{2{,}616}$ x 100%

= 53,17%

4) Ekstrak metanol kulit buah sukun 10000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2{,}616 - 1{,}151}{2{,}616}$ x 100%

= 56%

d. Perhitungan persentase inhibisi (%) *acarbose* (kontrol positif)

1) *Acarbose* 1000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2{,}616 - 2{,}395}{2{,}616}$ x 100%

= 8,44%

2) *Acarbose* 3000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2{,}616 - 2{,}204}{2{,}616}$ x 100%

= 15,74%

3) *Acarbose* 5000 ppm

inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2{,}616 - 1{,}925}{2{,}616}$ x 100%

= 26,41%

4) *Acarbose* 10000 ppm

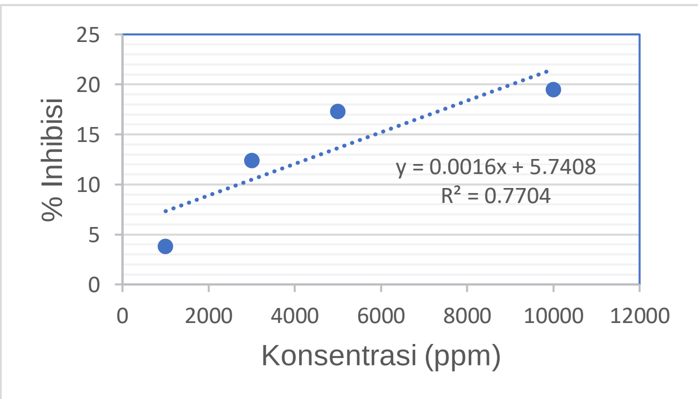
inhibisi (%) $= \frac{absorbansi\ kontrol - absorbansi\ sampel}{absorbansi\ kontrol}$ x 100%

$= \frac{2{,}616 - 1{,}638}{2{,}616}$ x 100%

= 37,38%

5. Perhitungan nilai IC_{50}

a. Perhitungan nilai IC_{50} ekstrak *n*-heksana kulit buah sukun

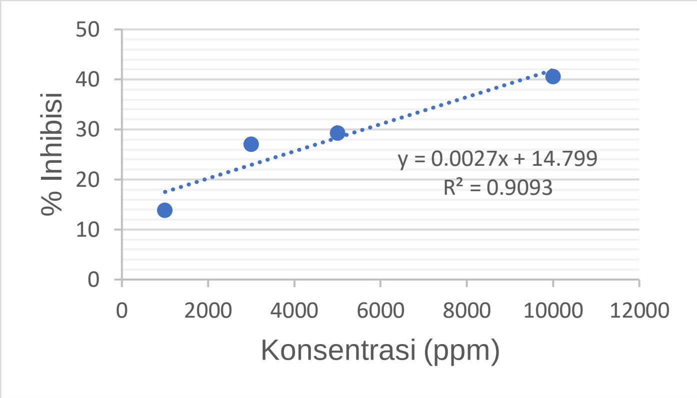


$IC_{50} = \frac{50 - a}{b}$

$IC_{50} = \frac{50 - 5.7408}{0.7704}$

IC_{50} = 57,44

b. Perhitungan nilai IC_{50} ekstrak etil asetat kulit buah sukun

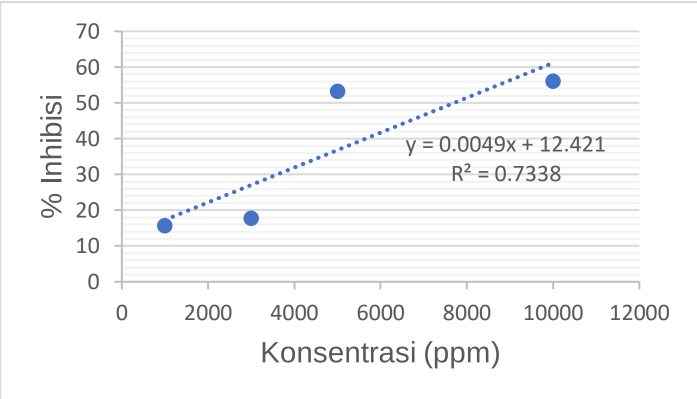


$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-14.799}{0.9093}$

$IC_{50} = 38{,}71$

c. Perhitungan nilai IC_{50} ekstrak metanol kulit buah sukun

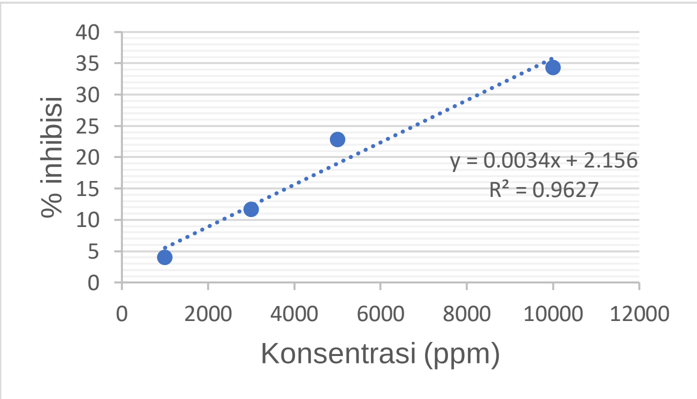


$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-12.421}{0.7338}$

$IC_{50} = 51{,}21$

d. Perhitungan nilai IC_{50} *acarbose* sebagai pembanding



$IC_{50} = \frac{50-a}{b}$

$IC_{50} = \frac{50-2.156}{0.9627}$

$IC_{50} = 49{,}69$

6. Perhitungan Dosis dan Volume Pemberian Sediaan Uji

a. Larutan Aloksan Dosis 150 mg/kg BB

Dosis = 150mg/kg BB

= 0,15 g/kg BB

Timbang 0,15g/kg BB aloksan, kemudian disuspensikan dengan CMC 0,5% dalam 10 mL

Dosis untuk mencit 20 g = $\frac{20\ g}{1000\ g}$ x 0,15 g = 0,003 g

Maka, volume pemberian = $\frac{0{,}003\ g}{0{,}15\ g}$ x 10 mL = 0,2 mL

b. Larutan Ekstrak dosis 100 mg/kg BB

Dosis = 100mg/kg BB

= 0,1g/kg BB

Timbang 0,1g/kg BB ekstrak KBS, kemudian disuspensikan dengan CMC 0,5% dalam 10 mL

Dosis untuk mencit 20 g = $\frac{20\ g}{1000\ g}$ x 0,1 g = 0,002 g

Maka, volume pemberian = $\frac{0{,}002\ g}{0{,}1\ g}$ x 10 mL = 0,2 mL

c. Larutan Ekstrak Dosis 200 mg/kg BB

Dosis = 200mg/kg BB

= 0,2 g/kg BB

Timbang 0,2g/kg BB ekstrak KBS, kemudian disuspensikan dengan CMC 0,5% dalam 10 mL

Dosis untuk mencit 20 g = $\frac{20\ g}{1000\ g}$ x 0,2 g = 0,004 g

Maka, volume pemberian = $\frac{0{,}004\ g}{0{,}2\ g}$ x 10 mL = 0,2 mL

d. Larutan Ekstrak Dosis 300 mg/kg BB

Dosis = 300mg/kg BB

= 0,3g/kg BB

Timbang 0,3g/kg BB ekstrak KBS, kemudian disuspensikan dengan CMC 0,5% dalam 10 mL

Dosis untuk mencit 20 g = $\frac{20\ g}{1000\ g}$ x 0,3 g = 0,006 g

Maka, volume pemberian = $\frac{0{,}006\ g}{0{,}3\ g}$ x 10 mL = 0,2 mL

e. *Acarbose*

Dosis Lazim Acarbose = 50 mg/kg BB

Faktor konversi dari manusia ke mencit = 0,0026

Dosis untuk mencit 20 g = FK x DL

= 0,0026 x 50

= 0,13mg/20g BB

BE (Bobot Etiket) = 100 mg

Berat rata-rata = $\frac{5.0112\ g}{20}$

= 250 g

Dosis Hitung = $\frac{0{,}13\ mg}{0{,}2\ mL}$ x 10 mL

= 6,5 mg

Dosis Timbang $= \frac{DH}{BE}$ x Br

$= \frac{6,5\ mg}{100\ mg}$ x 250 g

= 16,25 mg / 10 mL

= 0,016 g / 10 mL

7. Perhitungan Persen (%) Penurunan Kadar Gula Darah (KGD) Hewan Uji

a. Kelompok 1 (pemberian CMC 0,5%)

Tabel 1. Hasil pengukuran KGD Mencit Kelompok 1

Kode Mencit	D0	D3	D7	D10
1A	108	196	172	119
1B	77	177	170	196
1C	71	600	600	600
1D	49	125	125	126

Persen penurunan KGD = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

1) Persen penurunan KGD 1A = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

= $\frac{196-119}{196}$ x 100

= 39,28%

2) Persen penurunan KGD 1B = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

= $\frac{177-196}{177}$ x 100

= -10,73%

3) Persen penurunan KGD 1C = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

= $\frac{600-600}{600}$ x 100

= 0

4) Persen penurunan KGD 1D = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

= $\frac{125-126}{125}$ x 100

= -0,8

b. Kelompok 2 (pemberian *acarbose*)

Tabel 2. Hasil pengukuran KGD Mencit Kelompok 2

Kode Mencit	D0	D3	D7	D10
2A	87	182	155	152
2B	81	557	407	99
2C	79	457	422	209
2D	83	196	157	119

Persen penurunan KGD = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

1) Persen penurunan KGD 2A = $\frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{182-152}{182}$ x 100

= 16,48%

2) Persen penurunan KGD 2B $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{557-99}{557}$ x 100

= 82,22%

3) Persen penurunan KGD 2C $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{457-209}{457}$ x 100

= 54,26%

4) Persen penurunan KGD 2D $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{196-119}{196}$ x 100

= 39,28%

c. Kelompok 3 (pemberian ekstrak etil asetat KBS dosis 100mg/kg)

Tabel 3. Hasil pengukuran KGD Mencit Kelompok 3

Kode Mencit	D0	D3	D7	D10
3A	61	186	156	150
3B	68	185	150	150
3C	62	600	532	527
3D	Mati	-	-	-

Persen penurunan KGD $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

1) Persen penurunan KGD 3A $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{186-150}{186}$ x 100

= 19,35%

2) Persen penurunan KGD 3B $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{185-150}{185}$ x 100

= 18,91%

3) Persen penurunan KGD 3C $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{600-527}{600}$ x 100

= 12,17%

d. Kelompok 4 (pemberian ekstrak etil asetat KBS dosis 200mg/kg)

Tabel 4. Hasil pengukuran KGD Mencit Kelompok 4

Kode Mencit	D0	D3	D7	D10
4A	64	561	534	510
4B	67	600	556	472
4C	91	385	311	272

4D	62	220	216	143

Persen penurunan KGD $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

1) Persen penurunan KGD 4A $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{561-510}{561}$ x 100

= 9,09%

2) Persen penurunan KGD 4B $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{600-472}{600}$ x 100

= 21,34%

3) Persen penurunan KGD 4C $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{385-272}{385}$ x 100

= 29,35%

4) Persen penurunan KGD 4D $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{220-143}{220}$ x 100

= 35%

e. Kelompok 5 (pemberian ekstrak etil asetat KBS dosis 300mg/kg)

Tabel 5. Hasil pengukuran KGD Mencit Kelompok 5

Kode Mencit	D0	D3	D7	D10
5A	64	600	211	165
5B	99	600	500	312
5C	71	600	512	436
5D	108	353	158	148

Persen penurunan KGD $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

1) Persen penurunan KGD 5A $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{600-165}{600}$ x 100

= 72,5%

2) Persen penurunan KGD 5B $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{600-312}{600}$ x 100

= 48%

3) Persen penurunan KGD 5C $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{600-436}{600}$ x 100

= 27,34%

4) Persen penurunan KGD 5D $= \frac{\text{KGD(D3)} - \text{KGD setelah perlakuan (D10)}}{\text{KGD (D3)}}$ x 100%

$= \frac{353-148}{353}$ x 100

= 58,07%

Lampiran 6. Dokumentasi Penelitian

Kulit Buah Sukun (KBS)

Kulit Buah Sukun Kering

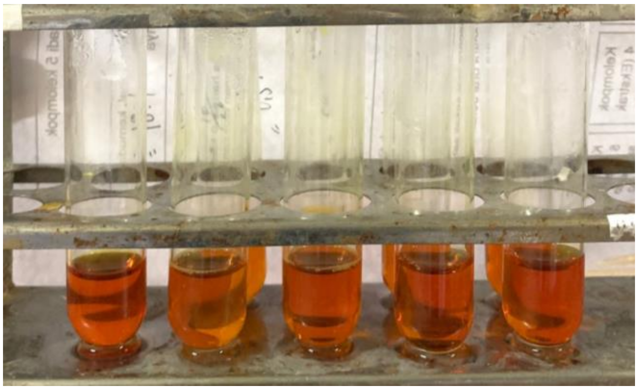
Serbuk Kulit Buah Sukun

Proses Maserasi KBS

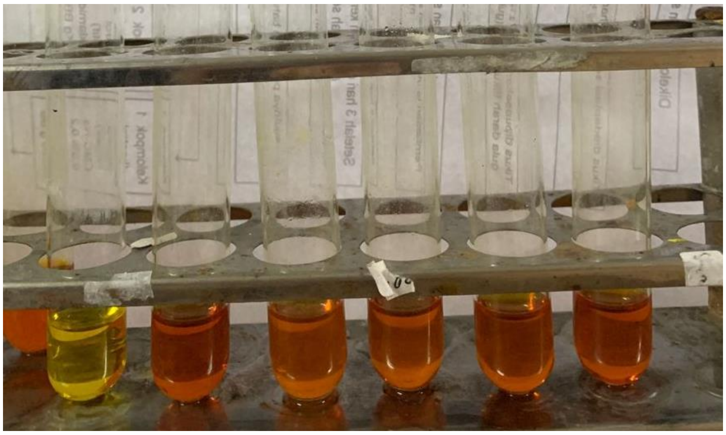
Proses Evaporasi

Ekstrak Kental KBS

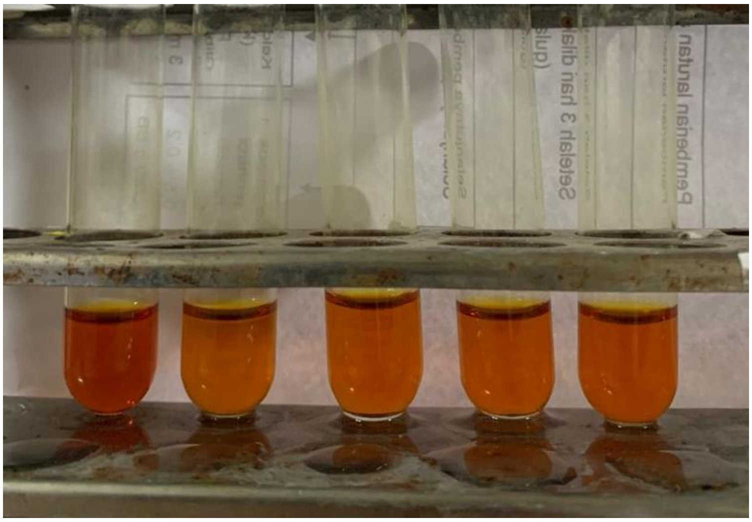
1. **Hasil Dokumentasi Uji aktivitas inhibisi enzim α-amilase dengan sampel (ekstrak *n*-heksana, etil asetat dan metanol KBS serta *acarbose*) secara *in vitro***



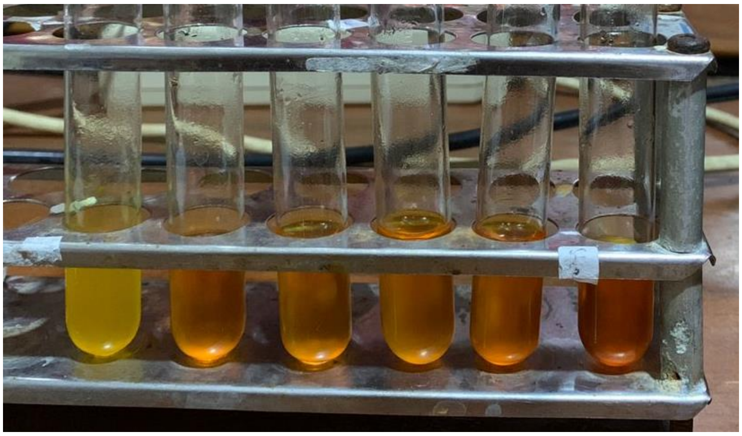
Uji aktivitas inhibisi enzim α-amilase dengan ekstrak *n*-heksana KBS



Uji aktivitas inhibisi enzim α-amilase dengan ekstrak etil asetat KBS



Uji aktivitas inhibisi enzim α-amilase dengan ekstrak metanol KBS



Uji aktivitas inhibisi enzim α-amilase dengan *acarbose*

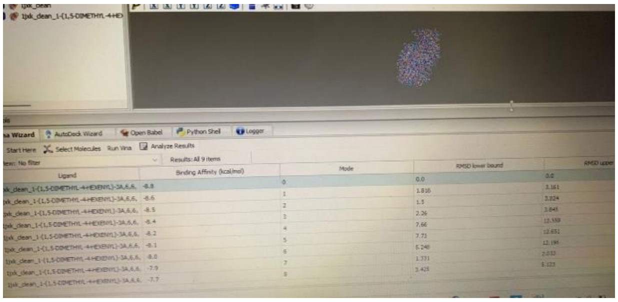
2. Hasil Dokumentasi Uji aktivitas sampel (*carboxymethyl cellulose*, ekstrak etil asetat dan *acarbose*) terhadap mencit secara *in vivo*

Proses adaptasi mencit

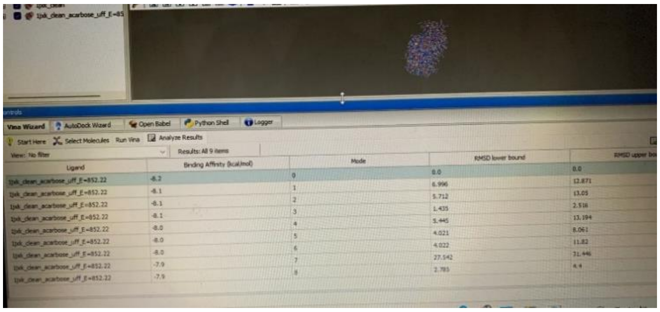
Pemberian sampel (*carboxymethyl cellulose*, ekstrak etil asetat dan *acarbose*) secara oral untuk tiap kelompok

Proses pengukuran kadar gula darah mencit

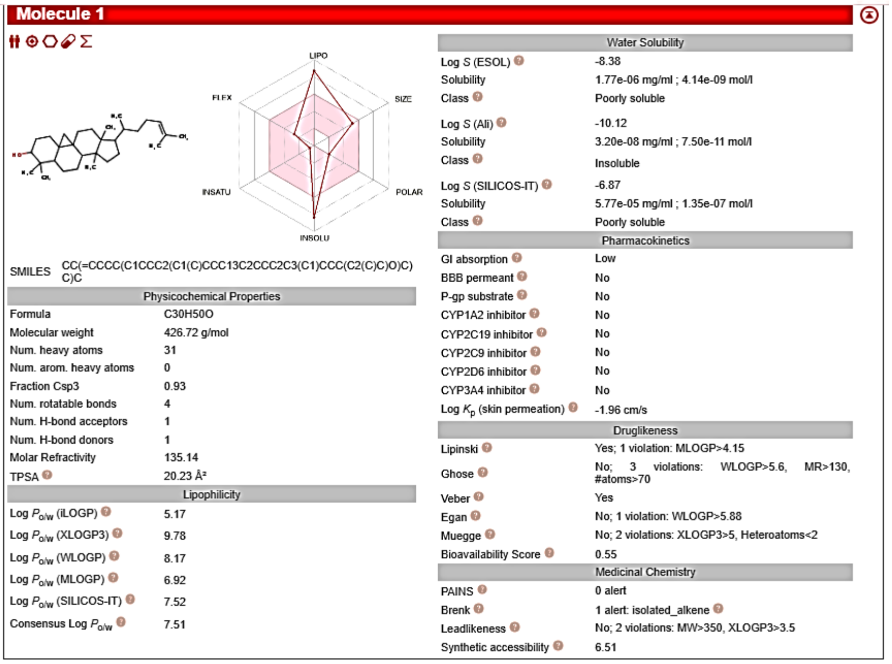
3. Hasil Dokumentasi Uji senyawa dominan dari ekstrak etil asetat KBS terhadap enzim α-amilase secara *in silico*



RMSD hasil *redocking* sikloartenol



RMSD hasil *redocking acarbose*



SMILES CC(=CCCC(C1CCC2(C1(C)CCC13C2CCC2C3(C1)CCC(C2(C)C)O)C)C)C

Physicochemical Properties	
Formula	C30H50O
Molecular weight	426.72 g/mol
Num. heavy atoms	31
Num. arom. heavy atoms	0
Fraction Csp3	0.93
Num. rotatable bonds	4
Num. H-bond acceptors	1
Num. H-bond donors	1
Molar Refractivity	135.14
TPSA	20.23 Å²

Lipophilicity	
Log $P_{o/w}$ (iLOGP)	5.17
Log $P_{o/w}$ (XLOGP3)	9.78
Log $P_{o/w}$ (WLOGP)	8.17
Log $P_{o/w}$ (MLOGP)	6.92
Log $P_{o/w}$ (SILICOS-IT)	7.52
Consensus Log $P_{o/w}$	7.51

Water Solubility	
Log *S* (ESOL)	-8.38
Solubility	1.77e-06 mg/ml ; 4.14e-09 mol/l
Class	Poorly soluble
Log *S* (Ali)	-10.12
Solubility	3.20e-08 mg/ml ; 7.50e-11 mol/l
Class	Insoluble
Log *S* (SILICOS-IT)	-6.87
Solubility	5.77e-05 mg/ml ; 1.35e-07 mol/l
Class	Poorly soluble

Pharmacokinetics	
GI absorption	Low
BBB permeant	No
P-gp substrate	No
CYP1A2 inhibitor	No
CYP2C19 inhibitor	No
CYP2C9 inhibitor	No
CYP2D6 inhibitor	No
CYP3A4 inhibitor	No
Log K_p (skin permeation)	-1.96 cm/s

Druglikeness	
Lipinski	Yes; 1 violation: MLOGP>4.15
Ghose	No; 3 violations: WLOGP>5.6, MR>130, #atoms>70
Veber	Yes
Egan	No; 1 violation: WLOGP>5.88
Muegge	No; 2 violations: XLOGP3>5, Heteroatoms<2
Bioavailability Score	0.55

Medicinal Chemistry	
PAINS	0 alert
Brenk	1 alert: isolated_alkene
Leadlikeness	No; 2 violations: MW>350, XLOGP3>3.5
Synthetic accessibility	6.51

Hasil analisis ADME Sikloartenol