LAMPIRAN

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Lampiran 1. Perhitungan Parameter Lingkungan (Kecerahan)

$$D = \frac{D1 + D2}{2}$$

$$D = \frac{6 + 2}{2}$$

D = 4 meter

Lampiran 2. Penyusutan kadar air

$$\text{Kadar air} = \frac{(\text{bobot awal} - \text{bobot akhir})}{\text{bobot awal}} \times 100\%$$

$$= \frac{(13-11)}{13} \times 100\%$$

= 15,39%

Lampiran 3. Perhitungan persentase rendemen ekstrak sampel *Turbinaria ornata*

$$\text{Rendemen (\%)} = \frac{\text{berat ekstak}}{\text{berat sampel}} \times 100\%$$

Berat sampel yang diekstraksi sebanyak 200 gram

1. Persentase rendemen ekstrak n-heksan

$$\text{Rendemen (\%)} = \frac{200}{2{,}82} \times 100\%$$

= 1,41%

2. Persentase rendemen ekstrak etil asetat

$$\text{Rendemen (\%)} = \frac{200}{3{,}09} \times 100\%$$

= 1,545%

3. Persentase rendemen ekstrak metanol

$$\text{Rendemen (\%)} = \frac{200}{3{,}19} \times 100\%$$

= 1,595%

Lampiran 4. Pembuatan larutan induk dan pengenceran bertingkat

A. Pembuatan larutan induk ekstrak *Turbinaria ornata*, fraksi gabungan, dan asam askorbat

Larutan induk 2000 ppm = 2000 µg/ml

= 0,02 gr/10 ml

$\frac{0{,}02\ \text{gram}}{10\ \text{ml}}$ x 10^6 = 2000 ppm

Dari larutan induk 2000 ppm diencerkan secara beringkat menjadi 5 konsentrasi, masing-masing sebesar 1000 ppm, 500 ppm, 250 ppm, 125 ppm, dan 62,5 ppm

B. Pengenceran Bertingkat

1. 1000 ppm

M1 x V1 = M2 x V2

2000 ppm x V1 = 1000 ppm x 2 ml

V1 = 1 ml

2. 500 ppm

M1 x V1 = M2 x V2

1000 ppm x V1 = 500 ppm x 2 ml

V1 = 1 ml

3. 250 ppm

M1 x V1 = M2 x V2

500 ppm x V1 = 250 ppm x 2 ml

V1 = 1 ml

1. 125 ppm

M1 x V1 = M2 x V2

250 ppm x V1 = 125 ppm x 2 ml

V1 = 1 ml

1. 62,5 ppm

M1 x V1 = M2 x V2

125 ppm x V1 = 62,5 ppm x 2 ml

V1 = 1 ml

Lampiran 5. Tabel Nilai Absorbansi dan %Inhibisi Ekstrak N-Heksan, Etil Asetat, Metanol, Vitamin C, dan Fraksi Gabungan

1. ekstrak n-heksan

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
N-Heksan	62.5	0.531	0.591	0.586	0.569	50.521	1.8	5.03	1.3826	24.13
	125	0.531	0.546	0.528	0.535	53.505	2.1	5.10		
	250	0.511	0.535	0.514	0.520	54.809	2.4	5.13		
	500	0.5	0.498	0.508	0.502	56.344	2.7	5.15		
	1000	0.486	0.499	0.488	0.491	57.358	3.0	5.18		
BLANCO	1.228									
	1.122									
	1.102									
Rerata	1.151									

2. ekstrak etil

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
Etil Asetat	62.5	0.112	0.128	0.118	0.119	82.502	1.8	5.95	0.4548	2.85
	125	0.094	0.118	0.106	0.106	84.457	2.1	5.99		
	250	0.091	0.09	0.08	0.087	87.243	2.4	6.13		
	500	0.07	0.053	0.077	0.067	90.225	2.7	6.28		
	1000	0.023	0.018	0.042	0.028	95.943	3.0	6.75		
BLANCO	0.662									
	0.690									
	0.694									
Rerata	0.682									

3. ekstrak metanol

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
Metanol	62.5	0.356	0.337	0.354	0.349	40.847	1.8	4.77	2.5161	328.16
	125	0.353	0.333	0.342	0.343	41.921	2.1	4.8		
	250	0.327	0.291	0.313	0.310	47.401	2.4	4.92		
	500	0.296	0.286	0.276	0.286	51.525	2.7	5.05		
	1000	0.243	0.239	0.242	0.241	59.096	3.0	5.23		
BLANCO	0.569									
	0.590									
	0.611									
Rerata	0.59									

4. Vitamin C

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
Vit C	0.98	0.348	0.398	0.372	0.373	35.450	0.0	4.61	0.00709	1.016
	1.95	0.144	0.071	0.172	0.129	77.656	0.3	5.77		
	3.91	0.141	0.035	0.035	0.070	87.818	0.6	6.13		
	7.81	0.028	0.034	0.034	0.032	94.457	0.9	6.55		
	15.63	0.026	0.027	0.026	0.026	95.439	1.2	6.64		

BLANCO	0.590
	0.620
	0.522
Rerata	0.577

Lampiran 6. Tabel Nilai Absorbansi dan %Inhibisi Fraksi Gabungan, Vit C

1. Fraksi Gabungan 1

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 1	62.5	0.442	0.454	0.468	0.455	12.170	1.8	3.82	2.5323	340.64
	125	0.357	0.437	0.42	0.405	21.829	2.1	4.23		
	250	0.227	0.373	0.392	0.331	36.124	2.4	4.64		
	500	0.054	0.259	0.249	0.187	63.812	2.7	5.36		
	1000	0.037	0.150	0.141	0.109	78.880	3.0	5.81		

BLANCO	0.480
	0.722
	0.351
Rerata	0.518

2. fraksi gabungan 2

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 2	62.5	0.453	0.459	0.434	0.449	52.539	1.8	5.08	1.2137	16.36
	125	0.388	0.390	0.376	0.385	59.309	2.1	5.23		
	250	0.381	0.384	0.368	0.378	60.049	2.4	5.25		
	500	0.378	0.369	0.351	0.366	61.283	2.7	5.28		
	1000	0.350	0.359	0.308	0.339	64.140	3.0	5.36		

BLANCO	0.910
	0.948
	0.978
Rerata	0.945

3. Fraksi gabungan 3

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 3	62.5	0.531	0.504	0.511	0.515	39.158	1.8	4.72	3.2670	1849.27
	125	0.522	0.501	0.508	0.510	39.748	2.1	4.75		
	250	0.488	0.493	0.485	0.489	42.306	2.4	4.80		
	500	0.466	0.446	0.464	0.459	45.848	2.7	4.90		
	1000	0.457	0.423	0.432	0.437	48.367	3.0	4.95		

BLANCO	0.870
	0.842
	0.829
Rerata	0.847

4. fraksi gabungan 4

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 4	62.5	0.133	0.156	0.164	0.151	87.053	1.8	6.13	0.0559	1.14
	125	0.126	0.136	0.133	0.132	88.711	2.1	6.23		
	250	0.072	0.071	0.069	0.071	93.941	2.4	6.55		
	500	0.055	0.055	0.054	0.055	95.313	2.7	6.64		
	1000	0.036	0.037	0.035	0.036	96.913	3.0	6.88		

BLANCO	1.071
	1.191
	1.237
Rerata	1.166

5. fraksi gabungan 5

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 5	62.5	0.332	0.321	0.307	0.320	64.563	1.8	5.39	0.3073	2.03
	125	0.326	0.315	0.301	0.314	65.227	2.1	5.39		
	250	0.284	0.284	0.292	0.287	68.254	2.4	5.47		
	500	0.257	0.246	0.236	0.246	72.721	2.7	5.61		
	1000	0.233	0.238	0.228	0.233	74.197	3.0	5.64		

BLANCO	0.893
	0.913
	0.903
Rerata	0.903

6. fraksi gabungan 6

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 6	62.5	0.437	0.445	0.460	0.447	56.863	1.8	5.23	0.6686	4.66
	125	0.303	0.288	0.293	0.295	71.585	2.1	5.58		
	250	0.302	0.278	0.285	0.288	72.195	2.4	5.58		
	500	0.272	0.276	0.276	0.275	73.513	2.7	5.64		
	1000	0.261	0.252	0.255	0.256	75.313	3.0	5.67		

BLANCO	1.052
	0.995
	1.064
Rerata	1.037

7. fraksi gabungan 7

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 7	62.5	0.423	0.442	0.424	0.430	53.449	1.8	5.08	0.9527	8.97
	125	0.418	0.397	0.396	0.404	56.266	2.1	5.15		
	250	0.418	0.397	0.376	0.397	56.988	2.4	5.18		
	500	0.401	0.384	0.375	0.387	58.108	2.7	5.20		
	1000	0.399	0.376	0.366	0.380	58.794	3.0	5.23		

BLANCO	0.993
	0.820
	0.956
Rerata	0.923

8. fraksi gabungan 8

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
FG 8	62.5	0.459	0.538	0.434	0.477	56.010	1.8	5.15	0.2711	1.87
	125	0.449	0.444	0.423	0.439	59.545	2.1	5.25		
	250	0.447	0.442	0.414	0.434	59.945	2.4	5.25		
	500	0.44	0.441	0.4	0.427	60.621	2.7	5.28		
	1000	0.432	0.420	0.371	0.408	62.404	3.0	5.31		

BLANCO	1.095
	1.088
	1.070
Rerata	1.084

9. Vitamin C

Sampel	K (ppm)	Absorbansi			rerata	%Inhibisi	Log K	Probit	Log ic50(x)	IC50
		1	2	3						
Vitamin C	0.98	0.255	0.292	0.289	0.279	49.086	0.0	4.97	0.06001	1.148
	1.95	0.249	0.286	0.258	0.264	51.705	0.3	5.05		
	3.91	0.093	0.092	0.089	0.091	83.313	0.6	5.95		
	7.81	0.038	0.039	0.039	0.039	92.935	0.9	6.48		
	15.63	0.036	0.038	0.038	0.037	93.179	1.2	6.48		

BLANCO	0.525
	0.518
	0.599
Rerata	0.547333333

Lampiran 7. Pengambilan, preparasi, maserasi, dan evaporasi sampel

Pengambilan sampel

pengukuran kualitas perairan

Pengeringan dan penghalusan sampel

Maserasi dan evaporasi sampel

Lampiran 8. Isolasi dan Purifikasi Menggunakan Kromatografi Kolom Gravitasi

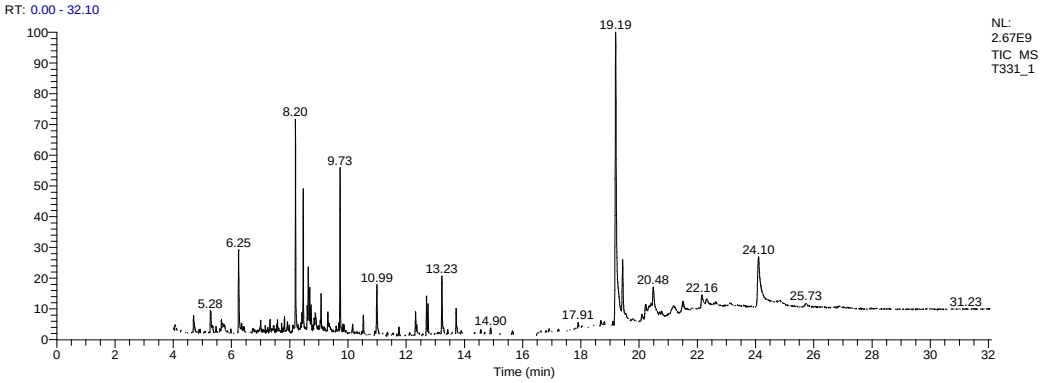
Senyawa turun dengan fase gerak dan hasil kolom

Lampiran 9. Uji DPPH

Penimbangan sampel, kristal DPPH, dan larutan stok induk

Pengujian DPPH, dan Uji Spektrofotometri UV-Vis

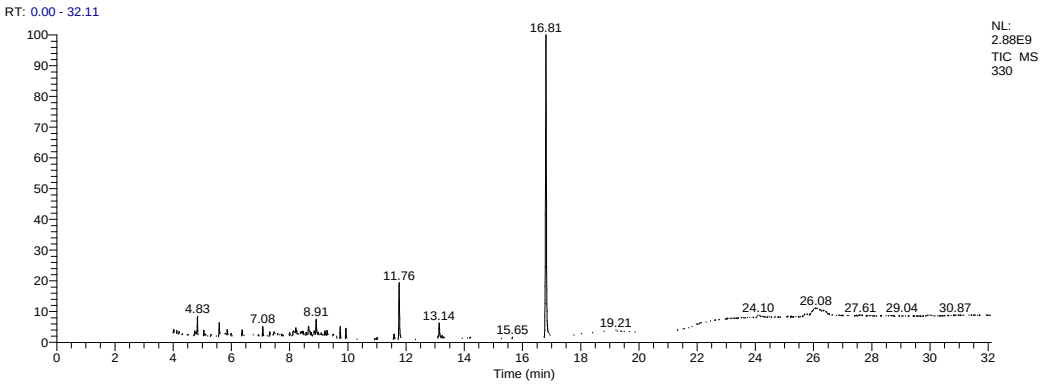
Lampiran 10. Hasil Uji GC-MS N-Heksan (Excel)



RT	Peak Area	Peak Height	Area %	S/N
4.70	469740689.77	117018392.55	1.33	2532.91
5.29	663026682.52	170528133.82	1.88	3691.14
5.69	274023063.16	77765358.08	0.78	1683.26
6.25	1295391996.44	516746489.05	3.68	11185.17
7.00	276167818.86	69535816.57	0.78	1505.13
7.58	278581065.89	68259036.19	0.79	1477.49
8.20	2336964161.73	1060172097.74	6.64	22947.81
8.46	1783929148.55	720249918.19	5.07	15590.07
8.64	1952594939.32	420737512.56	5.55	9107.02
8.89	612925843.04	117344009.35	1.74	2539.95
9.08	531980381.32	191342174.06	1.51	4141.67
9.31	493214305.30	124905547.42	1.40	2703.63
9.73	1894732413.50	898165764.94	5.38	19441.13
10.53	348522930.56	121350119.15	0.99	2626.67
10.99	1096565224.48	350931260.96	3.11	7596.04
12.32	539775379.58	149685357.36	1.53	3239.99
12.70	462779183.12	233538526.68	1.31	5055.03

12.75	450947431.86	195288798.14	1.28	4227.10
13.23	1011772413.04	371396497.45	2.87	8039.01
13.72	372980202.50	149487756.26	1.06	3235.72
19.20	8647025639.55	2188565215.92	24.56	47372.29
19.44	1689085512.88	444842756.48	4.80	9628.78
20.22	470191506.42	112677434.92	1.34	2438.94
20.35	456850626.55	96753471.41	1.30	2094.26
20.49	1688248150.99	229735796.15	4.79	4972.72
21.18	765840877.25	69380264.56	2.17	1501.76
21.50	613537499.44	87796023.77	1.74	1900.38
22.16	531797387.68	100614935.38	1.51	2177.85
22.32	376988624.85	60050726.68	1.07	1299.82
24.10	2825957422.06	394321577.50	8.03	8535.23

Lampiran 11. **Hasil Uji GCMS Etil-Asetat (Excel)**



RT	Peak Area	Peak Height	Area %	S/N
11.76	1058376016.04	408096484.71	11.56	11391.76
13.14	392362234.62	114748756.69	4.29	3203.14
16.81	6633600613.05	2341143995.02	72.47	65351.59
26.07	1069142295.69	60554777.37	11.68	1690.35