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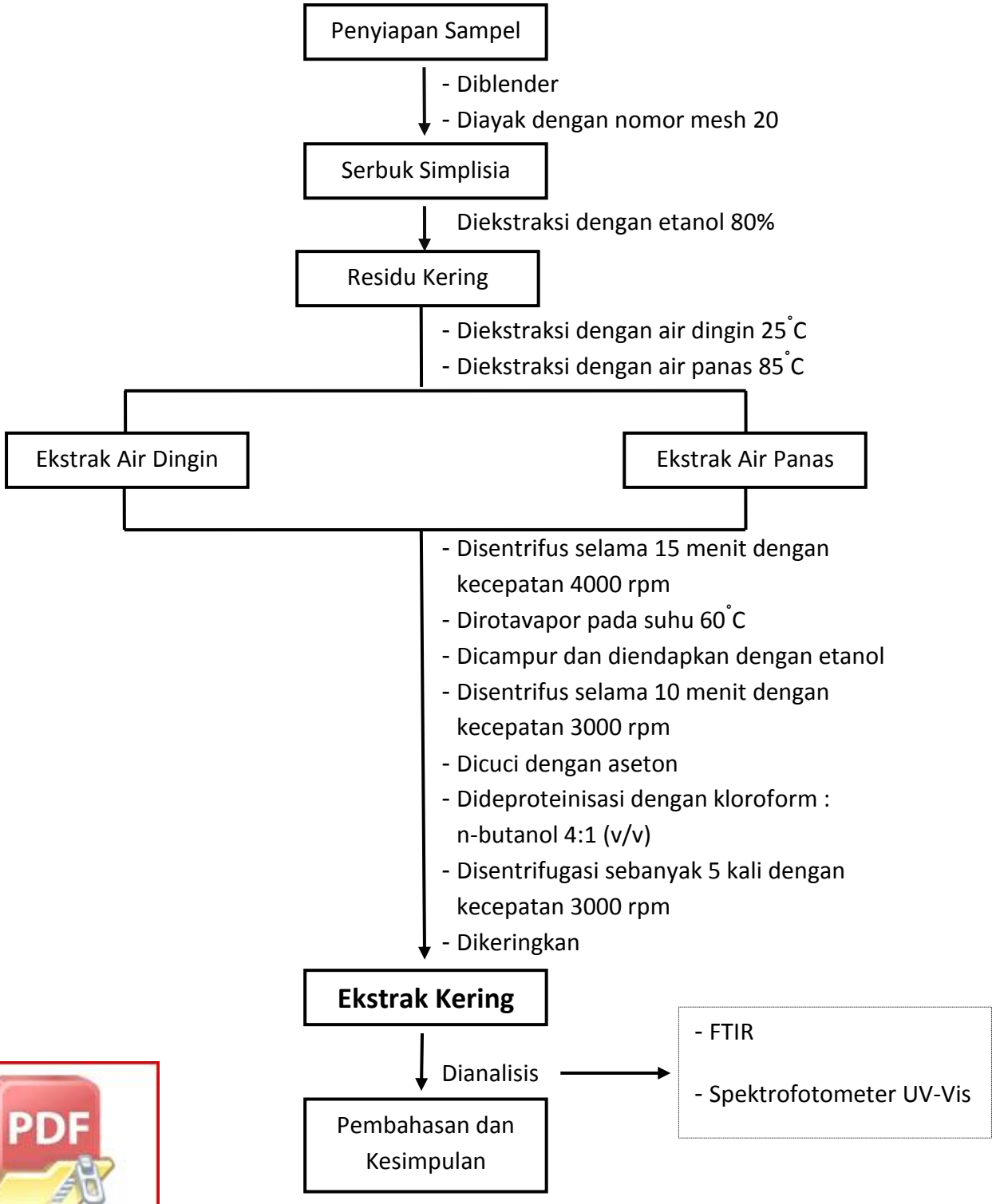
LAMPIRAN

Lampiran 1.Skema Kerja



Lampiran 2. Perhitungan

1. Perhitungan % Rendemen

Perhitungan rendemen Alga Coklat *Sargassum sp*

- Ekstrak Air Panas

$$\text{Rendemen} = \frac{berat\ \ ekstrak\ \ (g)}{berat\ \ sampel\ \ kering\ \ (g)} \text{ x100\%}$$

$$= \frac{3{,}0955}{70} \text{ x } 100\%$$

$$= 4{,}4221\%$$

- Ekstrak Air Dingin

$$\text{Rendemen} = \frac{berat\ \ ekstrak\ \ (g)}{berat\ \ sampel\ \ kering\ \ (g)} \text{x100\%}$$

$$= \frac{3{,}3684}{70} \text{x100\%}$$

$$= 4{,}8120\%$$

2. Perhitungan Nilai Rf

$$\text{Nilai Rf} = \frac{Jarak\ \ titik\ \ pusat\ \ bercak\ \ dari\ \ titik\ \ awal}{Jarak\ \ garis\ \ depan\ \ dari\ \ titik\ \ awal}$$

- Rf ekstrak air dingin (A) $= \frac{4{,}5\ \text{cm}}{7\ \text{cm}} = 0{,}64$ cm
- Rf ekstrak air panas (B) $= \frac{5{,}6\ \text{cm}}{7\ \text{cm}} = 0{,}8$ cm

3. Perhitungan % Kadar

ahui hasil pengukuran sampel dengan metode spektrofotometer
s sebagai berikut :

Nama Sampel	Absorbansi
Ekstrak Air Panas 1	0,454
Ekstrak Air Panas 2	0,475
Ekstrak Air Panas 3	0,461
Ekstrak Air Dingin 1	0,494
Ekstrak Air Dingin 2	0,500
Ekstrak Air dingin 3	0,507

Dari perhitungan kurva baku diperoleh persamaan regresi linear y = 0,00216 x + 0,00775

- Ekstrak Air Panas 1

  y = 0,00216 x + 0,00775

  0,454 = 0,00216 x + 0,00775

  0,00216 x = 0,454–0,00775

  $$x = \frac{0,454-0,00775}{0,00216}$$

  x = 206,59 bpj

  x = 20,66 mg/100 mL

% Kadar Ekstrak Air Panas 1 $= \frac{20,66}{100}$ x 100%

= 20,66%

- Ekstrak Air Panas 2

  y = 0,00216 x + 0,00775

  0,475 = 0,00216 x + 0,00775

  0,00216 x = 0,475 – 0,00775

  $$x = \frac{0,475-0,00775}{0,00216}$$

  x = 216,33 bpj

  x = 21,63 mg/100 mL

% Kadar Ekstrak Air Panas 2 = $\frac{21,63}{100}$ x 100%

= 21,63%

- Ekstrak Air Panas 3

y = 0,00216 x + 0,00775

0,461 = 0,00216 x + 0,00775

0,00216 x = 0,461– 0,00775

x = $\frac{0,461-0,00775}{0,00216}$

x = 209,83 bpj

x = 20,98 mg/100 mL

% Kadar Ekstrak Air Panas 3 = $\frac{20,98}{100}$ x 100%

= 20,98%

- Ekstrak Air Dingin 1

y = 0,00216 x + 0,00775

0,494 = 0,00216 x + 0,00775

0,00216 x = 0,494 – 0,00775

x = $\frac{0,494-0,00775}{0,00216}$

x = 225,11 bpj

x = 22,51 mg/100 mL

% Kadar Ekstrak Air Dingin 1 = $\frac{22,51}{100}$ x 100%

= 22,51%

- Ekstrak Air Dingin 2

y = 0,00216 x + 0,00775

0,500 = 0,00216 x + 0,00775

0,00216 x = 0,500– 0,00775

$$x = \frac{0,500 - 0,00775}{0,00216}$$

x = 227, 89 bpj

x = 22,79 mg/100 mL

% Kadar Ekstrak Air Dingin 2 $= \frac{22,79}{100}$ x 100%

= 22,79%

- Ekstrak Air Dingin 3

y = 0,00216 x + 0,00775

0,507 = 0,00216 x + 0,00775

0,00216 x = 0,507– 0,00775

$$x = \frac{0,507 - 0,00775}{0,00216}$$

x = 231,13 bpj

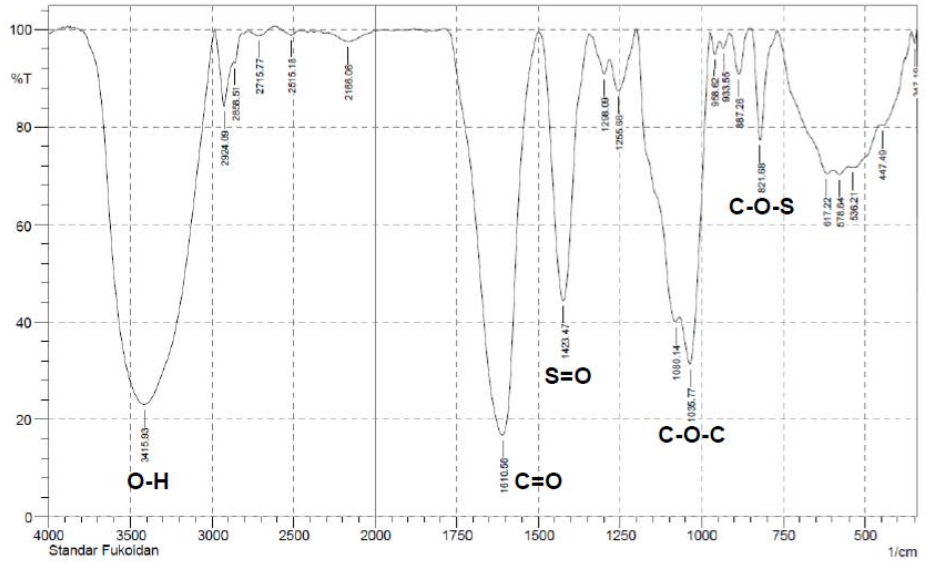
x = 23,11 mg/100 mL

% Kadar Ekstrak Air Dingin 3 $= \frac{23,11}{100}$ x 100%

= 23,11%

Lampiran 3.Profil Hasil FTIR dan Spektrofotometer UV-Vis

SHIMADZU



	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	347.19	97.178	2.658	356.83	341.4	0.112	0.098
2	447.49	80.316	1.132	453.27	378.05	5.361	0.888
3	536.21	71.735	1.372	549.71	455.2	12.047	0.85
4	578.64	70.237	1.208	596	551.64	6.615	0.161
5	617.22	70.469	3.936	767.67	597.93	15.677	2.908
6	821.68	77.346	22.869	850.61	769.6	3.28	3.327
7	887.26	90.806	9.024	914.26	852.54	1.12	1.096
8	933.55	96.175	2.08	945.12	914.26	0.349	0.142
9	958.62	94.958	3.495	974.05	945.12	0.415	0.226
10	1035.77	31.349	29.095	1066.64	974.05	28.056	10.412
11	1080.14	40.036	6.189	1199.72	1068.56	28.199	2.814
12	1255.66	87.437	8.379	1280.73	1201.65	2.858	1.811
13	1298.09	90.913	4.265	1342.46	1282.66	1.498	0.529
14	1423.47	44.336	55.016	1498.69	1344.38	22.085	21.644
15	1610.66	16.744	83.001	1786.08	1500.62	79.087	78.871
16	2166.06	97.601	2.02	2289.5	1978.97	1.817	1.389
17	2515.18	98.833	1.344	2613.55	2453.45	0.22	0.41
18	2715.77	98.781	1.277	2777.5	2613.55	0.341	0.472
19	2858.51	93.129	1.023	2866.22	2810.28	0.867	-0.06
20	2924.09	84.252	12.313	2981.95	2868.15	4.716	2.96
21	3415.93	22.908	77.007	3793.98	2983.88	261.929	261.662

Comment;
Standar Fukoidan

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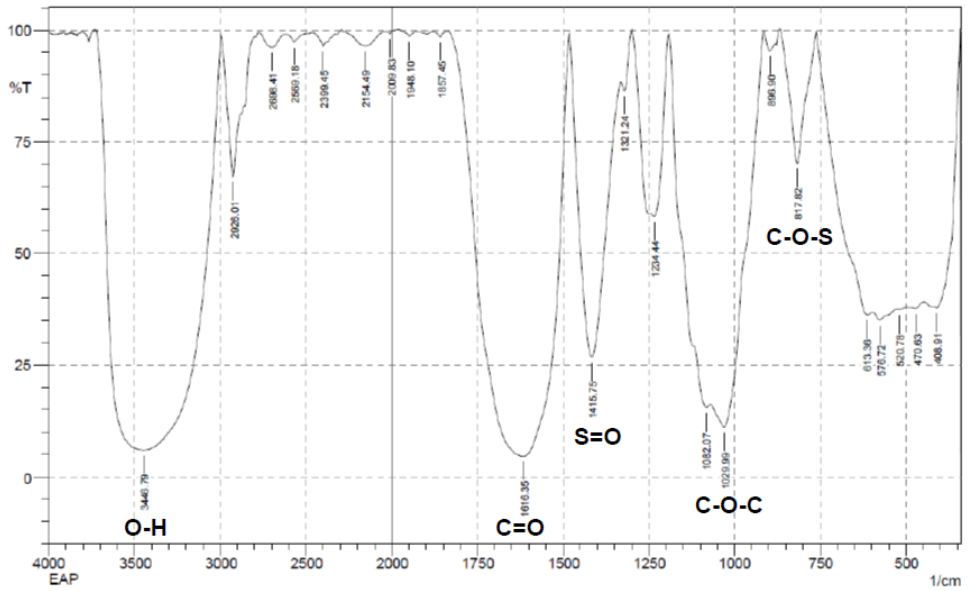

No.	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	408.91	37.808	6.512	416.62	343.33	21.335	5.943
2	470.63	37.677	0.791	487.99	449.41	16.135	0.168
3	520.78	37.372	0.174	526.57	499.56	11.465	0.028
4	576.72	35.058	1.928	596	528.5	29.815	0.763
5	613.36	36.204	6.475	761.88	597.93	41.612	5.414
6	817.82	70.202	29.356	867.97	763.81	7.415	7.194
7	896.9	95.417	2.93	914.26	881.47	0.468	0.241
8	1029.99	11.088	26.179	1068.56	916.19	78.796	19.13
9	1082.07	15.511	8.562	1192.01	1070.49	55.402	6.543
10	1234.44	58.373	9.351	1246.02	1193.94	8.208	2.297
11	1321.24	86.473	5.46	1330.88	1300.02	1.2	0.415
12	1415.75	26.765	67.758	1481.33	1332.81	42.514	38.278
13	1616.35	4.644	2.715	1620.21	1483.26	101.045	11.585
14	1857.45	98.527	1.307	1880.6	1836.23	0.12	0.088
15	1948.1	98.718	1.191	1978.97	1928.82	0.114	0.105
16	2009.83	99.229	0.743	2031.04	1978.97	0.051	0.052
17	2154.49	96.507	3.495	2291.43	2034.9	1.993	2.007
18	2399.45	96.412	1.356	2465.03	2382.09	0.678	0.096
19	2569.18	97.418	1.774	2611.62	2492.03	0.732	0.324
20	2698.41	96.22	3.121	2773.64	2623.19	1.562	1.128
21	2926.01	67.233	31.56	2995.45	2796.78	14.995	13.908
22	3446.79	6.013	93.678	3722.61	2997.38	547.441	546.182

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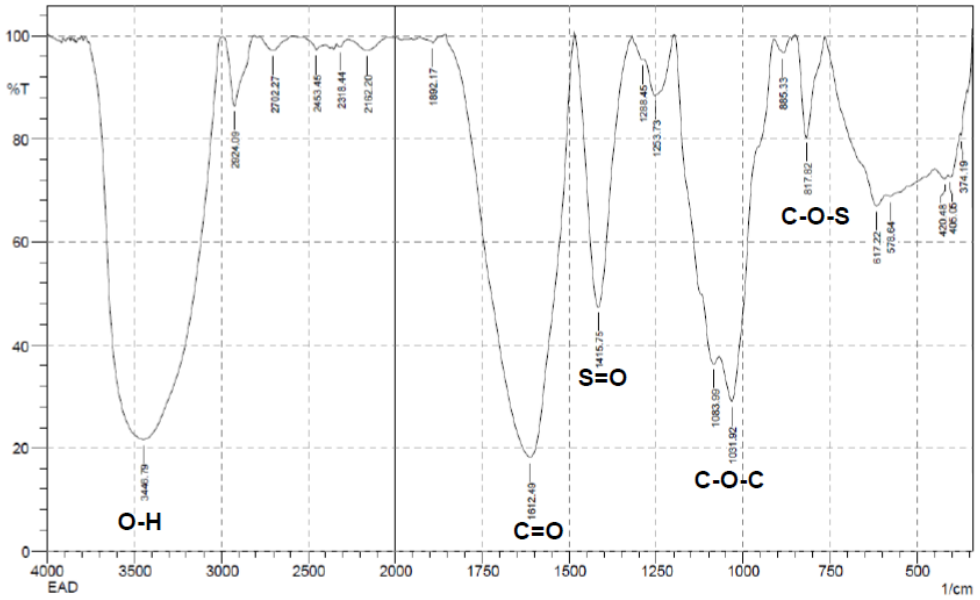

No.	Peak	Intensity	Corr. Intensity	Base (H)	Base (L)	Area	Corr. Area
1	374.19	80.656	1.205	376.12	358.76	1.219	0.038
2	405.05	72.646	1.123	408.91	378.05	3.738	0.212
3	420.48	72.263	0.971	447.49	410.84	5.028	0.123
4	578.64	68.796	0.637	588.29	449.41	20.586	0.439
5	617.22	66.94	6.89	763.81	590.22	18.387	4.124
6	817.82	80.247	19.797	850.61	765.74	3.587	3.588
7	885.33	96.657	2.943	912.33	866.04	0.411	0.323
8	1031.92	29.072	23.111	1068.56	912.33	41.774	9.751
9	1083.99	36.284	8.049	1197.79	1070.49	32.209	4.986
10	1253.73	88.407	8.707	1284.59	1199.72	3.02	2.198
11	1288.45	95.344	0.533	1319.31	1284.59	0.443	0.082
12	1415.75	47.322	52.609	1483.26	1321.24	22.376	22.3
13	1612.49	18.224	82.262	1853.59	1485.19	120.325	120.981
14	1892.17	98.6	1.351	1928.82	1855.52	0.172	0.156
15	2162.2	97.229	2.316	2268.29	2029.11	1.659	1.214
16	2318.44	97.773	0.9	2337.72	2268.29	0.449	0.109
17	2453.45	97.278	1.481	2538.32	2403.3	0.861	0.242
18	2702.27	97.191	2.719	2781.35	2590.4	1.209	1.142
19	2924.09	86.387	13.56	2991.59	2810.28	5.075	5.049
20	3446.79	21.665	73.662	3720.69	2993.52	293.573	281.243

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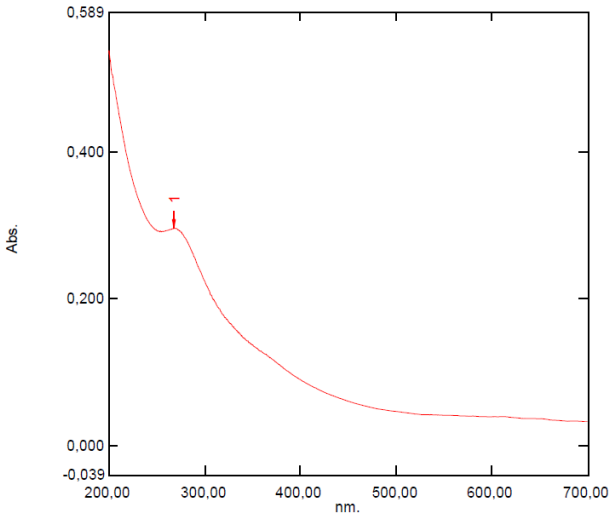
Panjang Gelombang Maksimum Standar Fucoidan

LABORATORIUM BIOFARMAKA
FAKULTAS FARMASI UNIVERSITAS HASANUDDIN

Gedung Pusat Kegiatan Penelitian Lantai IV Wing B



No.	P/V	Wavelength	Abs.	Description
1		268,00	0,296	
2		255,00	0,291	

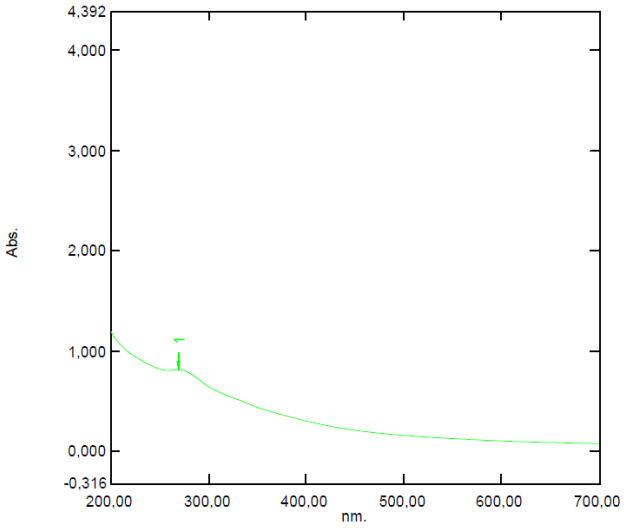
17/06/2020

Makassar,
Analis

Panjang Gelombang Maksimum Ekstrak Air Panas

LABORATORIUM BIOFARMAKA
FAKULTAS FARMASI UNIVERSITAS HASANUDDIN

Gedung Pusat Kegiatan Penelitian Lantai IV Wing B



No.	P/V	Wavelength	Abs.	Description
1		270,00	0,818	
2		258,50	0,806	

18/06/2020

Makassar,
Analis

Panjang Gelombang Maksimum Ekstrak Air Dingin

LABORATORIUM BIOFARMAKA
FAKULTAS FARMASI UNIVERSITAS HASANUDDIN

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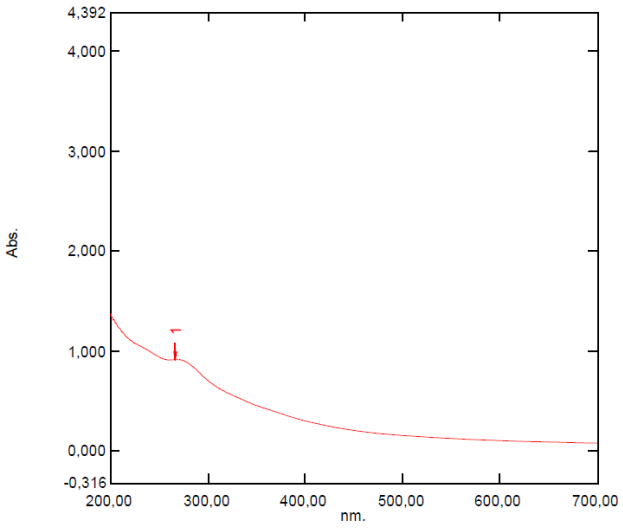


No.	P/V	Wavelength	Abs.	Description
1		267,00	0,915	
2		260,00	0,910	

18/06/2020

Makassar,
Analis

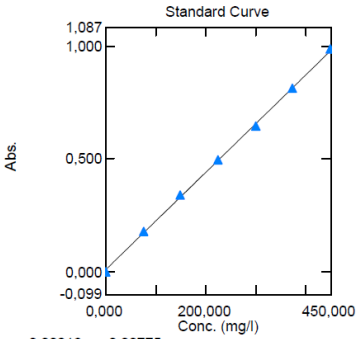
Kurva Baku Standar Fucoidan

LABORATORIUM BIOFARMAKA
FAKULTAS FARMASI UNIVERSITAS HASANUDDIN

Gedung Pusat Kegiatan Penelitian Lantai IV Wing B

Standard Table

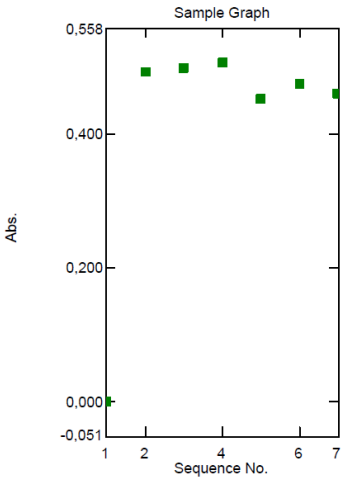
	Sample ID	Type	Ex	Conc	WL268,0	Wgt.Factor
1	blanko	Standard		0,000	-0,000	1,000
2	fucoidan 75 ppm	Standard		75,000	0,178	1,000
3	fucoidan 150 ppm	Standard		150,000	0,341	1,000
4	fucoidan 225 ppm	Standard		225,000	0,496	1,000
5	fucoidan 300 ppm	Standard		300,000	0,645	1,000
6	fucoidan 375 ppm	Standard		375,000	0,814	1,000
7	fucoidan 450 ppm	Standard		450,000	0,988	1,000
8						



y = 0,00216 x + 0,00775
Correlation Coefficient r2 = 0,99943

Sample Table

	Sample ID	Type	Ex	Conc	WL268,0
1	blanko	Unknown		-3,548	0,000
2	ekstrak air dingin 1	Unknown		224,859	0,494
3	ekstrak air dingin 2	Unknown		227,469	0,500
4	ekstrak air dingin 3	Unknown		230,968	0,507
5	ekstrak air panas 1	Unknown		206,263	0,454
6	ekstrak air panas 2	Unknown		216,132	0,475
7	ekstrak air panas 3	Unknown		209,508	0,461
8					



Makassar, 17/06/2020
Analis

Lampiran 4.Dokumentasi Penelitian

Gambar 6. Sampel Kering *Sargassum sp*

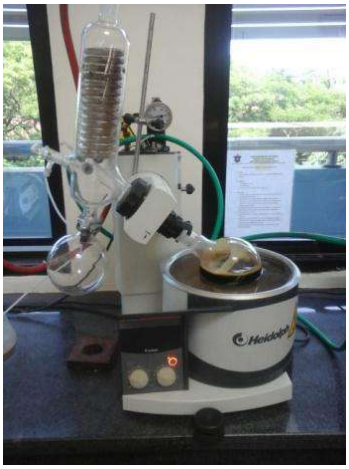
Gambar 7. Ayakan Nomor Mesh 20

Gambar 8. Ekstraksi dengan Etanol 80%

Gambar 9. Sampel yang telah diekstraksi dengan Etanol 80%

Gambar 10. Ekstraksi dengan Air Panas pada suhu 85°C

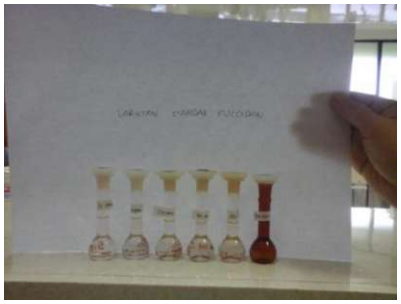
Gambar 11. Ekstraksi dengan Air Dingin pada suhu 25°C



Gambar 12. Rotary Evaporator

Gambar 13. Sentrifus

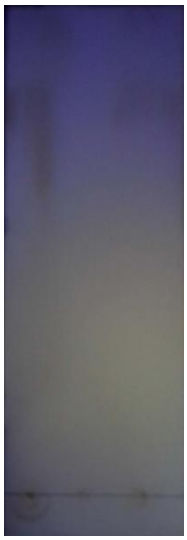
ar 14. Ekstrak Air Panas dan Ekstrak Air Dingin



Gambar 15. Larutan Standar Fukoidan

Gambar 16. Proses Pemisahan Senyawa dengan KLT

Gambar 17. Penampakan Noda pada UV 254 nm



Gambar 18. Penampakan Noda pada UV 366 nm

Gambar 19. Penampakan Noda setelah disemprot H_2SO_4 10%

20. Instrumen Spektrofotometer UV-Vis (Shimadzu®)

Gambar 21. Instrumen FTIR (Shimadzu®)