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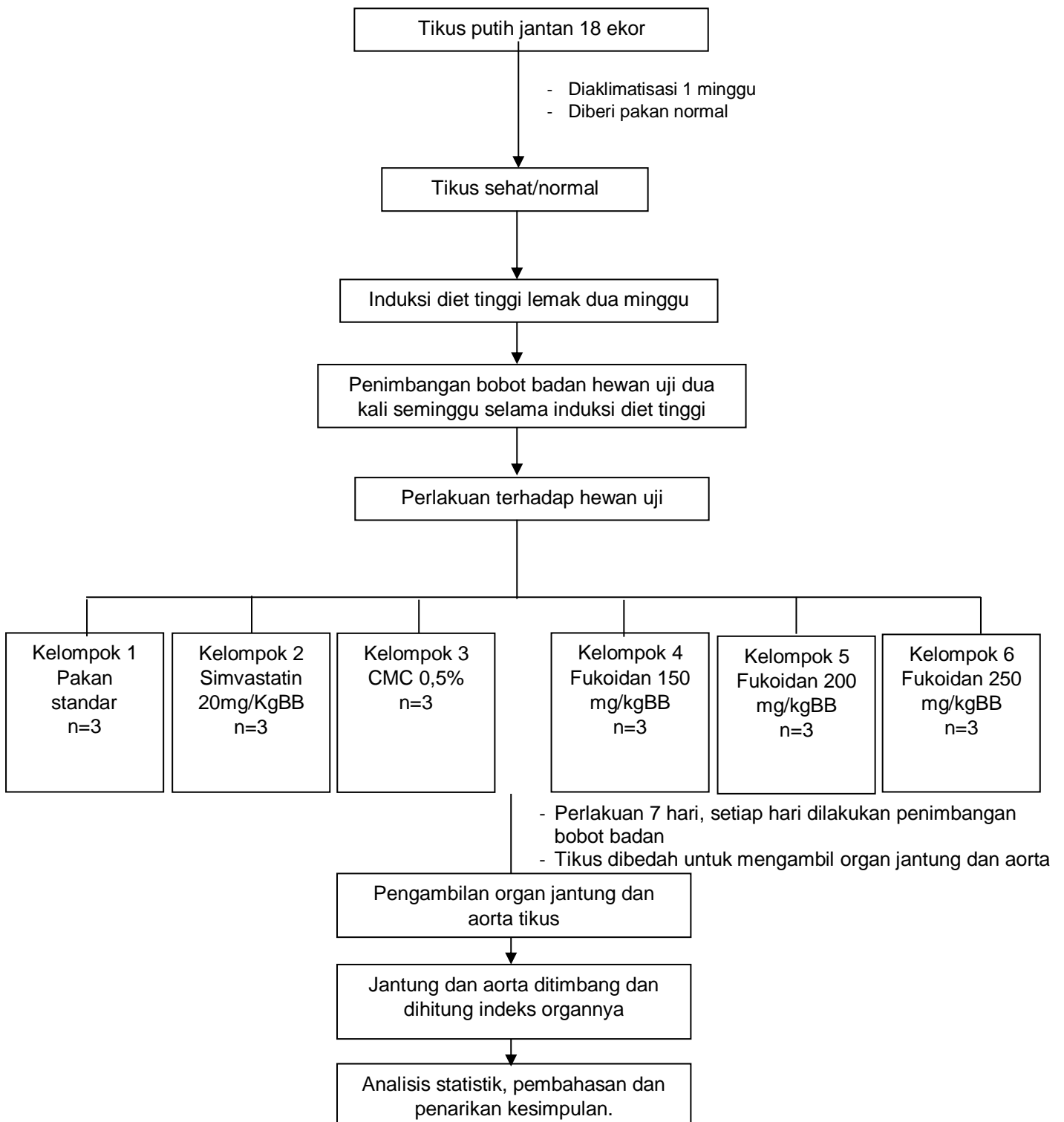
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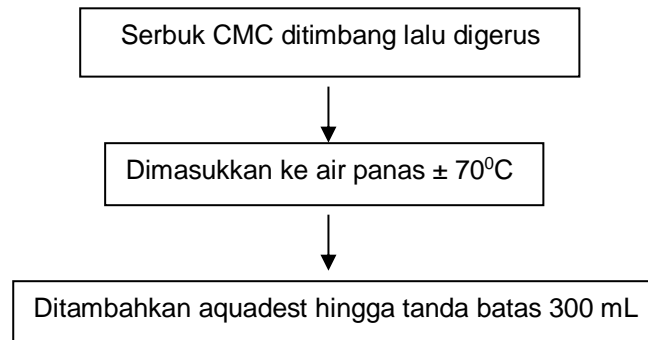
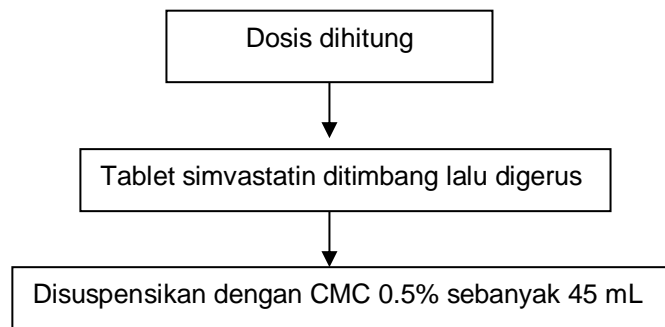
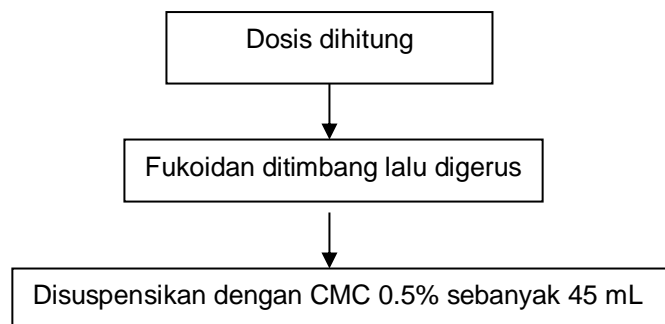
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LAMPIRAN

Lampiran 1. Skema Kerja Penelitian



Suspensi CMC 0.5%**Suspensi Simvastatin****Suspensi Fukoidan**

Lampiran 2. Perhitungan

2.1 Konversi dosis Simvastatin

Diketahui:

Berat rata-rata tablet : 206,3 mg

Berat etiket : 20 mg

Faktor konversi tikus : 0,018

Dosis manusia : 20 mg/60kgBB

: 0,3 mg/kgBB

: 0,06 mg/200 gramBB

Konversi ke dosis hewan : 0,06 mg/200 gramBB x 0,018

: 0,0012 mg/200 gramBB/2 mL

Dosis timbang : $\frac{\text{Dosis hewan}}{\text{Berat etiket}} \times \text{Berat rata-rata tablet}$

: $\frac{0,0012 \text{ mg}}{20 \text{ mg}} \times 206,3 \text{ mg}$

: 0,0124 mg/200 gramBB/2 mL

Stok 45 mL : 0,0124 mg/2 mL = 0,279 mg/45 mL

2.2 Fukoidan dosis 150 mg/kgBB

Diketahui:

Dosis 150 mg/KgBB = 30 mg/200gBB

Dosis hewan : Dosis manusia x faktor Konversi

: 30 mg/200gBB x 0.018

: 0,54 mg/200gBB

Stok 45 mL : 0,54 mg/200gBB/2 mL

: 12,15 mg/45 mL

2.3 Fukoidan dosis 200 mg/kgBB

Diketahui:

Dosis fukoidan 200 mg/kgBB = 40 mg/200gBB

Faktor konversi : 0,018

Dosis hewan : Dosis manusia x faktor Konversi

: 40 mg/200gBB x 0.018

: 0,72 mg/200gBB

Stok 45 mL : 0,72 mg/200gBB/2 mL

: 16,2 mg/45 mL

2.4 Fukoidan dosis 250 mg/kgBB

Diketahui:

Dosis fukoidan 250 mg/kgBB = 50 mg/200gBB

Faktor konversi : 0,018

Dosis hewan : Dosis manusia x faktor Konversi

: 50 mg/200gBB x 0.018

: 0,9 mg/200gBB

Stok 45 mL : 0,9 mg/200gBB/2 mL

: 20,25 mg/45 mL

2.5 CMC 0,5%

: $\frac{0,5}{100} \times 300 \text{ mL}$

: 1,5 g/ 300 mL

Jadi, ditimbang 1,5 g kemudian dicukupkan dengan CMC hingga

volume 300 mL

2.6 Etanol 20% dalam Saline

Diketahui:

Dosis etanol 20% yang digunakan 4,5 g/kgBB

: 4,5 g/kgBB

: 0,9 g/200gBB/2 mL

Stok 500 mL = 0,9 g/200gBB/2 mL

= 225 g/500 mL

= 225 mL/500 mL

Pengenceran etanol 99 % ke 20 %

$M1.V1 = M2.V1$

$99 \times V1 = 20 \times 225 \text{ mL}$

$V1 = 20 \times 225 \text{ mL} / 99$

$V1 = 45 \text{ mL}$

Dipipet 45 mL etanol 99% dan encerkan dengan aquadest hingga volume 225 mL lalu cukupkan dengan saline hingga 500 mL.

2.7 Diet Tinggi Lemak

Komposisi mentega (Blueband®) → persentase 30% b/b

- Total lemak 15 g (11 g lemak total + 4 g lemak jenuh)

- Kolesterol 0 g

Mentega yang ditimbang : 15 gram x 30% b/b

: 4,5 gram

Komposisi susu (Indomilk UHT®) → persentase 70% b/v

- Lemak total 8 g

: 8 gram x 70% b/v

: 5,6 gram

- Kolesterol 25 mg

: 0.025 gram x 70% b/v

: 0,017 gram

Susu yang ditimbang: 5,617 gram.

Lampiran 3. Hasil Statistik

3.1 Bobot badan

Data Per Individu

Kelompok Perlakuan	Bobot Badan Aklimatisasi (gram)	Bobot Badan Diet Tinggi Lemak (gram)	Bobot Badan Terapi (gram)							Rerata \pm SD Bobot Badan Terapi, n=3
Kontrol Sehat (KS)	174.2	170.9	173.4	172.4	183.7	185.6	194.2	180.3	183.8	179.7 \pm 6.367
Kontrol Sehat (KS)	168.9	175.5	177.7	175.5	166.2	170.2	178.9	180.1	186.3	
Kontrol Sehat (KS)	177.3	183.6	185.5	185.1	177.8	180.9	182.2	174.6	178.7	
Kontrol Negatif (KN)	173.2	206.9	178.9	180.6	183	180.8	183.7	182.8	185.7	195.5 \pm 18.304
Kontrol Negatif (KN)	178.2	213.9	245.1	236.4	209.7	191.7	187.7	185.9	188.9	
Kontrol Negatif (KN)	170.2	194.1	222.1	201.6	195.1	192.2	195.1	193.8	184.1	
Kontrol Positif (KP)	173.1	197.4	176.1	172.5	170.7	170.3	168.2	174.2	171.2	180.0 \pm 9.885
Kontrol Positif (KP)	177.7	198.3	183.7	187.5	185.7	183	178.5	175.1	176	
Kontrol Positif (KP)	175.3	211.6	202.8	198.2	197.6	185.8	176.8	172.5	173.9	
Fukoidan 150 mg/kgBB (D1)	169.5	207.2	187.7	190.7	190.2	188.8	191.4	195.9	195.4	198.9 \pm 11.818
Fukoidan 150 mg/kgBB (D1)	176.9	200.1	186.1	187.7	190.6	188.9	190.2	193.3	197.9	
Fukoidan 150 mg/kgBB (D1)	180.5	209.1	209.8	216.5	211.3	212.2	217.2	218	216.8	
Fukoidan 200 mg/kgBB (D2)	170.8	191.9	184.8	187.2	186	177.8	187.3	186.6	183.6	205.2 \pm 15.507
Fukoidan 200 mg/kgBB (D2)	177.5	202.3	211.6	221.4	212.3	209.6	221.4	224.4	210.7	
Fukoidan 200 mg/kgBB (D2)	172.3	215.3	221	214.8	215.3	206	215.4	215.5	216.5	
Fukoidan 250 mg/kgBB (D3)	177.5	213.9	213.3	218.3	220.5	221.4	222.4	226	214.9	229.53 \pm 35.086
Fukoidan 250 mg/kgBB (D3)	171.2	222.8	275.5	282.6	279.9	279.3	284.5	285.5	180.2	
Fukoidan 250 mg/kgBB (D3)	180.3	204.3	197.3	204.2	205.1	202.6	199.4	207.2	200.1	

Tests of Normality

	Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual for Aklimatisasi	Kontrol Sehat (KS)	.235	3	.	.978	3	.713
	Kontrol Negatif (KN)	.232	3	.	.980	3	.726
	Kontrol Positif (KP)	.178	3	.	.999	3	.952
	Fukoidan 150 mg/kgBB (D1)	.256	3	.	.962	3	.624
	Fukoidan 200 mg/kgBB (D2)	.304	3	.	.908	3	.411
	Fukoidan 250 mg/kgBB (D3)	.265	3	.	.953	3	.583
Standardized Residual for HFD	Kontrol Sehat (KS)	.239	3	.	.975	3	.699
	Kontrol Negatif (KN)	.243	3	.	.972	3	.680
	Kontrol Positif (KP)	.365	3	.	.797	3	.108
	Fukoidan 150 mg/kgBB (D1)	.309	3	.	.900	3	.385
	Fukoidan 200 mg/kgBB (D2)	.196	3	.	.996	3	.878
	Fukoidan 250 mg/kgBB (D3)	.178	3	.	1.000	3	.958
Standardized Residual for Terapi	Kontrol Sehat (KS)	.255	3	.	.962	3	.628
	Kontrol Negatif (KN)	.253	3	.	.964	3	.637
	Kontrol Positif (KP)	.200	3	.	.995	3	.862
	Fukoidan 150 mg/kgBB (D1)	.346	3	.	.836	3	.204
	Fukoidan 200 mg/kgBB (D2)	.324	3	.	.877	3	.317
	Fukoidan 250 mg/kgBB (D3)	.206	3	.	.993	3	.838

a. Lilliefors Significance Correction

Pairwise Comparisons

Measure: Bobot_Badan

Kelompok	(I) Waktu	(J) Waktu	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
						Lower Bound	Upper Bound
Kontrol Sehat (KS)	1	2	-3.200	5.381	.563	-14.924	8.524
		3	-9.467	5.711	.123	-21.909	2.976
	2	1	3.200	5.381	.563	-8.524	14.924
		3	-6.267	7.272	.406	-22.111	9.578
	3	1	9.467	5.711	.123	-2.976	21.909
		2	6.267	7.272	.406	-9.578	22.111
Kontrol Negatif (KN)	1	2	-31.100*	5.381	.000	-42.824	-19.376
		3	-12.367	5.711	.051	-24.809	.076
	2	1	31.100*	5.381	.000	19.376	42.824
		3	18.733*	7.272	.024	2.889	34.578
	3	1	12.367	5.711	.051	-.076	24.809
		2	-18.733*	7.272	.024	-34.578	-2.889
Kontrol Positif (KP)	1	2	-27.067*	5.381	.000	-38.791	-15.343
		3	1.667	5.711	.775	-10.776	14.109
	2	1	27.067*	5.381	.000	15.343	38.791
		3	28.733*	7.272	.002	12.889	44.578
	3	1	-1.667	5.711	.775	-14.109	10.776
		2	-28.733*	7.272	.002	-44.578	-12.889
Fukoidan 150 mg/kgBB (D1)	1	2	-29.833*	5.381	.000	-41.557	-18.109
		3	-27.733*	5.711	.000	-40.176	-15.291
	2	1	29.833*	5.381	.000	18.109	41.557
		3	2.100	7.272	.778	-13.744	17.944
	3	1	27.733*	5.711	.000	15.291	40.176
		2	-2.100	7.272	.778	-17.944	13.744
Fukoidan 200 mg/kgBB (D2)	1	2	-29.633*	5.381	.000	-41.357	-17.909
		3	-30.067*	5.711	.000	-42.509	-17.624
	2	1	29.633*	5.381	.000	17.909	41.357
		3	-.433	7.272	.953	-16.278	15.411
	3	1	30.067*	5.711	.000	17.624	42.509
		2	.433	7.272	.953	-15.411	16.278
Fukoidan 250 mg/kgBB (D3)	1	2	-37.333*	5.381	.000	-49.057	-25.609
		3	-22.067*	5.711	.002	-34.509	-9.624

2	1	37.333*	5.381	.000	25.609	49.057
	3	15.267	7.272	.058	-.578	31.111
3	1	22.067*	5.711	.002	9.624	34.509
	2	-15.267	7.272	.058	-31.111	.578

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

Keterangan: 1 : Aklimatisasi, 2 : Diet Tinggi Lemak, 3 : Sampel Uji

Pairwise Comparisons

Measure: Bobot_Badan

Waktu	(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
						Lower Bound	Upper Bound
1	Kontrol Sehat (KS)	Kontrol Negatif (KN)	-.400	3.419	.909	-7.850	7.050
		Kontrol Positif (KP)	-1.900	3.419	.589	-9.350	5.550
		Fukoidan 150 mg/kgBB (D1)	-2.167	3.419	.538	-9.616	5.283
		Fukoidan 200 mg/kgBB (D2)	-.067	3.419	.985	-7.516	7.383
		Fukoidan 250 mg/kgBB (D3)	-2.867	3.419	.418	-10.316	4.583
	Kontrol Negatif (KN)	Kontrol Sehat (KS)	.400	3.419	.909	-7.050	7.850
		Kontrol Positif (KP)	-1.500	3.419	.669	-8.950	5.950
		Fukoidan 150 mg/kgBB (D1)	-1.767	3.419	.615	-9.216	5.683
		Fukoidan 200 mg/kgBB (D2)	.333	3.419	.924	-7.116	7.783
		Fukoidan 250 mg/kgBB (D3)	-2.467	3.419	.484	-9.916	4.983
	Kontrol Positif (KP)	Kontrol Sehat (KS)	1.900	3.419	.589	-5.550	9.350

	Kontrol Negatif (KN)	1.500	3.419	.669	-5.950	8.950
	Fukoidan 150 mg/kgBB (D1)	-.267	3.419	.939	-7.716	7.183
	Fukoidan 200 mg/kgBB (D2)	1.833	3.419	.602	-5.616	9.283
	Fukoidan 250 mg/kgBB (D3)	-.967	3.419	.782	-8.416	6.483
Fukoidan 150 mg/kgBB (D1)	Kontrol Sehat (KS)	2.167	3.419	.538	-5.283	9.616
	Kontrol Negatif (KN)	1.767	3.419	.615	-5.683	9.216
	Kontrol Positif (KP)	.267	3.419	.939	-7.183	7.716
	Fukoidan 200 mg/kgBB (D2)	2.100	3.419	.551	-5.350	9.550
	Fukoidan 250 mg/kgBB (D3)	-.700	3.419	.841	-8.150	6.750
Fukoidan 200 mg/kgBB (D2)	Kontrol Sehat (KS)	.067	3.419	.985	-7.383	7.516
	Kontrol Negatif (KN)	-.333	3.419	.924	-7.783	7.116
	Kontrol Positif (KP)	-1.833	3.419	.602	-9.283	5.616
	Fukoidan 150 mg/kgBB (D1)	-2.100	3.419	.551	-9.550	5.350
	Fukoidan 250 mg/kgBB (D3)	-2.800	3.419	.429	-10.250	4.650
Fukoidan 250 mg/kgBB (D3)	Kontrol Sehat (KS)	2.867	3.419	.418	-4.583	10.316
	Kontrol Negatif (KN)	2.467	3.419	.484	-4.983	9.916
	Kontrol Positif (KP)	.967	3.419	.782	-6.483	8.416
	Fukoidan 150 mg/kgBB (D1)	.700	3.419	.841	-6.750	8.150
	Fukoidan 200 mg/kgBB (D2)	2.800	3.419	.429	-4.650	10.250

2	Kontrol Sehat (KS)	Kontrol Negatif (KN)	-28.300 [†]	7.078	.002	-43.723	-12.877
		Kontrol Positif (KP)	-25.767 [†]	7.078	.003	-41.189	-10.344
		Fukoidan 150 mg/kgBB (D1)	-28.800 [†]	7.078	.002	-44.223	-13.377
		Fukoidan 200 mg/kgBB (D2)	-26.500 [†]	7.078	.003	-41.923	-11.077
		Fukoidan 250 mg/kgBB (D3)	-37.000 [†]	7.078	.000	-52.423	-21.577
	Kontrol Negatif (KN)	Kontrol Sehat (KS)	28.300 [†]	7.078	.002	12.877	43.723
		Kontrol Positif (KP)	2.533	7.078	.727	-12.889	17.956
		Fukoidan 150 mg/kgBB (D1)	-.500	7.078	.945	-15.923	14.923
		Fukoidan 200 mg/kgBB (D2)	1.800	7.078	.804	-13.623	17.223
		Fukoidan 250 mg/kgBB (D3)	-8.700	7.078	.243	-24.123	6.723
	Kontrol Positif (KP)	Kontrol Sehat (KS)	25.767 [†]	7.078	.003	10.344	41.189
		Kontrol Negatif (KN)	-2.533	7.078	.727	-17.956	12.889
		Fukoidan 150 mg/kgBB (D1)	-3.033	7.078	.676	-18.456	12.389
		Fukoidan 200 mg/kgBB (D2)	-.733	7.078	.919	-16.156	14.689
		Fukoidan 250 mg/kgBB (D3)	-11.233	7.078	.139	-26.656	4.189
	Fukoidan 150 mg/kgBB (D1)	Kontrol Sehat (KS)	28.800 [†]	7.078	.002	13.377	44.223
		Kontrol Negatif (KN)	.500	7.078	.945	-14.923	15.923
		Kontrol Positif (KP)	3.033	7.078	.676	-12.389	18.456
		Fukoidan 200 mg/kgBB (D2)	2.300	7.078	.751	-13.123	17.723

		Fukoidan 250 mg/kgBB (D3)	-8.200	7.078	.269	-23.623	7.223
	Fukoidan 200 mg/kgBB (D2)	Kontrol Sehat (KS)	26.500 [†]	7.078	.003	11.077	41.923
		Kontrol Negatif (KN)	-1.800	7.078	.804	-17.223	13.623
		Kontrol Positif (KP)	.733	7.078	.919	-14.689	16.156
		Fukoidan 150 mg/kgBB (D1)	-2.300	7.078	.751	-17.723	13.123
		Fukoidan 250 mg/kgBB (D3)	-10.500	7.078	.164	-25.923	4.923
	Fukoidan 250 mg/kgBB (D3)	Kontrol Sehat (KS)	37.000 [†]	7.078	.000	21.577	52.423
		Kontrol Negatif (KN)	8.700	7.078	.243	-6.723	24.123
		Kontrol Positif (KP)	11.233	7.078	.139	-4.189	26.656
		Fukoidan 150 mg/kgBB (D1)	8.200	7.078	.269	-7.223	23.623
		Fukoidan 200 mg/kgBB (D2)	10.500	7.078	.164	-4.923	25.923
3	Kontrol Sehat (KS)	Kontrol Negatif (KN)	-3.300	9.281	.728	-23.522	16.922
		Kontrol Positif (KP)	9.233	9.281	.339	-10.989	29.455
		Fukoidan 150 mg/kgBB (D1)	-20.433 [†]	9.281	.048	-40.655	-.211
		Fukoidan 200 mg/kgBB (D2)	-20.667 [†]	9.281	.046	-40.889	-.445
		Fukoidan 250 mg/kgBB (D3)	-15.467	9.281	.121	-35.689	4.755
	Kontrol Negatif (KN)	Kontrol Sehat (KS)	3.300	9.281	.728	-16.922	23.522
		Kontrol Positif (KP)	12.533	9.281	.202	-7.689	32.755
		Fukoidan 150 mg/kgBB (D1)	-17.133	9.281	.090	-37.355	3.089

	Fukoidan 200 mg/kgBB (D2)	-17.367	9.281	.086	-37.589	2.855
	Fukoidan 250 mg/kgBB (D3)	-12.167	9.281	.214	-32.389	8.055
Kontrol Positif (KP)	Kontrol Sehat (KS)	-9.233	9.281	.339	-29.455	10.989
	Kontrol Negatif (KN)	-12.533	9.281	.202	-32.755	7.689
	Fukoidan 150 mg/kgBB (D1)	-29.667 [*]	9.281	.008	-49.889	-9.445
	Fukoidan 200 mg/kgBB (D2)	-29.900 [*]	9.281	.007	-50.122	-9.678
	Fukoidan 250 mg/kgBB (D3)	-24.700 [*]	9.281	.021	-44.922	-4.478
Fukoidan 150 mg/kgBB (D1)	Kontrol Sehat (KS)	20.433 [*]	9.281	.048	.211	40.655
	Kontrol Negatif (KN)	17.133	9.281	.090	-3.089	37.355
	Kontrol Positif (KP)	29.667 [*]	9.281	.008	9.445	49.889
	Fukoidan 200 mg/kgBB (D2)	-.233	9.281	.980	-20.455	19.989
	Fukoidan 250 mg/kgBB (D3)	4.967	9.281	.602	-15.255	25.189
Fukoidan 200 mg/kgBB (D2)	Kontrol Sehat (KS)	20.667 [*]	9.281	.046	.445	40.889
	Kontrol Negatif (KN)	17.367	9.281	.086	-2.855	37.589
	Kontrol Positif (KP)	29.900 [*]	9.281	.007	9.678	50.122
	Fukoidan 150 mg/kgBB (D1)	.233	9.281	.980	-19.989	20.455
	Fukoidan 250 mg/kgBB (D3)	5.200	9.281	.586	-15.022	25.422
Fukoidan 250 mg/kgBB (D3)	Kontrol Sehat (KS)	15.467	9.281	.121	-4.755	35.689
	Kontrol Negatif (KN)	12.167	9.281	.214	-8.055	32.389

Kontrol Positif (KP)	24.700*	9.281	.021	4.478	44.922
Fukoidan 150 mg/kgBB (D1)	-4.967	9.281	.602	-25.189	15.255
Fukoidan 200 mg/kgBB (D2)	-5.200	9.281	.586	-25.422	15.022

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

2.2 Indeks Organ

Data per Individu

Rumus Indeks Organ

$$\text{Indeks organ} = \frac{\text{Berat organ (gram)}}{\text{Berat badan tikus (gram)}} \times 100$$

Kelompok Perlakuan	Bobot Badan	Bobot Jantung (gram)	Rerata ± SD Bobot Jantung	Indeks Organ Jantung	Rerata ± SD Indeks Jantung	Bobot Aorta (gram)	Rerata ± SD Bobot Aorta	Indeks Organ Aorta	Rerata ± SD Indeks Aorta
Kontrol Sehat (KS)	183.8	0.705	0.639 ± 0.057	0.384	0.350 ± 0.031	0.280	0.328 ± 0.077	0.152	0.179 ± 0.039
Kontrol Sehat (KS)	186.3	0.601		0.323		0.417		0.224	
Kontrol Sehat (KS)	178.7	0.612		0.342		0.286		0.160	
Kontrol Negatif (KN)	185.7	0.812	0.752 ± 0.051	0.437	0.404 ± 0.029	0.613	0.444 ± 0.147	0.330	0.238 ± 0.080
Kontrol Negatif (KN)	188.9	0.726		0.384		0.341		0.180	
Kontrol Negatif (KN)	184.1	0.720		0.391		0.378		0.205	
Kontrol Positif (KP)	171.2	0.746	0.710 ± 0.047	0.436	0.409 ± 0.030	0.432	0.363 ± 0.068	0.252	0.209 ± 0.043
Kontrol Positif (KP)	176	0.729		0.414		0.295		0.167	
Kontrol Positif (KP)	173.9	0.656		0.377		0.363		0.208	
Fukoidan 150 mg/kgBB (D1)	195.4	0.745	0.724 ± 0.091	0.381	0.355 ± 0.035	0.758	0.432 ± 0.286	0.388	0.216 ± 0.151
Fukoidan 150 mg/kgBB (D1)	197.9	0.624		0.315		0.313		0.158	
Fukoidan 150 mg/kgBB (D1)	216.8	0.802		0.370		0.224		0.103	

Fukoidan 200 mg/kgBB (D2)	183.6	0.797	0.681 ± 0.105	0.434	0.339 ± 0.084	0.264	0.365 ± 0.115	0.144	0.178 ± 0.048
Fukoidan 200 mg/kgBB (D2)	210.7	0.654		0.310		0.491		0.233	
Fukoidan 200 mg/kgBB (D2)	216.5	0.592		0.273		0.339		0.157	
Fukoidan 250 mg/kgBB (D3)	214.9	0.646	0.696 ± 0.115	0.300	0.356 ± 0.089	0.408	0.358 ± 0.076	0.190	0.181 ± 0.043
Fukoidan 250 mg/kgBB (D3)	180.2	0.828		0.459		0.395		0.219	
Fukoidan 250 mg/kgBB (D3)	200.1	0.616		0.308		0.270		0.135	

Tests of Normality

	Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Indeks_Jantung	Kontrol Sehat	.257	3	.	.961	3	.621
	Kontrol Negatif (CMC 0.5%)	.342	3	.	.844	3	.225
	Kontrol Positif (Simvastatin)	.236	3	.	.977	3	.711
	Fukoidan 150 mg/KgBB	.325	3	.	.875	3	.308
	Fukoidan 200 mg/KgBB	.301	3	.	.911	3	.423
	Fukoidan 250 mg/KgBB	.371	3	.	.784	3	.077
Indeks_Aorta	Kontrol Sehat	.350	3	.	.830	3	.188
	Kontrol Negatif (CMC 0.5%)	.328	3	.	.870	3	.297
	Kontrol Positif (Simvastatin)	.177	3	.	1.000	3	.968
	Fukoidan 150 mg/KgBB	.317	3	.	.888	3	.349
	Fukoidan 200 mg/KgBB	.337	3	.	.855	3	.254
	Fukoidan 250 mg/KgBB	.246	3	.	.970	3	.669

a. Lilliefors Significance Correction

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Indeks_Jantung	Between Groups	.013	5	.003	.843	.545
	Within Groups	.038	12	.003		
	Total	.051	17			
Indeks_Aorta	Between Groups	.009	5	.002	.309	.898
	Within Groups	.073	12	.006		
	Total	.083	17			

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Indeks_Jantung	Kontrol Sehat	Kontrol Negatif (CMC 0.5%)	-.054682	.046001	.834	-.20920	.09983
		Kontrol Positif (Simvastatin)	-.059513	.046001	.783	-.21403	.09500
		Fukoidan 150 mg/KgBB	-.005955	.046001	1.000	-.16047	.14856
		Fukoidan 200 mg/KgBB	.010237	.046001	1.000	-.14428	.16475
		Fukoidan 250 mg/KgBB	-.006433	.046001	1.000	-.16095	.14808
		Kontrol Negatif (CMC 0.5%)	Kontrol Sehat	.054682	.046001	.834	-.09983
	Kontrol Positif (Simvastatin)	Kontrol Positif (Simvastatin)	-.004831	.046001	1.000	-.15935	.14968
		Fukoidan 150 mg/KgBB	.048727	.046001	.888	-.10579	.20324
		Fukoidan 200 mg/KgBB	.064919	.046001	.721	-.08960	.21943
		Fukoidan 250 mg/KgBB	.048249	.046001	.892	-.10627	.20276
		Kontrol Positif (Simvastatin)	Kontrol Sehat	.059513	.046001	.783	-.09500
	Kontrol Negatif (CMC 0.5%)	Kontrol Negatif (CMC 0.5%)	.004831	.046001	1.000	-.14968	.15935
		Fukoidan 150 mg/KgBB	.053558	.046001	.845	-.10096	.20807
		Fukoidan 200 mg/KgBB	.069750	.046001	.661	-.08476	.22426
		Fukoidan 250 mg/KgBB	.053080	.046001	.850	-.10143	.20759
		Kontrol Positif (Simvastatin)	Kontrol Negatif (CMC 0.5%)	-.004831	.046001	1.000	-.15935

Fukoidan 150 mg/KgBB	Kontrol Sehat	.005955	.046001	1.000	-	.16047	
					.14856		
	Kontrol Negatif (CMC 0.5%)	-.048727	.046001	.888	-	.10579	
					.20324		
	Kontrol Positif (Simvastatin)	-.053558	.046001	.845	-	.10096	
					.20807		
Fukoidan 200 mg/KgBB		.016192	.046001	.999	-	.17071	
					.13832		
Fukoidan 250 mg/KgBB		-.000478	.046001	1.000	-	.15404	
					.15499		
Fukoidan 200 mg/KgBB	Kontrol Sehat	-.010237	.046001	1.000	-	.14428	
					.16475		
	Kontrol Negatif (CMC 0.5%)	-.064919	.046001	.721	-	.08960	
					.21943		
	Kontrol Positif (Simvastatin)	-.069750	.046001	.661	-	.08476	
					.22426		
Fukoidan 150 mg/KgBB		-.016192	.046001	.999	-	.13832	
					.17071		
Fukoidan 250 mg/KgBB		-.016670	.046001	.999	-	.13784	
					.17118		
Fukoidan 250 mg/KgBB	Kontrol Sehat	.006433	.046001	1.000	-	.16095	
					.14808		
	Kontrol Negatif (CMC 0.5%)	-.048249	.046001	.892	-	.10627	
					.20276		
	Kontrol Positif (Simvastatin)	-.053080	.046001	.850	-	.10143	
					.20759		
Fukoidan 150 mg/KgBB		.000478	.046001	1.000	-	.15499	
					.15404		
Fukoidan 200 mg/KgBB		.016670	.046001	.999	-	.17118	
					.13784		
Indeks_Aorta	Kontrol Sehat	Kontrol Negatif (CMC 0.5%)	-.059909	.063874	.929	-	.15464
						.27446	
		Kontrol Positif (Simvastatin)	-.030825	.063874	.996	-	.18372
					.24537		

	Fukoidan 150 mg/KgBB	-.037729	.063874	.990	-	.17682
	Fukoidan 200 mg/KgBB	.000937	.063874	1.000	-	.21549
	Fukoidan 250 mg/KgBB	-.002591	.063874	1.000	-	.21196
Kontrol Negatif (CMC 0.5%)	Kontrol Sehat	.059909	.063874	.929	-	.27446
	Kontrol Positif (Simvastatin)	.029085	.063874	.997	-	.24363
	Fukoidan 150 mg/KgBB	.022180	.063874	.999	-	.23673
	Fukoidan 200 mg/KgBB	.060846	.063874	.924	-	.27540
	Fukoidan 250 mg/KgBB	.057318	.063874	.940	-	.27187
	Kontrol Positif (Simvastatin)	Kontrol Sehat	.030825	.063874	.996	-
Kontrol Negatif (CMC 0.5%)		-.029085	.063874	.997	-	.18546
Fukoidan 150 mg/KgBB		-.006904	.063874	1.000	-	.20764
Fukoidan 200 mg/KgBB		.031762	.063874	.995	-	.24631
Fukoidan 250 mg/KgBB		.028234	.063874	.997	-	.24278
Fukoidan 150 mg/KgBB		Kontrol Sehat	.037729	.063874	.990	-
	Kontrol Negatif (CMC 0.5%)	-.022180	.063874	.999	-	.19237
	Kontrol Positif (Simvastatin)	.006904	.063874	1.000	-	.22145
	Fukoidan 200 mg/KgBB	.038666	.063874	.989	-	.25322
	Fukoidan 250 mg/KgBB	.035138	.063874	.993	-	.24969

Fukoidan 200 mg/KgBB	Kontrol Sehat	-.000937	.063874	1.000	-	.21361
					.21549	
	Kontrol Negatif (CMC 0.5%)	-.060846	.063874	.924	-	.15370
					.27540	
	Kontrol Positif (Simvastatin)	-.031762	.063874	.995	-	.18279
					.24631	
Fukoidan 150 mg/KgBB		-.038666	.063874	.989	-	.17588
					.25322	
Fukoidan 250 mg/KgBB		-.003528	.063874	1.000	-	.21102
					.21808	
Fukoidan 250 mg/KgBB	Kontrol Sehat	.002591	.063874	1.000	-	.21714
					.21196	
	Kontrol Negatif (CMC 0.5%)	-.057318	.063874	.940	-	.15723
					.27187	
	Kontrol Positif (Simvastatin)	-.028234	.063874	.997	-	.18632
					.24278	
Fukoidan 150 mg/KgBB		-.035138	.063874	.993	-	.17941
					.24969	
Fukoidan 200 mg/KgBB		.003528	.063874	1.000	-	.21808
					.21102	

Lampiran 4. Dokumentasi penelitian



Gambar 6. Proses Aklimatisasi



Gambar 7. Penimbangan bobot badan



Gambar 8. Pembuatan pakan tinggi lemak



Gambar 9. Pemberian pakan tinggi lemak



Gambar 10. Pembuatan sampel terapi



Gambar 11. Suspensi Fukoidan



Gambar 12. Pemberian sampel terapi



Gambar 13. Proses pengambilan organ jantung dan aorta



Gambar 14. Proses pembilasan organ



Gambar 15. Jantung



Gambar 16. Aorta



Gambar 17. Penimbangan organ

Lampiran 5. Surat persetujuan etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
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REKOMENDASI PERSETUJUAN ETIK

Nomor : 514/UN4.6.4.5.31/ PP36/ 2023

Tanggal: 26 Juli 2023

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH23050341	No Sponsor	
Peneliti Utama	Eka Kurnia Pla'bistoni	Sponsor	
Judul Peneliti	Pengaruh Pemberian Senyawa Fukoidan dari Alga Cokelat (Sargassum polycystum) Terhadap Berat Badan, Bobot Jantung dan Bobot Aorta Tikus Wistar (Rattus norvegicus) Yang Diinduksi Diet Tinggi Lemak		
No Versi Protokol	2	Tanggal Versi	17 Juli 2023
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Fakultas Farmasi Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 26 Juli 2023 sampai 26 Juli 2024	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan