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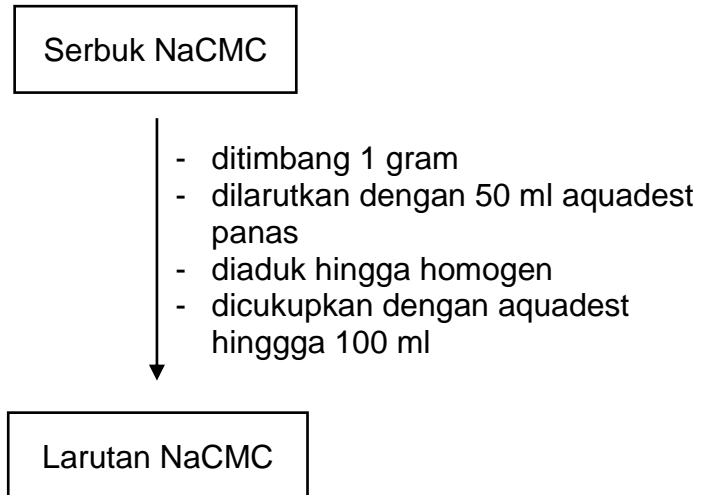
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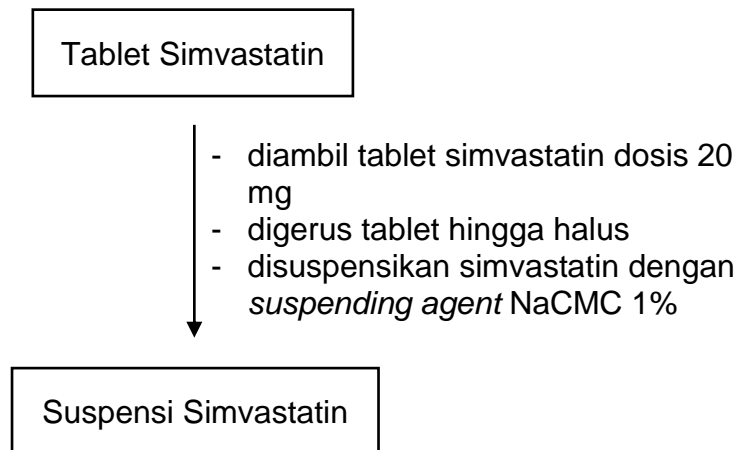
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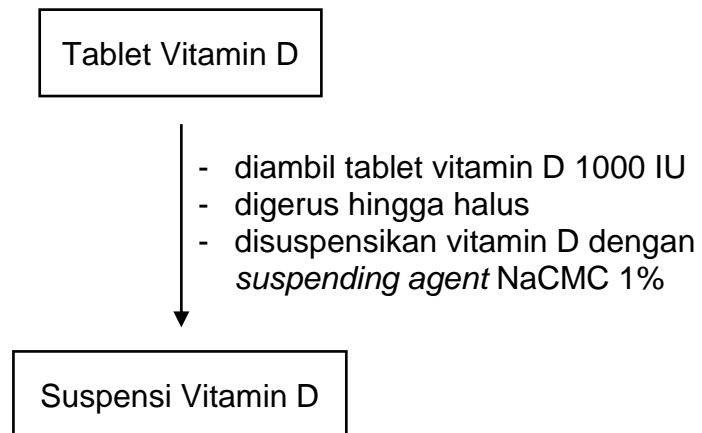
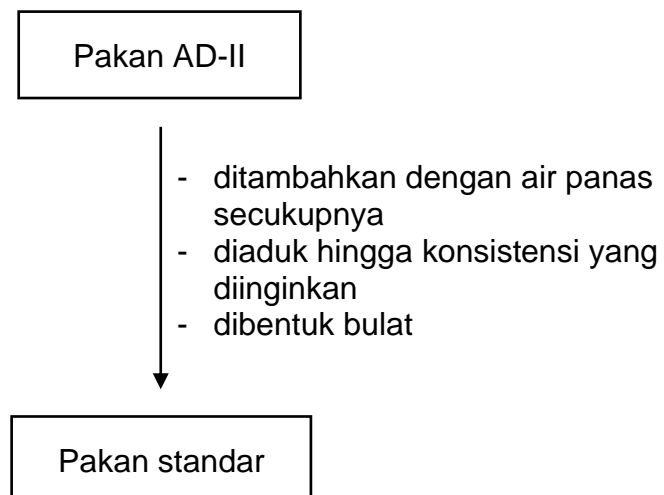
LAMPIRAN

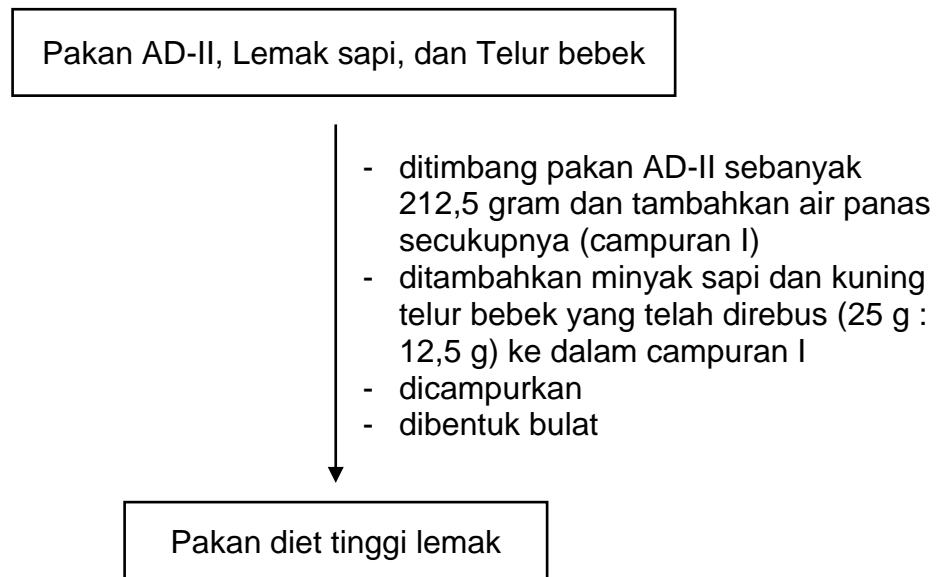
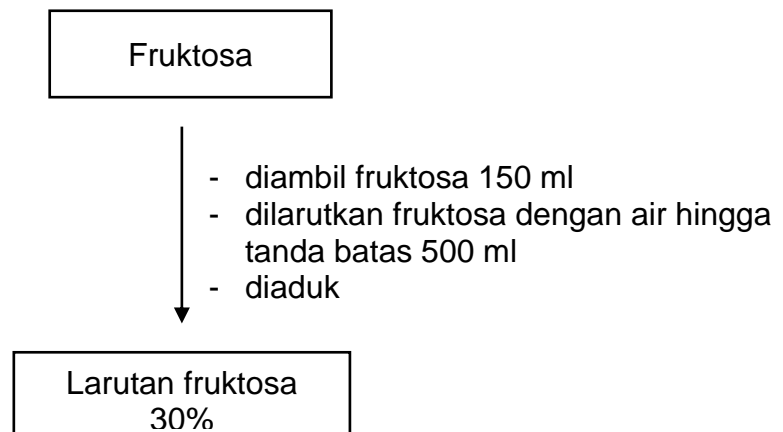
Lampiran 1. Pembuatan larutan NaCMC 1% b/v

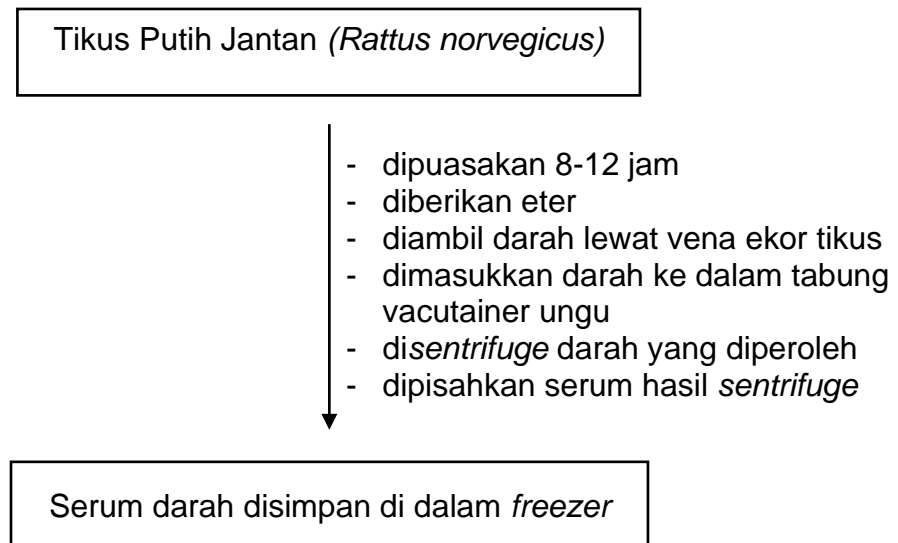
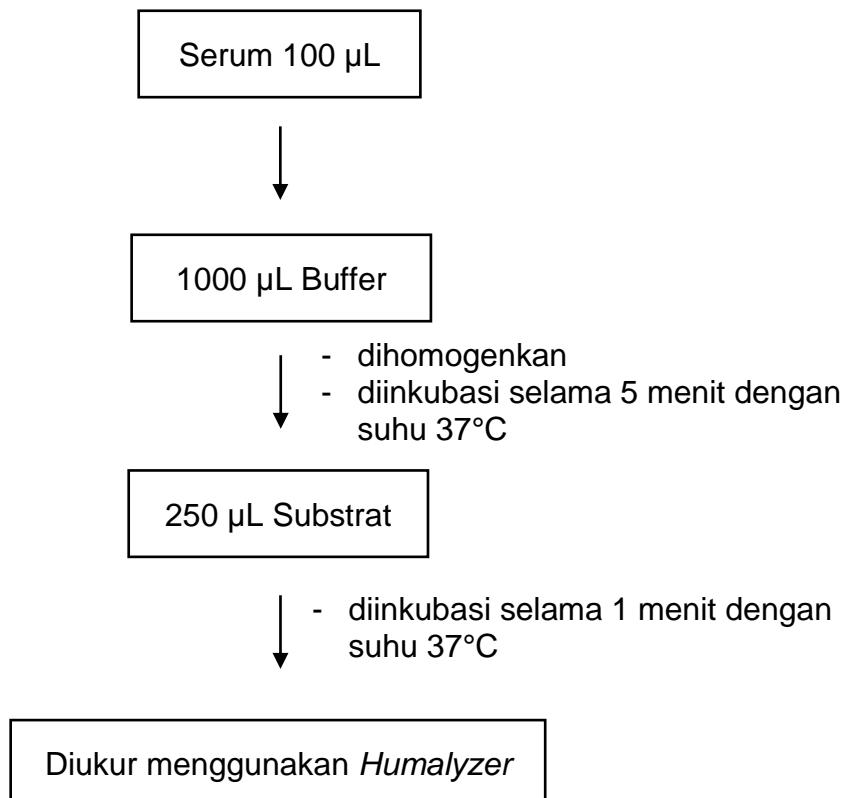


Lampiran 2. Pembuatan suspensi Simvastatin



Lampiran 3. Pembuatan suspensi Vitamin D**Lampiran 4. Pembuatan pakan standar**

Lampiran 5. Pembuatan pakan diet tinggi lemak**Lampiran 6. Pembuatan larutan fruktosa 30%**

Lampiran 7. Pengambilan darah hewan coba**Lampiran 8. Pengukuran kadar enzim ALT dan AST**

Lampiran 9. Perhitungan

Simvastatin

Menghitung rata-rata bobot tablet

Jumlah ditimbang : 20 tablet

Bobot Rata-rata : 2727 mg/20 tablet
: 136,35 mg

Jumlah yang ditimbang : 0,414 mg/10 mg = x mg/136,35
: 5,631mg/mL (168,93mg/30mL NaCMC 1%)

Perhitungan dosis Simvastatin

Diketahui:

Dosis manusia : 20 mg/60kgBB
: 0,333 mg/kgBB

Faktor Konversi : 6,2

Ditanyakan:

Dosis hewan : ?

Perhitungan :

Dosis hewan = Dosis manusia x Faktor Konversi
= 0,333 mg/kgBB x 6,2
= 2,07 mg/kgBB
= 2,07 mg/1000gBB = X/200gBB
= 0,414 mg/200gBB

Perhitungan dosis Vitamin D dosis rendah

Diketahui:

Dosis manusia : 600 IU/60kgBB
: 10mg/kgBB

Faktor Konversi : 6,2

Ditanyakan:

Dosis hewan : ?

Perhitungan :

$$\begin{aligned}
 \text{Dosis hewan} &= \text{Dosis manusia} \times \text{Faktor Konversi} \\
 &= 10 \text{ IU/kgBB} \times 6,2 \\
 &= 62 \text{ IU/kgBB} \\
 &= 62 \text{ IU/1000gBB} = X/200\text{gBB} \\
 &= 12,4 \text{ IU/200gBB}
 \end{aligned}$$

Perhitungan dosis Vitamin D dosis tinggi

Diketahui:

Dosis manusia : 6000 IU/60kgBB
 : 100mg/kgBB

Faktor Konversi : 6,2

Ditanyakan:

Dosis hewan : ?

Perhitungan :

$$\begin{aligned}
 \text{Dosis hewan} &= \text{Dosis manusia} \times \text{Faktor Konversi} \\
 &= 100 \text{ IU/kgBB} \times 6,2 \\
 &= 620 \text{ IU/kgBB} \\
 &= 620 \text{ IU/1000gBB} = X/200\text{gBB} \\
 &= 124 \text{ IU/200gBB}
 \end{aligned}$$

Perhitungan dosis Omega-3

Diketahui:

Dosis manusia : 2000 mg/60kgBB
 : 33,3 mg/kgBB

Faktor Konversi : 6,2

Ditanyakan:

Dosis hewan : ?

Perhitungan :

$$\begin{aligned}
 \text{Dosis hewan} &= \text{Dosis manusia} \times \text{Faktor Konversi} \\
 &= 33,3 \text{ mg/kgBB} \times 6,2 \\
 &= 206,71 \text{ mg/kgBB}
 \end{aligned}$$

$$= 206,71 \text{ mg}/1000\text{gBB} = X/200\text{gBB}$$

$$= 41,345 \text{ mg}/200\text{gBB}$$

Pembagian hewan coba

$$(t-1) (r-1) \geq 15$$

$$(6-1) (n-1) \geq 15$$

$$5n-5 \geq 15$$

$$n \geq 4$$

Keterangan: t = jumlah perlakuan

r = jumlah pengulangan

Lampiran 10. Data Hasil Analisis Statistika

Report

ASTpre

Kelompok	Mean	N	Std. Deviation	Std. Error of Mean
K1	85.9000	4	10.98393	5.49196
K2	84.1000	3	47.79121	27.59227
P1	90.6750	4	23.70715	11.85358
P2	74.8500	4	11.49565	5.74783
P3	89.5500	4	24.33673	12.16837
P4	88.0000	4	27.56302	13.78151
Total	85.5739	23	23.08707	4.81399

Report

ASTpost

Kelompok	Mean	N	Std. Deviation	Std. Error of Mean
K1	94.7250	4	12.80817	6.40408
K2	212.1333	3	51.14492	29.52854
P1	153.1000	4	37.47888	18.73944
P2	140.1750	4	39.23548	19.61774
P3	136.5750	4	43.87675	21.93837
P4	121.7250	4	40.65582	20.32791
Total	140.0696	23	48.22695	10.05601

Report

ALTpre

Kelompok	Mean	N	Std. Deviation	Std. Error of Mean
K1	53.2250	4	13.19959	6.59979
K2	55.4000	3	13.70109	7.91033
P1	63.3250	4	11.87894	5.93947
P2	65.7250	4	12.15027	6.07514
P3	62.2000	4	13.14559	6.57280
P4	52.2750	4	21.22080	10.61040

Total	58.8348	23	13.95280	2.90936
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Report

ALTpost

Kelompok	Mean	N	Std. Deviation	Std. Error of Mean
K1	59.2250	4	12.03422	6.01711
K2	90.5000	3	18.10166	10.45100
P1	72.7000	4	16.52533	8.26267
P2	64.5250	4	18.06348	9.03174
P3	73.8250	4	2.88603	1.44301
P4	68.2000	4	4.81733	2.40866
Total	70.6696	23	14.95133	3.11757

ANOVA

ASTpre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	657.817	5	131.563	.202	.957
Within Groups	11068.467	17	651.086		
Total	11726.284	22			

Multiple Comparisons

Dependent Variable: ASTpre

LSD

(I) Kelompok	(J) Kelompok	Mean Difference			95% Confidence Interval	
		(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
K1	K2	1.80000	19.48847	.927	-39.3171	42.9171
	P1	-4.77500	18.04281	.794	-42.8420	33.2920
	P2	11.05000	18.04281	.548	-27.0170	49.1170
	P3	-3.65000	18.04281	.842	-41.7170	34.4170
	P4	-2.10000	18.04281	.909	-40.1670	35.9670
K2	K1	-1.80000	19.48847	.927	-42.9171	39.3171
	P1	-6.57500	19.48847	.740	-47.6921	34.5421
	P2	9.25000	19.48847	.641	-31.8671	50.3671
	P3	-5.45000	19.48847	.783	-46.5671	35.6671

	P4	-3.90000	19.48847	.844	-45.0171	37.2171
P1	K1	4.77500	18.04281	.794	-33.2920	42.8420
	K2	6.57500	19.48847	.740	-34.5421	47.6921
	P2	15.82500	18.04281	.393	-22.2420	53.8920
	P3	1.12500	18.04281	.951	-36.9420	39.1920
	P4	2.67500	18.04281	.884	-35.3920	40.7420
P2	K1	-11.05000	18.04281	.548	-49.1170	27.0170
	K2	-9.25000	19.48847	.641	-50.3671	31.8671
	P1	-15.82500	18.04281	.393	-53.8920	22.2420
	P3	-14.70000	18.04281	.426	-52.7670	23.3670
	P4	-13.15000	18.04281	.476	-51.2170	24.9170
P3	K1	3.65000	18.04281	.842	-34.4170	41.7170
	K2	5.45000	19.48847	.783	-35.6671	46.5671
	P1	-1.12500	18.04281	.951	-39.1920	36.9420
	P2	14.70000	18.04281	.426	-23.3670	52.7670
	P4	1.55000	18.04281	.933	-36.5170	39.6170
P4	K1	2.10000	18.04281	.909	-35.9670	40.1670
	K2	3.90000	19.48847	.844	-37.2171	45.0171
	P1	-2.67500	18.04281	.884	-40.7420	35.3920
	P2	13.15000	18.04281	.476	-24.9170	51.2170
	P3	-1.55000	18.04281	.933	-39.6170	36.5170

ANOVA

ASTpost

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25878.232	5	5175.646	3.479	.024
Within Groups	25290.217	17	1487.660		
Total	51168.449	22			

Multiple Comparisons

Dependent Variable: ASTpost

LSD

(I) Kelompok	(J) Kelompok	Mean Difference		Sig.	95% Confidence Interval	
		(I-J)	Std. Error		Lower Bound	Upper Bound
K1	K2	-117.40833*	29.45847	.001	-179.5603	-55.2564
	P1	-58.37500*	27.27325	.047	-115.9165	-.8335

	P2	-45.45000	27.27325	.114	-102.9915	12.0915
	P3	-41.85000	27.27325	.143	-99.3915	15.6915
	P4	-27.00000	27.27325	.336	-84.5415	30.5415
K2	K1	117.40833*	29.45847	.001	55.2564	179.5603
	P1	59.03333	29.45847	.061	-3.1186	121.1853
	P2	71.95833*	29.45847	.026	9.8064	134.1103
	P3	75.55833*	29.45847	.020	13.4064	137.7103
	P4	90.40833*	29.45847	.007	28.2564	152.5603
P1	K1	58.37500*	27.27325	.047	.8335	115.9165
	K2	-59.03333	29.45847	.061	-121.1853	3.1186
	P2	12.92500	27.27325	.642	-44.6165	70.4665
	P3	16.52500	27.27325	.553	-41.0165	74.0665
	P4	31.37500	27.27325	.266	-26.1665	88.9165
P2	K1	45.45000	27.27325	.114	-12.0915	102.9915
	K2	-71.95833*	29.45847	.026	-134.1103	-9.8064
	P1	-12.92500	27.27325	.642	-70.4665	44.6165
	P3	3.60000	27.27325	.897	-53.9415	61.1415
	P4	18.45000	27.27325	.508	-39.0915	75.9915
P3	K1	41.85000	27.27325	.143	-15.6915	99.3915
	K2	-75.55833*	29.45847	.020	-137.7103	-13.4064
	P1	-16.52500	27.27325	.553	-74.0665	41.0165
	P2	-3.60000	27.27325	.897	-61.1415	53.9415
	P4	14.85000	27.27325	.593	-42.6915	72.3915
P4	K1	27.00000	27.27325	.336	-30.5415	84.5415
	K2	-90.40833*	29.45847	.007	-152.5603	-28.2564
	P1	-31.37500	27.27325	.266	-88.9165	26.1665
	P2	-18.45000	27.27325	.508	-75.9915	39.0915
	P3	-14.85000	27.27325	.593	-72.3915	42.6915

*. The mean difference is significant at the 0.05 level.

ANOVA

ALTPre

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	649.242	5	129.848	.607	.695
Within Groups	3633.730	17	213.749		
Total	4282.972	22			

Multiple Comparisons

Dependent Variable: ALTpre

LSD

(I) Kelompok	(J) Kelompok	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
		(I-J)			Lower Bound	Upper Bound
K1	K2	-2.17500	11.16632	.848	-25.7339	21.3839
	P1	-10.10000	10.33801	.342	-31.9113	11.7113
	P2	-12.50000	10.33801	.243	-34.3113	9.3113
	P3	-8.97500	10.33801	.397	-30.7863	12.8363
	P4	.95000	10.33801	.928	-20.8613	22.7613
K2	K1	2.17500	11.16632	.848	-21.3839	25.7339
	P1	-7.92500	11.16632	.487	-31.4839	15.6339
	P2	-10.32500	11.16632	.368	-33.8839	13.2339
	P3	-6.80000	11.16632	.551	-30.3589	16.7589
	P4	3.12500	11.16632	.783	-20.4339	26.6839
P1	K1	10.10000	10.33801	.342	-11.7113	31.9113
	K2	7.92500	11.16632	.487	-15.6339	31.4839
	P2	-2.40000	10.33801	.819	-24.2113	19.4113
	P3	1.12500	10.33801	.915	-20.6863	22.9363
	P4	11.05000	10.33801	.300	-10.7613	32.8613
P2	K1	12.50000	10.33801	.243	-9.3113	34.3113
	K2	10.32500	11.16632	.368	-13.2339	33.8839
	P1	2.40000	10.33801	.819	-19.4113	24.2113
	P3	3.52500	10.33801	.737	-18.2863	25.3363
	P4	13.45000	10.33801	.211	-8.3613	35.2613
P3	K1	8.97500	10.33801	.397	-12.8363	30.7863
	K2	6.80000	11.16632	.551	-16.7589	30.3589
	P1	-1.12500	10.33801	.915	-22.9363	20.6863
	P2	-3.52500	10.33801	.737	-25.3363	18.2863
	P4	9.92500	10.33801	.350	-11.8863	31.7363
P4	K1	-.95000	10.33801	.928	-22.7613	20.8613
	K2	-3.12500	11.16632	.783	-26.6839	20.4339
	P1	-11.05000	10.33801	.300	-32.8613	10.7613
	P2	-13.45000	10.33801	.211	-35.2613	8.3613
	P3	-9.92500	10.33801	.350	-31.7363	11.8863

ANOVA

ALtpost

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1935.386	5	387.077	2.206	.101
Within Groups	2982.542	17	175.444		
Total	4917.929	22			

Multiple Comparisons

Dependent Variable: ALtpost

LSD

(I) Kelompok	(J) Kelompok	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
		(I-J)			Lower Bound	Upper Bound
K1	K2	-31.27500*	10.11643	.007	-52.6188	-9.9312
	P1	-13.47500	9.36599	.168	-33.2355	6.2855
	P2	-5.30000	9.36599	.579	-25.0605	14.4605
	P3	-14.60000	9.36599	.137	-34.3605	5.1605
	P4	-8.97500	9.36599	.351	-28.7355	10.7855
K2	K1	31.27500*	10.11643	.007	9.9312	52.6188
	P1	17.80000	10.11643	.096	-3.5438	39.1438
	P2	25.97500*	10.11643	.020	4.6312	47.3188
	P3	16.67500	10.11643	.118	-4.6688	38.0188
	P4	22.30000*	10.11643	.042	.9562	43.6438
P1	K1	13.47500	9.36599	.168	-6.2855	33.2355
	K2	-17.80000	10.11643	.096	-39.1438	3.5438
	P2	8.17500	9.36599	.395	-11.5855	27.9355
	P3	-1.12500	9.36599	.906	-20.8855	18.6355
	P4	4.50000	9.36599	.637	-15.2605	24.2605
P2	K1	5.30000	9.36599	.579	-14.4605	25.0605
	K2	-25.97500*	10.11643	.020	-47.3188	-4.6312
	P1	-8.17500	9.36599	.395	-27.9355	11.5855
	P3	-9.30000	9.36599	.335	-29.0605	10.4605
	P4	-3.67500	9.36599	.700	-23.4355	16.0855
P3	K1	14.60000	9.36599	.137	-5.1605	34.3605
	K2	-16.67500	10.11643	.118	-38.0188	4.6688
	P1	1.12500	9.36599	.906	-18.6355	20.8855

	P2	9.30000	9.36599	.335	-10.4605	29.0605
	P4	5.62500	9.36599	.556	-14.1355	25.3855
P4	K1	8.97500	9.36599	.351	-10.7855	28.7355
	K2	-22.30000*	10.11643	.042	-43.6438	-.9562
	P1	-4.50000	9.36599	.637	-24.2605	15.2605
	P2	3.67500	9.36599	.700	-16.0855	23.4355
	P3	-5.62500	9.36599	.556	-25.3855	14.1355

*. The mean difference is significant at the 0.05 level.

PAIRED T TEST AST K1

		Paired Samples Test							
		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	ASTpre - ASTpost	-8.82500	15.75846	7.87923	-33.90023	16.25023	-1.120	3	.344

PAIRED T TEST AST K2

		Paired Samples Test							
		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	ASTpre - ASTpost	-128.03333	97.72821	56.42341	-370.80367	114.73700	-2.269	2	.151

PAIRED T TEST AST P1**Paired Samples Test**

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	ASTpre - ASTpost	-62.42500	58.30748	29.15374	-155.20522	30.35522	-2.141	3	.122

PAIRED T TEST AST P2**Paired Samples Test**

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	ASTpre - ASTpost	-65.32500	43.30638	21.65319	-134.23511	3.58511	-3.017	3	.057

PAIRED T TEST AST P3**Paired Samples Test**

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	ASTpre - ASTpost	-47.02500	62.76530	31.38265	-146.89859	52.84859	-1.498	3	.231

PAIRED T TEST AST P4**Paired Samples Test**

	Mean	Std. Deviation	Std. Error Mean	Paired Differences		t	df	Sig. (2-tailed)
				95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 ASTpre - ASTpost	-33.72500	42.00931	21.00466	-100.57119	33.12119	-1.606	3	.207

PAIRED T TEST ALT K1**Paired Samples Test**

	Mean	Std. Deviation	Std. Error Mean	Paired Differences		t	df	Sig. (2-tailed)
				95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 ALTpre - ALTpost	-6.00000	13.41914	6.70957	-27.35285	15.35285	-.894	3	.437

PAIRED T TEST ALT K2**Paired Samples Test**

	Mean	Std. Deviation	Std. Error Mean	Paired Differences		t	df	Sig. (2-tailed)
				95% Confidence Interval of the Difference				
				Lower	Upper			

Pair 1 ALTpre - ALTpost	-	30.40082	17.55192	-110.61983	40.41983	-2.000	2	.184
	35.10000							

PAIRED T TEST ALT P1

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
				Paired Differences				
Pair 1 ALTpre - ALTpost	-	28.16989	14.08494	-54.19958	35.44958	-.666	3	.553
	9.37500							

PAIRED T TEST ALT P2

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
				Paired Differences				
Pair 1 ALTpre - ALTpost	1.20000	27.01000	13.50500	-41.77893	44.17893	.089	3	.935

PAIRED T TEST ALT P3

Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
				Paired Differences				
Pair 1 ALTpre - ALTpost	-	15.60841	7.80421	-36.46147	13.21147	-1.490	3	.233
	11.62500							

PAIRED T TEST ALT P4

Paired Samples Test

	Mean	Std. Deviation	Paired Differences		t	df	Sig. (2-tailed)	
			Std. Error Mean	95% Confidence Interval of the Difference				
			Mean	Lower	Upper			
Pair 1 ALTpre - ALTpost	-15.92500	16.47571	8.23786	-42.14154	10.29154	-1.933	3	.149

Lampiran 11. Dokumentasi penelitian



Gambar 4. Pembagian hewan coba ke dalam kelompok



Gambar 5. Pembuatan pakan diet tinggi lemak



Gambar 6. Pembuatan pakan standar



Gambar 7. Pengukuran kadar kolesterol



Gambar 8. Proses pembuatan sediaan terapi



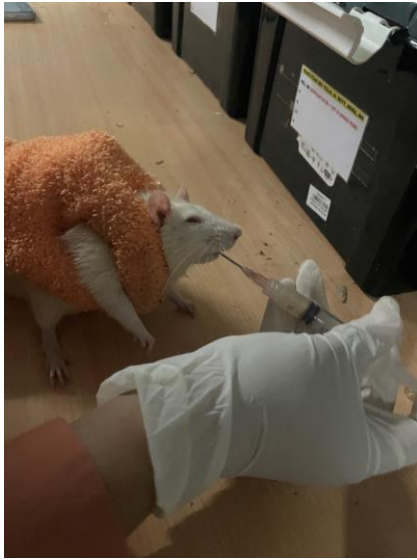
Gambar 9. Sediaan terapi



Gambar 10. Pengambilan darah untuk pemeriksaan AST dan ALT



Gambar 11. Pemisahan serum darah di sentrifuge



Gambar 12. Pemberian terapi hewan coba



Gambar 13. Pemusnahan hewan coba

Lampiran 12. Surat izin 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.
Contact Person: dr. Agussalim Bukhari, MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK
Nomor : 806/UN4.6.4.5.31/ PP36/ 2022
Tanggal: 12 Desember 2022

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

No Protokol	UH22110692	No Sponsor	
Peneliti Utama	Bethania Octaresya Mustamu	Sponsor	
Judul Peneliti	Uji Aktivitas Vitamin D dan Omega-3 sebagai Terapi Adjuvan Simvastatin dalam Mencegah Gangguan Fungsi Hati pada Tikus yang Diinduksi Diet Tinggi Lemak		
No Versi Protokol	1	Tanggal Versi	15 Nopember 2022
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Fakultas Farmasi Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 12 Desember 2022 sampai 12 Desember 2023	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

CS Diambil dengan CamScanner