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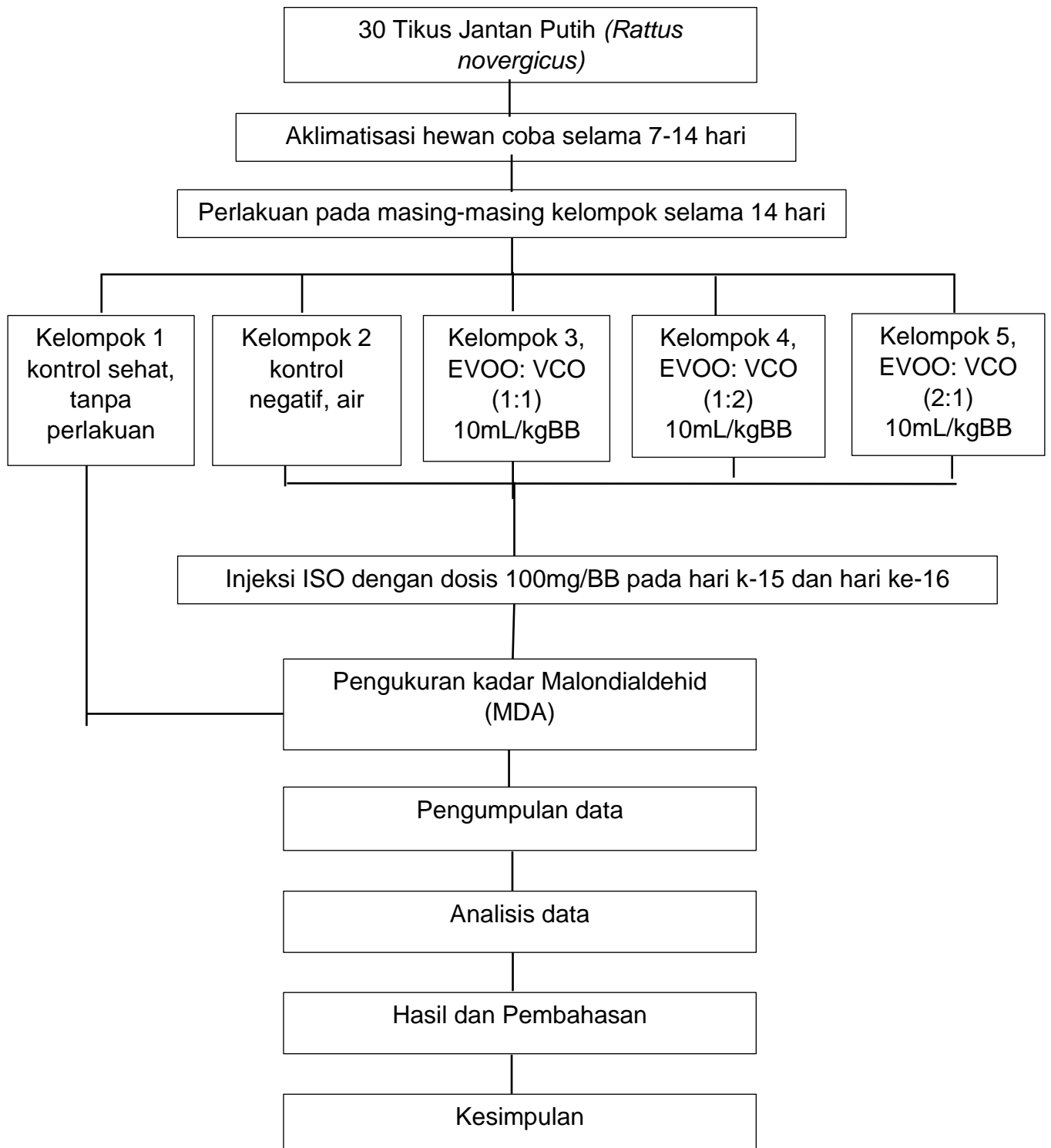
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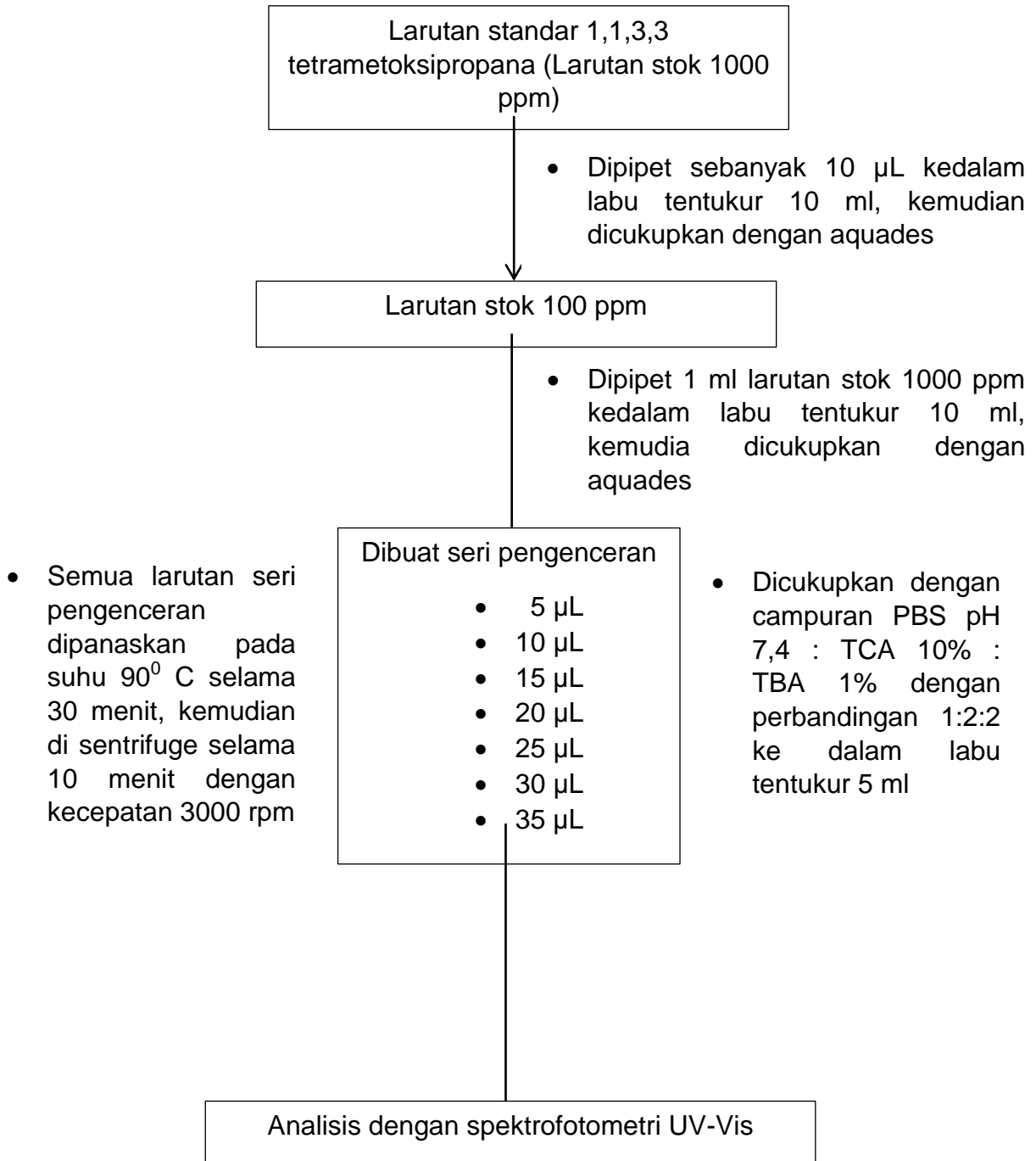
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## LAMPIRAN 1

### Skema Kerja Efek Pemberian Kombinasi EVOO: VCO dengan Induksi Isoproterenol



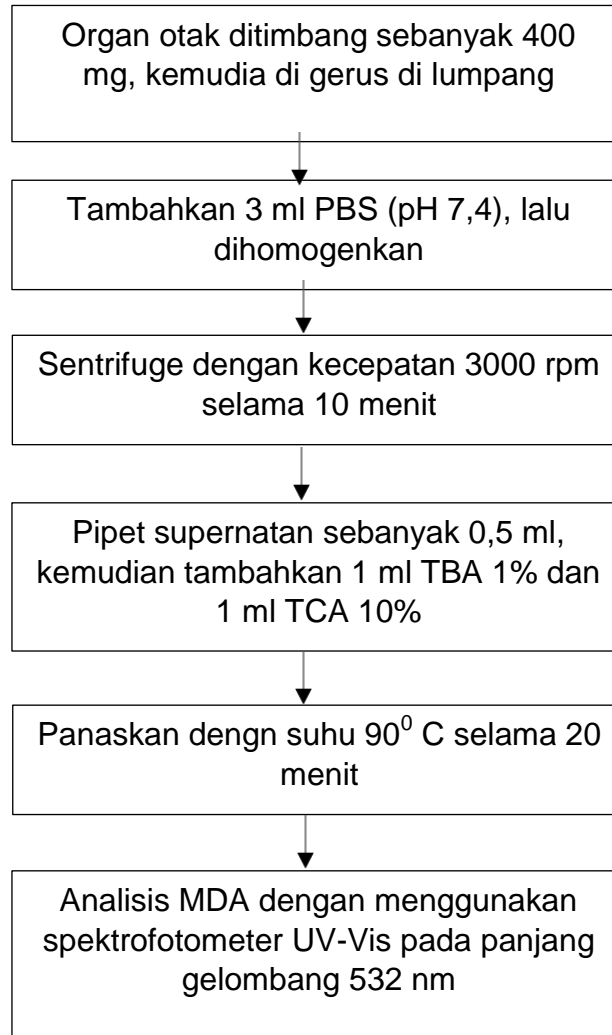
### Skema Pengukuran Kurva Baku





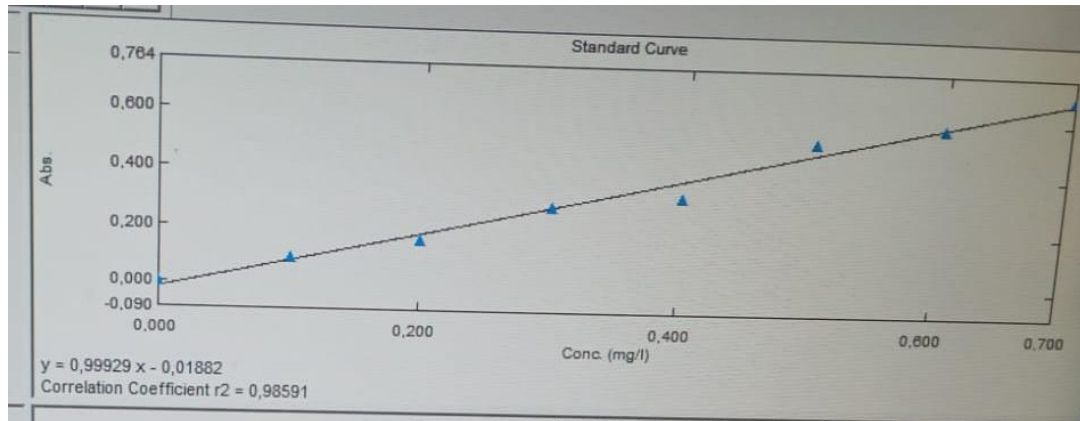
### LAMPIRAN 3

#### Skema Pengukuran Kadar Malondialdehida (MDA)



## LAMPIRAN 4

### Spektrum Absorbansi Kurva Baku



	Sample ID	Type	Ex	Conc	WL506,5	Wgt.Factor
1	blank	Standard		0,000	0,000	1,000
2	MDA.1	Standard		0,100	0,090	1,000
3	MDA.2	Standard		0,200	0,161	1,000
4	MDA.3	Standard		0,300	0,283	1,000
5	MDA.4	Standard		0,400	0,323	1,000
6	MDA.5	Standard		0,500	0,522	1,000
7	MDA.6	Standard		0,600	0,575	1,000
8	MDA.7	Standard		0,700	0,693	1,000
9						

## LAMPIRAN 5

### Hasil Pengukuran Kurva Baku dan Kadar Malondiladehida (MDA)

Tabel 4. Absorbansi TMP (Standar MDA)

Konsentrasi	Absorbansi
0,1	0,090
0,2	0,161
0,3	0,283
0,4	0,323
0,5	0,522
0,6	0,575
0,7	0,693

## LAMPIRAN 6

### Data Bobot Organ Otak dan Berat Badan

**Tabel 5.** Data Bobot Organ dan Berat Badan

Kelompok	Kode	Berat Badan	Bobot Otak	Bobot Relatif	Rata-rata SD
Kontrol Sehat	KS 1	260	1,87	7,1923	6,964 ± 0,425
	KS 2	256	1,62	6,3281	
	KS 3	263	1,88	7,1482	
	KS 4	267	1,92	7,1910	
Kontrol Negatif	KN 1	209	1,91	9,1387	8,866 ± 0,438
	KN 2	202	1,88	9,3069	
	KN 3	230	1,92	8,3478	
	KN 4	188	1,63	8,670	
EVOO:VCO (1:1)	T1.1	198	1,63	8,2323	8,770 ± 0.653
	T1.2	166	1,57	9,4578	
	T1.3	199	1,63	8,1909	
	T1.4	175	1,61	9,200	
EVOO:VCO (1:2)	T2.1	195	1,51	7,7435	7,833 0.173
	T2.2	190	1,45	7,6315	
	T2.3	177	1,41	7,9661	
	T2.4	179	1,73	7,9888	
EVOO:VCO (2:1)	T3.1	200	171	8,5500	8,476 ± 0.811
	T3.2	185	1,58	8,5405	
	T3.3	197	1,66	8,4263	
	T3.4	211	1,77	8,3886	

## LAMPIRAN 7

### Kadar Malondialdehida (MDA) Otak Tikus Putih Setelah Perlakuan

**Tabel 6.** Perhitungan kadar MDA

Kelompok	Kode	Absorbansi	Kadar MDA	Rerata SD
<b>Kontrol Sehat</b>	KS 1	0,1390	0.1671	0.1776 ± 0.0333
	KS 2	0.1190	0.1476	
	KS 3	0.1810	0.2080	
	KS 4	0.1190	0.1476	
	KS 5	0,1910	0.2177	
<b>Kontrol Negatif</b>	KN 1	1.3000	0.4076	0.2945 ± 0.0687
	KN 2	1.5709	0.3122	
	KN 3	1.4127	0.2450	
	KN 4	1.4256	0.2528	
	KN 5	1.5005	0.2547	
<b>1:1</b>	1:1 T1	0.2270	0.2343	0.2020 ± 0.0305
	1:1 T2	0.2120	0.2197	
	1:1 T3	0.2050	0.2129	
	1:1 T4	0.1480	0.1574	
	1:1 T5	0.1770	0.1856	
<b>1:2</b>	1:2 T1	0.1340	0.1447	1.1264 ± 0.0198
	1:2 T2	0.1390	0.1486	
	1:2 T3	0.1140	0.1243	
	1:2 T4	0.0990	0.1097	
	1:2 T5	0.0940	0.1048	
<b>2:1</b>	2:1 T1	0.1240	0.1340	0.1319 ± 0.0118
	2:1 T2	0.1310	0.1408	
	2:1 T3	0.1200	0.1301	
	2:1 T4	0.1320	0.1418	
	2:1 T5	0.1020	0.1126	

## **LAMPIRAN 8**

### **Perhitungan Dosis**

Perhitungan dosis Isoproterenol yang digunakan yaitu:

$$\text{Dosis } 100\text{mg/kgBB} = 100\text{mg}/1000\text{gBB} = 20\text{mg}/200\text{gBB}$$

Maka, tiap 200g tikus digunakan 1 mL dilarutkan dengan NaCl 0,9% sehingga menjadi 20mg/200gBB/mL NaCl 0,9%.

Cara pembuatan larutan ISO: Ditimbang 20 mg ISO kemudian dilarutkan menggunakan NaCl 0,9% sebanyak 1 mL dan dihomogenkan.

## LAMPIRAN 9

### Hasil Data Statistik One Way Anova

a. Kadar MDA

Hasil Data Statistik Kadar MDA

	Normal	Isoproterenol	1:1	1:2	2:1
Minimum	0,1476	0,245	0,1574	0,1048	0,1126
Maximum	0,2177	0,4076	0,2343	0,1486	0,1418
Range	0,0701	0,1626	0,0769	0,0438	0,0292
Mean	0,1776	0,2945	0,202	0,1264	0,1319
SD	0,03333	0,0687	0,03055	0,01986	0,0118
SD Error	0,0149	0,03072	0,01366	0,008881	0,005279

Test for normal distribution (Shapiro-Wilk test)

W	0,8423	0,7937	0,9432	0,8942	0,8676
P value	0,1713	0,0719	0,6885	0,3786	0,2569
Normality test (alpha=0,05)	Yes	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns	ns

Anova summary

F	15,9044244
P value	<0,0001
P value summary	****
Significant diff. Among means (P<0,05)?	Yes
R squared	0,76081618

Tukey's multiple comparisons test	Mean Diff,	95,00% CI of diff,	Below threshold?	Summary	Adjusted P Value	
normal vs. ISO	-0,11686	-0,1891603034 to 0,04455969655	Yes	***	0,0009	A-B
normal vs. 1:1	-0,02438	-0,09668030345 to 0,04792030345	No	ns	0,8482	A-C
normal vs. 1:2	0,05118	-0,02112030345 to 0,1234803034	No	ns	0,2512	A-D
normal vs. 2:1	0,04574	-0,02656030345 to 0,1180403034	No	ns	0,3526	A-E
ISO vs. 1:1	0,09248	0,02017969655 to 0,1647803034	Yes	**	0,0083	B-C
ISO vs. 1:2	0,16804	0,09573969655 to 0,2403403034	Yes	****	<0,0001	B-D
ISO vs. 2:1	0,1626	0,09029969655 to 0,2349003034	Yes	****	<0,0001	B-E
1:1 vs. 1:2	0,07556	0,003259696553 to 0,1478603034	Yes	*	0,0378	C-D
1:1 vs. 2:1	0,07012	-0,002180303447 to 0,1424203034	No	ns	0,0601	E
1:2 vs. 2:1	-0,00544	-0,07774030345 to 0,06686030345	No	ns	0,9994	D-E

Test details	Mean 1	Mean 2	Mean Diff,	SE of diff,	n1	n2	q	DF
normal vs. ISO	0,1776	0,29446	0,11686	0,024162	5	5	6,84001	20
normal vs. 1:1	0,1776	0,20198	0,02438	0,024162	5	5	1,427	20
normal vs. 1:2	0,1776	0,12642	0,05118	0,024162	5	5	2,99565	20
normal vs. 2:1	0,1776	0,13186	0,04574	0,024162	5	5	2,67724	20
ISO vs. 1:1	0,29446	0,20198	0,09248	0,024162	5	5	5,41301	20
ISO vs. 1:2	0,29446	0,12642	0,16804	0,024162	5	5	9,83566	20
ISO vs. 2:1	0,29446	0,13186	0,1626	0,024162	5	5	9,51725	20
1:1 vs. 1:2	0,20198	0,12642	0,07556	0,024162	5	5	4,42265	20
1:1 vs. 2:1	0,20198	0,13186	0,07012	0,024162	5	5	4,10424	20
1:2 vs. 2:1	0,12642	0,13186	0,00544	0,024162	5	5	0,31841	20

b. Bobot Organ Otak relatif  
 Hasil data statistik bobot organ otak relatif

	Normal	Negatif	(1:1)	(1:2)	(2:1)
Minimum	6,328	8,348	8,191	7,632	8,389
Maximum	7,192	9,307	9,458	7,989	8,55
Range	0,8642	0,9591	1,267	0,3572	0,1614
Mean	6,965	8,866	8,77	7,833	8,476
Std. Deviation	0,425	0,438	0,6538	0,1737	0,08111



Std. Error of Mean	0,2125	0,219	0,3269	0,08687	0,04055
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Test for normal distribution (Shapiro-Wilk test)

Shapiro-Wilk test	Normal	Negatif	(1:1)	(1:2)	(2:1)
W	0,6665	0,9438	0,8299	0,8815	0,8549
P value	0,0044	0,6777	0,1676	0,3449	0,2425
Passed normality test (alpha=0.05)?	No	Yes	Yes	Yes	Yes
P value summary	**	ns	ns	ns	ns

Anova summary

F	14,96162096
P value	<0,0001
P value summary	****
Significant diff. among means (P < 0.05)?	Yes
R squared	0,799589784

Two-stage linear step-up procedure of Benjamini, Krieger and Yekutieli	Mean Diff,	Discovery?	q value	Individual P Value	
Normal vs. Negatif	-1,900998158	Yes	<0,0001	<0,0001	A-B
Normal vs. 1:1	-1,805344108	Yes	<0,0001	<0,0001	A-C
Normal vs. 1:2	-0,867591075	Yes	0,0063	0,009	A-D
Normal vs. 2:1	-1,511457293	Yes	0,0001	0,0001	A-E
Negatif vs. 1:1	0,09565405	No	0,3131	0,7455	B-C
Negatif vs. 1:2	1,033407083	Yes	0,0029	0,0028	B-D
Negatif vs. 2:1	0,389540865	No	0,104	0,1981	B-E
1:1 vs. 1:2	0,937753033	Yes	0,0046	0,0055	C-D
1:1 vs. 2:1	0,293886815	No	0,152	0,3258	C-E
1:2 vs. 2:1	-0,643866218	Yes	0,0251	0,0418	D-E

Test details	Mean 1	Mean 2	Mean Diff,	SE of diff,	n1	n2
Normal vs. Negatif	6,964933225	8,865931383	-1,90099816	0,289269529	4	4
Normal vs. 1:1	6,964933225	8,770277333	-1,80534411	0,289269529	4	4
Normal vs. 1:2	6,964933225	7,8325243	-0,86759108	0,289269529	4	4
Normal vs. 2:1	6,964933225	8,476390518	-1,51145729	0,289269529	4	4
Negatif vs. 1:1	8,865931383	8,770277333	0,09565405	0,289269529	4	4
Negatif vs. 1:2	8,865931383	7,8325243	1,033407083	0,289269529	4	4
Negatif vs. 2:1	8,865931383	8,476390518	0,389540865	0,289269529	4	4
1:1 vs. 1:2	8,770277333	7,8325243	0,937753033	0,289269529	4	4
1:1 vs. 2:1	8,770277333	8,476390518	0,293886815	0,289269529	4	4
1:2 vs. 2:1	7,8325243	8,476390518	-0,64386622	0,289269529	4	4

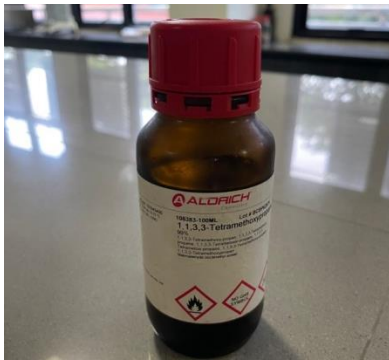
**LAMPIRAN 10**  
**Gambar Penelitian**



Gambar 5. Tikus (*Rattus norvegicus*)



Gambar 6. Isoproterenol



Gambar 7. 1,1,3,3- tetrametoksipropana



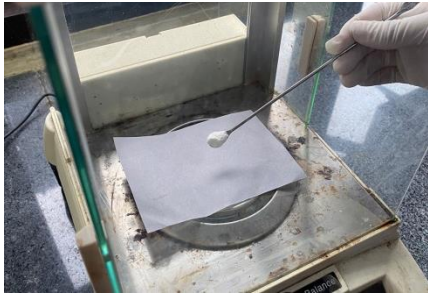
Gambar 8. *Virgin Coconut Oil* (VCO)



Gambar 9. *Extra Virgin Olive Oil* (EVOO)



Gambar 10. Pemberian Kombinasi EVOO:VCO



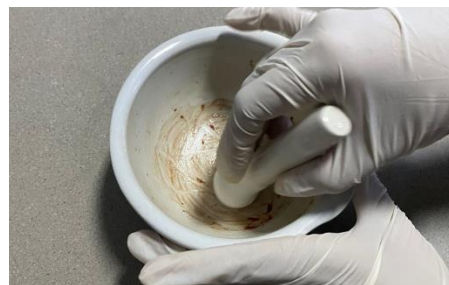
Gambar 11. Penimbangan Isoproterenol



Gambar 12. Pembedahan hewan uji



Gambar 13. Pemberian Nitrogen cair



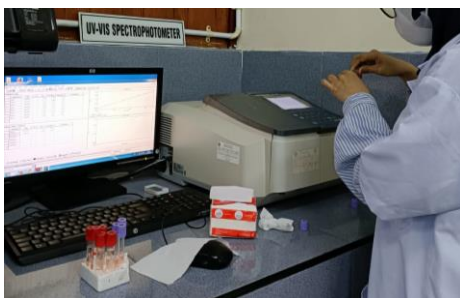
Gambar 14. Pengeerusan organ Otak



Gambar 15. Sentrifuge organ otak tikus



Gambar 16. Larutan sampel yang telah dipreparasi



Gambar 17. Pengukuran kadar MDA dengan dibedah spektrofotometri UV-VIS



Gambar 18. Organ Otak yang telah

## LAMPIRAN 11

### Rekomendasi 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.  
Contact Person: dr. Agussalim Bukhari, MMed,PhD, SpGK TELP. 081241850858, 0411 5780103. Fax : 0411-581431





#### REKOMENDASI PERSETUJUAN ETIK

Nomor : 277/UN4.6.4.5.31/ PP36/ 2023

Tanggal: 8 Mei 2023

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

No Protokol	UH23030197	No Sponsor Protokol	
Peneliti Utama	<b>Rahma Desti Ayu</b>	Sponsor	
Judul Peneliti	Uji Efek Protektif Kombinasi Extra Virgin Olive Oil (EVOO) dan Virgin Coconut Oil (VCO) Terhadap Aktivitas Lipid Peroksidasi Otak Yang Diinduksi Isoproterenol		
No Versi Protokol	<b>1</b>	Tanggal Versi	<b>25 Maret 2023</b>
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 <b>8 Mei 2023</b> sampai <b>8 Mei 2024</b>	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama <b>Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)</b>	Tanda tangan 	
Sekretaris KEP Universitas Hasanuddin	Nama <b>dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)</b>	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 7: Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setia 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