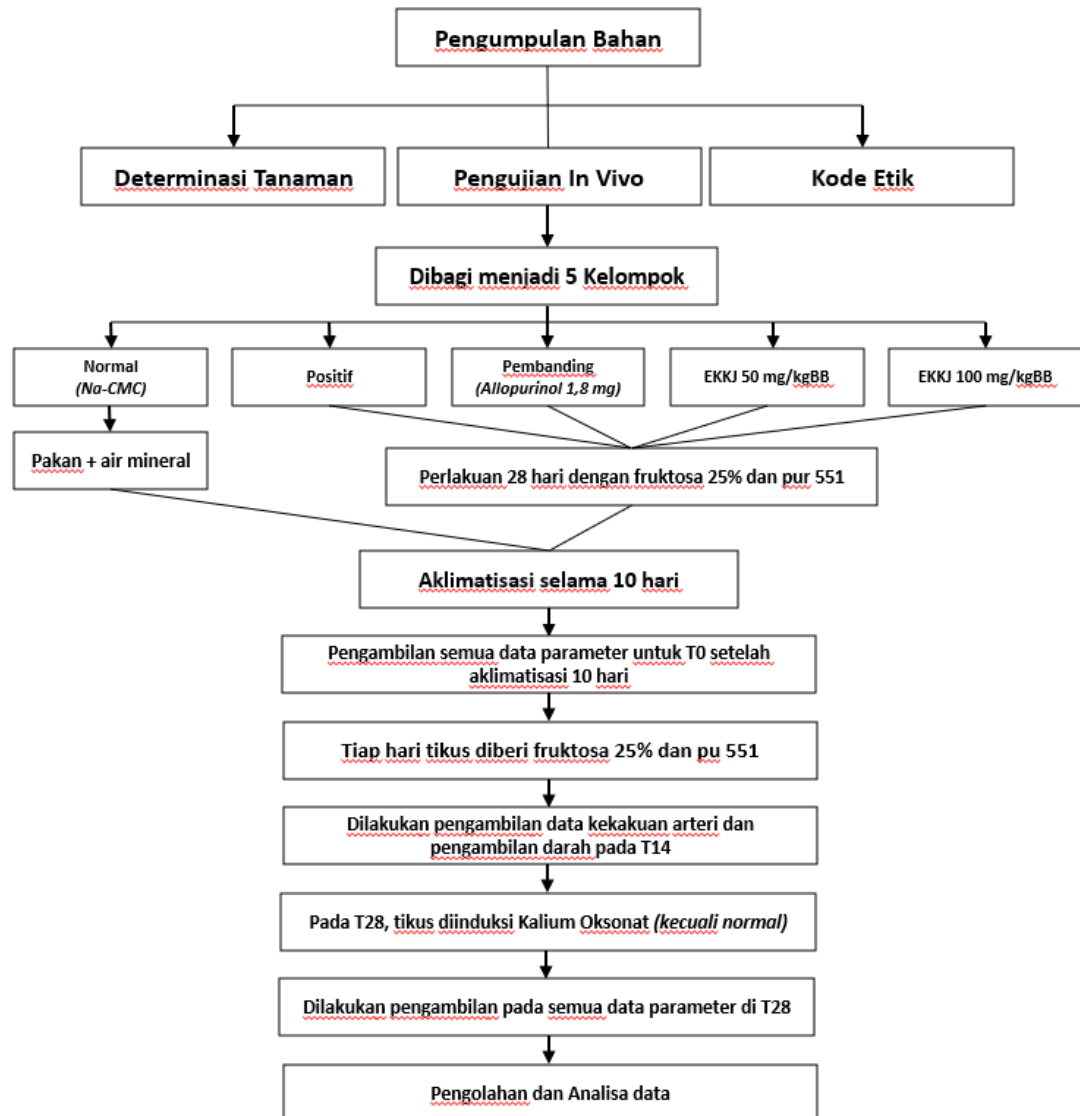


LAMPIRAN

Lampiran 1 Bagan Alir



Lampiran 2 Kode Etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
RISET DAN TEKNOLOGI
UNIVERSITAS PADJADJARAN
KOMITE ETIK PENELITIAN
RESEARCH ETHICS COMMITTEE

Jl. Prof. Eyckman No. 35 Bandung 40161
Telp. & Fax. 022-2036097 email: kep@unpad.ac.id, website: kep.unpad.ac.id

No. Reg.: 2401020011

PERSETUJUAN ETIK
ETHICAL APPROVAL

Nomor: 115/UN6.KEP/EC/2024

Komite Etik Penelitian Universitas Padjadjaran Bandung, telah mengkaji dengan teliti proposal penelitian yang menggunakan subjek Hewan Coba dalam penelitian yang berjudul:

The Research Ethics Committee Universitas Padjadjaran Bandung, has been thoroughly reviewed proposal for reaserch with animal subjects in reaserach entitled:

"UJI IN VIVO DAN IN VITRO AKTIVITAS ANTIHIPERURISEMIA EKSTRAK TUNGGAL DAN KOMBINASI RIMPANG JAHE (ZINGIBER OFFICINALE) DAN RIMPANG KENCUR (KAEMPFERIA GALANGA) TERHADAP INHIBISI XANTINE OXIDASE PADA MODEL HEWAN SINDROM METABOLIK"

Nama Peneliti Utama <i>Principal Researcher</i>	: Yoga Adi Restu Muzaki
Pembimbing/Peneliti Lain <i>Supervisor/Other Researcher</i>	: Dr. apt. Patonah, M.Si apt. Ika Kurnia Sukmawati, M.Si
Nama Institusi <i>Institution</i>	: Program Sarjana Program Studi Farmasi Fakultas Farmasi Universitas Bhakti Kencana Bandung

proposal tersebut dapat disetujui pelaksanaannya.
hereby declare that the proposal is approved.

Ditetapkan di : Bandung
Issued in
Tanggal : 02-02-2024
Date



Ketua,
Chairman,

Prof. Nur Atik, dr. M.Kes., MOHRE., PhD
NIP. 19811010 200801 1 019

Keterangan/notes:

Persetujuan etik ini berlaku selama satu tahun sejak tanggal ditetapkan.
This ethical clearance is effective for one year from the due date.

Pada akhir penelitian, laporan pelaksanaan penelitian harus diserahkan ke Komite Etik Penelitian.

In the end of the research, progress and final summary report should be submitted to the Research Ethics Committee.

Jika ada perubahan atau penyimpangan protokol dan/atau perpanjangan penelitian, harus mengajukan kembali permohonan kajian etik penelitian.

If there be any protocol modification or deviation and/or extension of the study, the Principal Investigator is required to resubmit the protocol for approval.

Jika ada kejadian serius yang tidak diinginkan (KTD) harus segera dilaporkan ke Komite Etik Penelitian.

If there are Serious Adverse Events (SAE) should be immediately reported to the Research Ethics Committee

Lampiran 3 Determinasi Tanaman

1. Lembar Identifikasi Tumbuhan Jahe

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 089689992695, email: phanerogamae@yahoo.com

LEMBAR IDENTIFIKASI TUMBUHAN
 No.30/HB/02/2024.

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Nadhira Aulia Zahra
 NIM/NIP : 201FF03018
 Instansi : Universitas Bhakti Kencana.
 Lokasi : Bandung.

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi :
 Tanggal Koleksi : 15 Februari 2024.

Hasil Identifikasi

Nama Ilmiah : *Zingiber officinale* Roscoe
 Sinonim : *Zingiber officinale* var. *Rubrum* Theilade
 Nama Lokal : Rimpang Jahe
 Suku/Famili : Zingiberaceae

Klasifikasi (Hirarki Taksonomi)

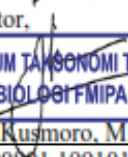
Kingdom	Plantae
Divisi	Magnoliophyta
Class	Liliopsida
Ordo	Zingiberales
Famili	Zingiberaceae
Genus	<i>Zingiber</i>
Species	<i>Zingiber officinale</i> Roscoe

Referensi:

Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. Flora of Java. Wolter-Noordhoff NV. Groningen.
 Cronquist, Arthur. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press. New York
 The Plant List. Website Dunia Tumbuhan. <http://www.theplantlist.org/tpl1.1/record/kew-158489>.

Jatinangor, 16 Februari 2024.

Identifikator,


LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA-UNPAD
 Drs. Joko Kusmoro, M.P.
 NIP. 19600801 199101 1 001

2. Lembar Identifikasi Tumbuhan Kencur

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
 Telp. 089689992695, email: phanerogamae@yahoo.com

LEMBAR IDENTIFIKASI TUMBUHAN
 No.31/HB/02/2024.

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Nadhira Aulia Zahra
 NIM/NIP : 201FF03018
 Instansi : Universitas Bhakti Kencana.
 Lokasi : Bandung.

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: -
 Tanggal Koleksi : 15 Februari 2024.

Hasil Identifikasi

Nama Ilmiah : *Kaempferia galanga* L.
 Sinonim : *Kaempferia rotunda* Blanco
 Nama Lokal : Rimpang Kencur
 Suku/Famili : Zingiberaceae

Klasifikasi (Hirarki Taksonomi)

Kingdom : Plantae
 Divisi : Magnoliophyta
 Class : Liliopsida
 Ordo : Zingiberales
 Famili : Zingiberaceae
 Genus : *Kaempferia*
 Species : *Kaempferia galanga* L.

Referensi:

Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. Flora of Java. Wolter-Noordhoff NV. Groningen.
 Cronquist, Arthur. 1981. An Integrated System of Classification of Flowering Plants. Columbia University Press. New York
 The Plant List. Website Dunia Tumbuhan. <http://www.theplantlist.org/tpl1.1/record/kew-158489>.

Jatinangor, 16 Februari 2024.

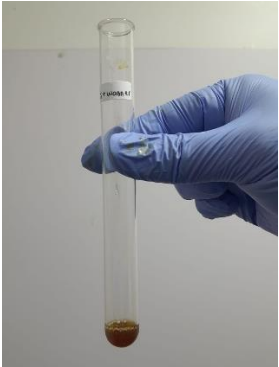
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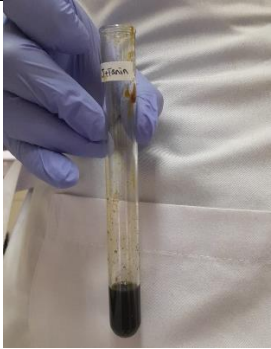
LABORATORIUM TAKSONOMI TUMBUHAN
 JURUSAN BIOLOGI FMIPA-UNPAD

Drs. Joko Kusmoro, M.P.
 NIP. 19600801 199101 1 001

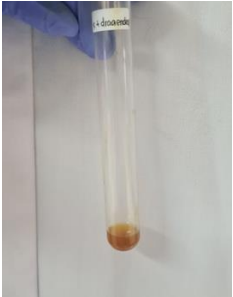
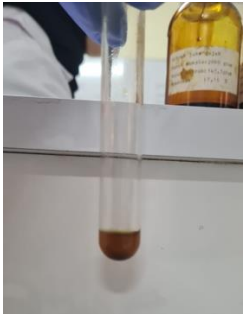
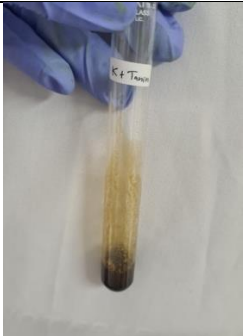
Lampiran 4 Skrining Fitokimia

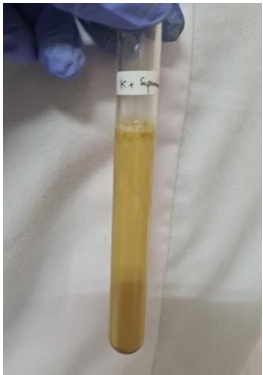
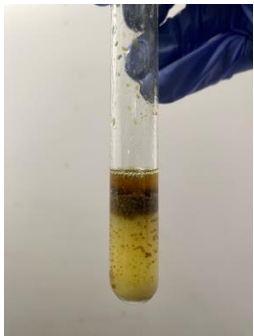
1. Hasil Skrining Fitokimia Jahe

No	Pereaksi		Hasil	Keterangan	Dokumentasi
1.	Alkaloid	Dragendorf	+	Endapan jingga	
		Wagner	+	Endapan coklat	
		Mayer	-	Negatif palsu (tidak ada endapan putih tapi ada bayangan putih)	

2.	Tanin	+	Biru kehitaman	
3.	Saponin	+	Tinggi busa > 1 cm	
4.	Flavonoid	+	Cincin merah	

2. Hasil Skrining Fitokimia Kencur

No	Pereaksi		Hasil	Keterangan	Dokumentasi
1.	Alkaloid	Dragendorf	+	Endapan jingga	
		Wagner	+	Endapan coklat	
		Mayer	-	Negatif palsu (tidak ada endapan putih tapi ada bayangan putih)	
2.	Tanin		+	Hitam kehijauan	

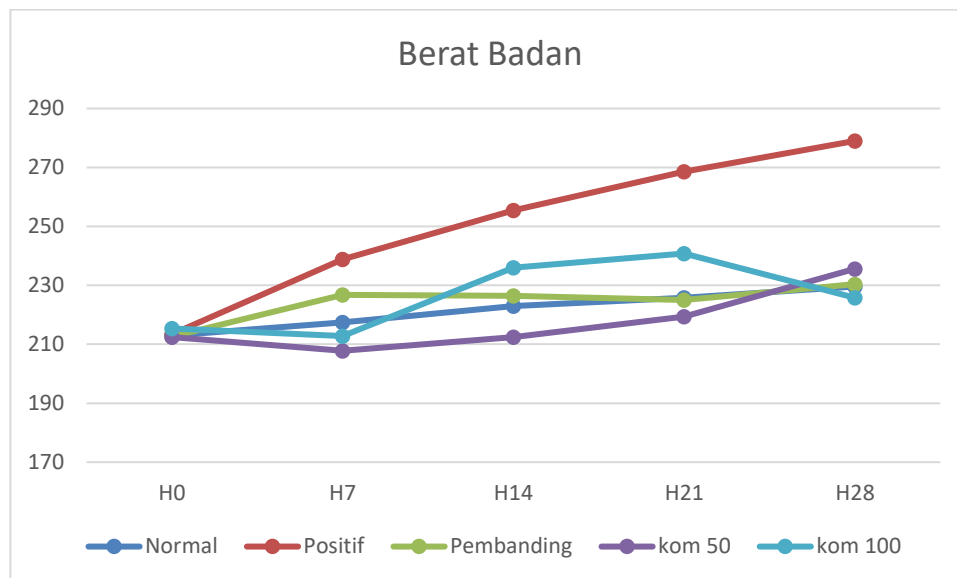
3.	Saponin	-	Tinggi busa < 1 cm	
4.	Flavonoid	+	Cincin merah	
5.	Triterpenoid	+	Kecoklatan	

Lampiran 5 Bobot Berat Badan

1. Indeks Berat Badan

Kelompok	Hari_0	Hari_7	Hari_14	Hari_21	Hari_28	% Kenaikan
Normal	213	218	224	227	230	
Normal	217	223	228	228	232	
Normal	215	218	224	226	231	
Normal	211	213	218	224	227	
Normal	210	215	221	224	228	
Rata-rata	213	217.4	223	225.8	229.6	
SD	3.674	3.782	3.742	1.789	2.074	7.58
% Kenaikan		2.07	2.58	1.26	1.68	
Positif	217	240	248	261	272	
Positif	210	242	274	286	298	
Positif	214	239	245	260	271	
Positif	216	243	260	266	272	
Positif	210	230	250	270	282	27.89
Rata-rata	213.4	238.8	255.4	268.6	279	
SD	3.29	5.17	11.82	10.53	11.53	
% Kenaikan		11.9	6.95	5.17	3.87	
Pembanding	209	216	215	223	229	
Pembanding	205	227	233	228	232	
Pembanding	214	228	226	221	225	
Pembanding	221	239	235	229	234	8.28
Pembanding	214	224	223	224	232	
Rata-rata	212.6	226.8	226.4	225	230.4	
SD	6.02	8.29	8.05	3.39	3.51	
% Kenaikan		6.68	-0.18	-0.62	2.4	
KOM 50 1	209	207	209	227	251	12.06
KOM 50 2	216	207	220	229	214	
KOM 50 3	204	192	190	189	236	
KOM 50 4	203	210	220	235	254	
KOM 50 5	230	223	223	217	223	
Rata2	212.4	207.8	212.4	219.4	235.6	
SD	11.10405331	11.0317723	13.61249426	18.18790807	17.32916617	24.97
% Kenaikan		-2.17	0	3.3	10.93	
KOM 100 1	220	222	238	246	232	
KOM 100 2	204	190	240	239	234	
KOM 100 3	215	222	240	247	164	
KOM 100 4	204	197	223	231	242	
KOM 100 5	234	233	239	241	257	
Rata2	215.4	212.8	236	240.8	225.8	
SD	12.52198067	18.34938691	7.314369419	6.418722614	35.91935411	
% Kenaikan		-1.21	9.56	11.79	4.83	

2. Trendline Berat Badan

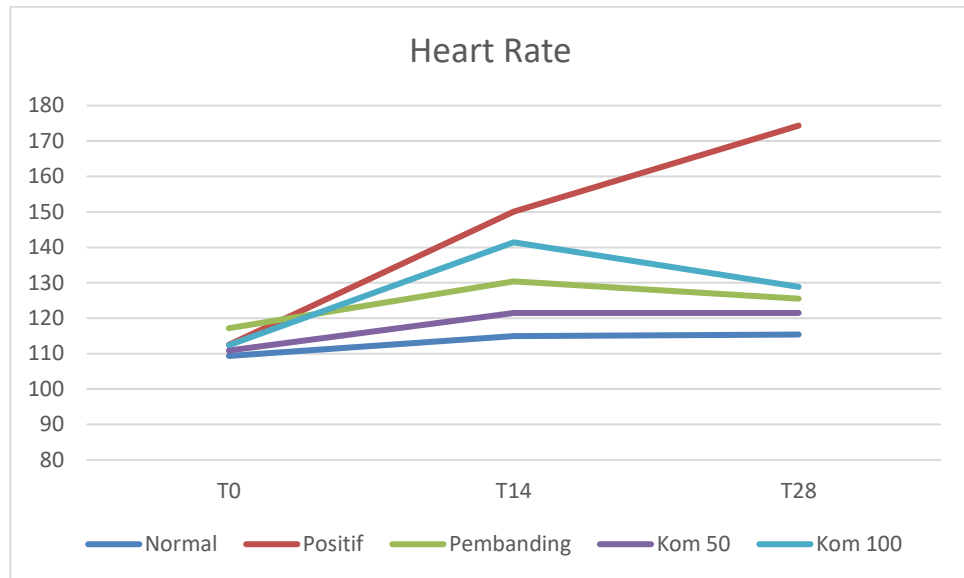


Lampiran 6 Kekakuan Arteri

1. Tabel Heart Rate

Kelompok	No	T0	T14	T28
Normal	1	105.98	109.24	106.04
	2	107.67	109.3	124.18
	3	113.89	116.65	121.93
	4	107.1	114.15	117.75
	5	112.04	125.32	106.98
	SD	3.43	6.63	8.42
	Rata	109.34	114.93	115.38
Positif	1	113.66	135.76	129.41
	2	111.87	150.94	132.57
	3	110.74	137.91	200.01
	4	111.11	148.94	160.43
	5	115.09	176.87	204.38
	SD	1.84	16.38	34.15
	Rata	112.494	150.084	165.36
Pembanding	1	115.4	153.59	112
	2	106.26	131.5	121.4
	3	120.16	125.85	112.64
	4	119.22	120.37	157.83
	5	113.29	120.61	123.69
	SD	5.32	13.75	18.8
	Rata	114.866	130.384	125.512
Kom 50	1	117.51	130.98	120.47
	2	104.01	128.08	122.11
	3	113.94	133.9	129.57
	4	107.13	179.68	158.45
	5	111.77	131.05	127.65
	SD	5.37	2.74	2.74
	Rata	110.87	121.47	121.47
Kom 100	1	112.06	132.83	115.82
	2	108.11	158.75	114.87
	3	103.33	139.75	105.32
	4	118.88	143.09	119.75
	5	119.56	123.55	188.21
	SD	6.96	13.06	33.64
	Rata	112.39	141.41	128.81

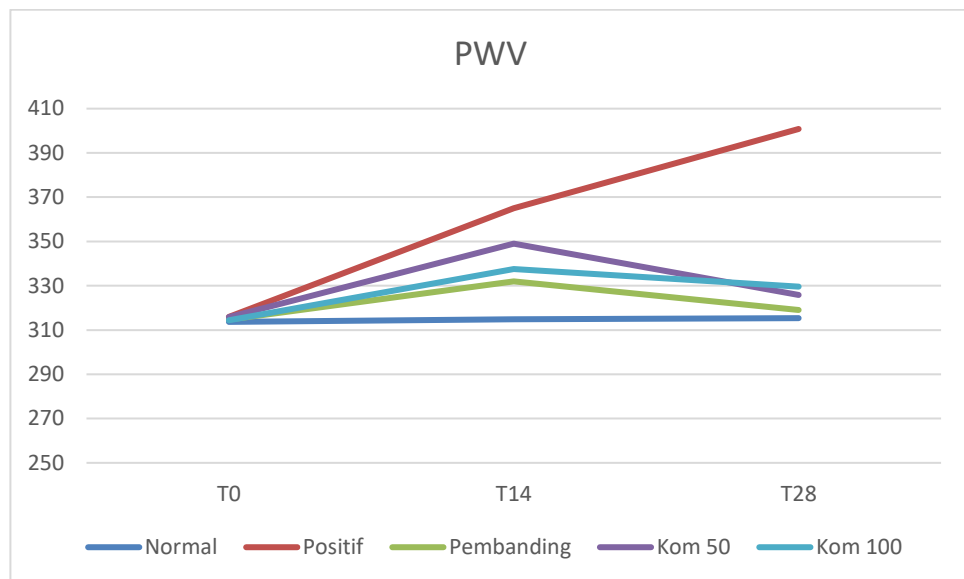
2. Trendline Heart Rate



3. Tabel PWV

Kelompok	No	PWV		
		t0	t14	t28
Normal	1	312.34	313.37	316.45
	2	313.87	314.36	315.82
	3	316.38	311.77	314.65
	4	316.55	316.14	317.08
	5	309.21	318.35	312.81
	RATA	313.67	314.79	315.36
	SD	3.06	2,54	1,69
Positif	2	315.71	366.45	398.1
	3	316.91	361.52	409.73
	4	317.21	362.18	391.38
	5	318.45	365.41	402.17
	6	311.44	369.49	402.69
	RATA	315.94	365.01	400.81
	SD	2.7	3.26	6.73
Pembanding	1	317.39	330.79	319.47
	2	308.28	325.14	312.21
	4	319.94	345.31	320.94
	6	310.96	335.14	319.65
	7	317.04	323.49	322.66
	RATA	314.72	331.97	318.99
	SD	4.88	8.77	4
KOM 50	1	315.48	341.91	330.45
	2	314.75	345.37	329.32
	3	316.68	355.75	299.41
	4	318.36	351.81	332.17
	5	313.92	350.42	337.92
	RATA	315.84	349.02	325.85
	SD	1.74	5.45	15.14
KOM 100	1	310.54	322.58	320.56
	2	312.99	339.102	325.201
	3	314.72	341.49	336.73
	4	318.602	336.44	330.61
	5	315.16	348.16	334.97
	RATA	314.41	337.55	329.61
	SD	2.97	9.43	6.74

4. Trendline PWV

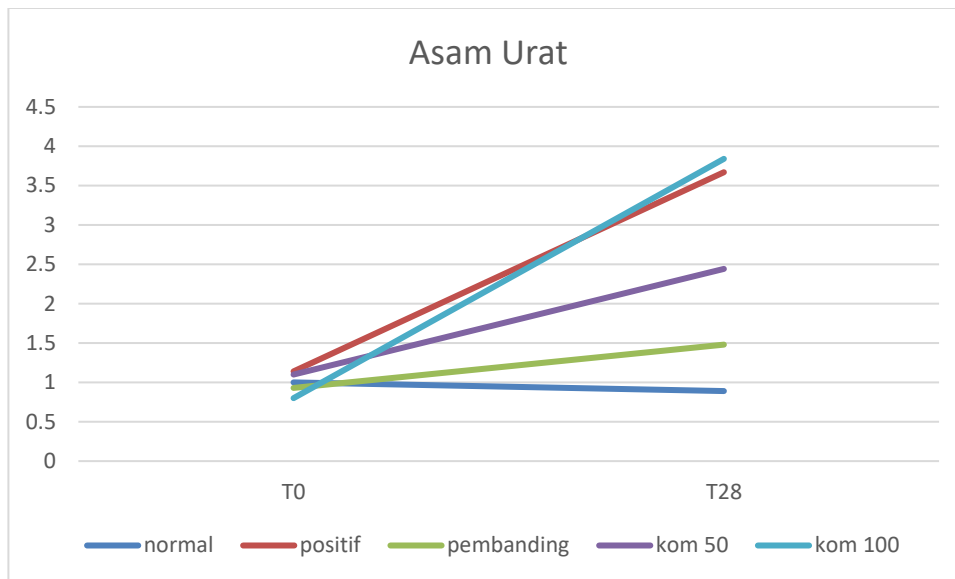


Lampiran 7 Pengukuran Kadar Asam Urat

1. Indeks Data Kadar Asam Urat

Kelompok	No	T0	T28
Normal	1	0.69	0.8
	2	1.37	1.05
	3	1.23	0.73
	4	0.88	0.68
	5	0.83	1.2
Rata-rata		1	0.892
SD		0.28688	0.223316
Positif	1	1.09	3.43
	2	1.29	3.37
	3	0.77	3.98
	4	1.03	3.71
	5	1.5	3.88
Rata-rata		1.136	3.674
SD		0.275463	0.268942
Pembanding	1	0.75	1.57
	2	1.02	1.67
	3	0.89	1.07
	4	0.95	1.24
	5	1.03	1.86
Rata-rata		0.928	1.482
SD		0.114543	0.321823
Kombinasi 50	1	1.92	2.04
	2	0.81	2.85
	3	1.5	2.97
	4	0.61	2.12
	5	0.66	2.23
Rata-rata		1.1	2.442
SD		0.580991	0.434592
Kombinasi 100	1	0.25	2.23
	2	0.95	5.08
	3	0.75	5.28
	4	0.98	4.08
	5	1.05	2.52
RATA		0.796	3.838
SD		0.324931	1.414503

2. Trendline Data Kadar Asam Urat

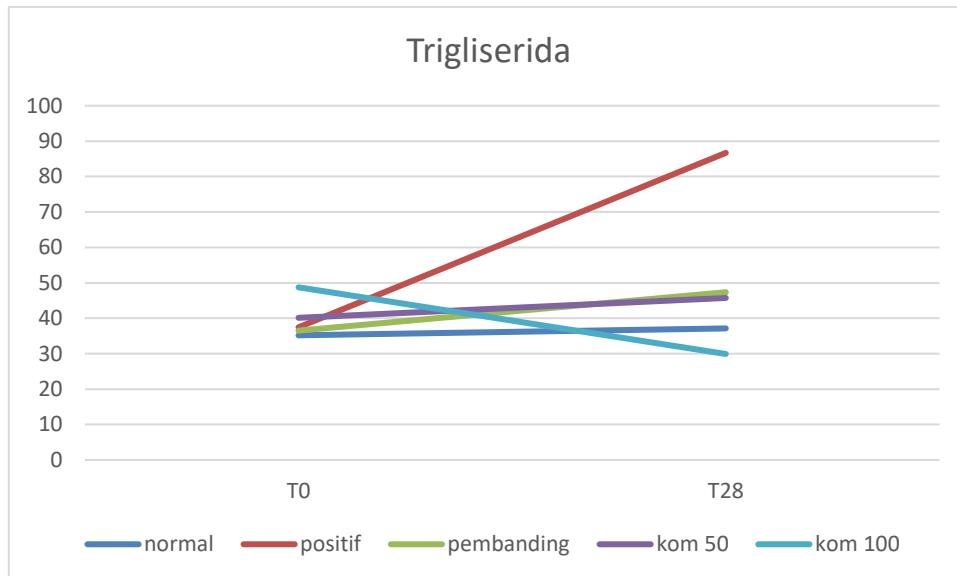


Lampiran 8 Tabel Pengukuran Kadar Trigliserida

1. Indeks Data Kadar Trigliserida

T28					
Nomor	Normal	Positif	Allopurinol	Kom 50	Kom 100
1	39.1	126.25	49.1	48.4	28.2
2	40.6	88.7	47.1	48.9	29.7
3	36.9	83.7	48.9	42.4	28.9
4	35	83.4	40.7	45.3	30.5
5	34	87.7	50.9	43.6	32.2
6		89.9	69.7	53.3	63.6
Rata-rata	37.12	86.68	47.34	45.72	29.9
SD	2,75	2,96	3,95	2,87	1,55
T0					
Nomor	Normal	Positif	Allopurinol	Kom 50	Kom 100
1	36,9	36,0	33,3	47,3	46,7
2	38,4	43,0	34,5	48,3	58,1
3	29,9	36,7	36,8	31,5	41,2
4	32,4	41,0	40,2	33,3	56,1
5	38,3	31,2	37,5	40,2	45,9
6		35,3	42,0	35,1	44,4
Rata-rata	35,18	37,44	36,5	40,12	48,73
SD	3,83	4,61	2,69	7,73	7,20

2. Trendline Kadar Triglicerida

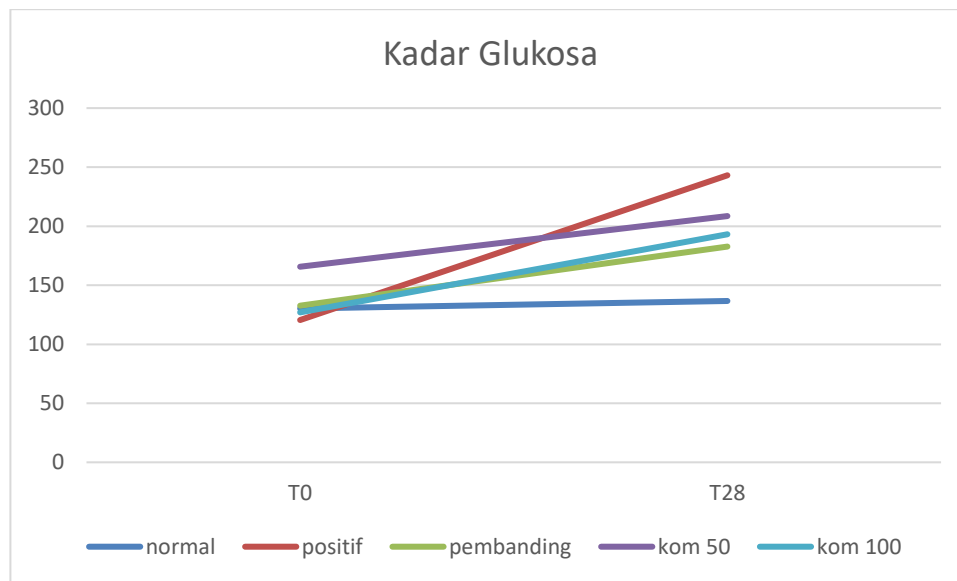


Lampiran 9 Tabel Pengamatan Kadar Glukosa

1. Indeks Data Kadar Glukosa

T28					
Nomor	Normal	Positif	Pembanding	Kom 50	Kom 100
1	134.7	272.1	182	211.8	257.3
2	154.6	240.9	180.1	176.8	184.3
3	136.9	268.6	183	236.4	187.7
4	132.8	245.4	195.7	256.4	176.4
5	124.2	189.6	197.8	204	134
6		241.9	157.6	165.9	219.1
Rata-rata	136,64	243,32	182.7	208.55	193.13
SD	11,13	33,03	8,34	30.58	44,35
T0					
Nomor	Normal	Positif	Pembanding	Kom 50	Kom 100
1	131.6	120.9	120.6	146.2	139.4
2	125.2	124.8	139.6	210.4	134.8
3	122.3	121.3	132.3	121.2	133.7
4	138.4	141.7	134.2	134.3	134.7
5	133.7	84.1	132.9	145.9	73.4
6		130.3	136.4	235.9	146
Rata-rata	130,24	120.52	132.6666667	165.65	127
SD	6,50	21,06	6,95	34,43	27,93

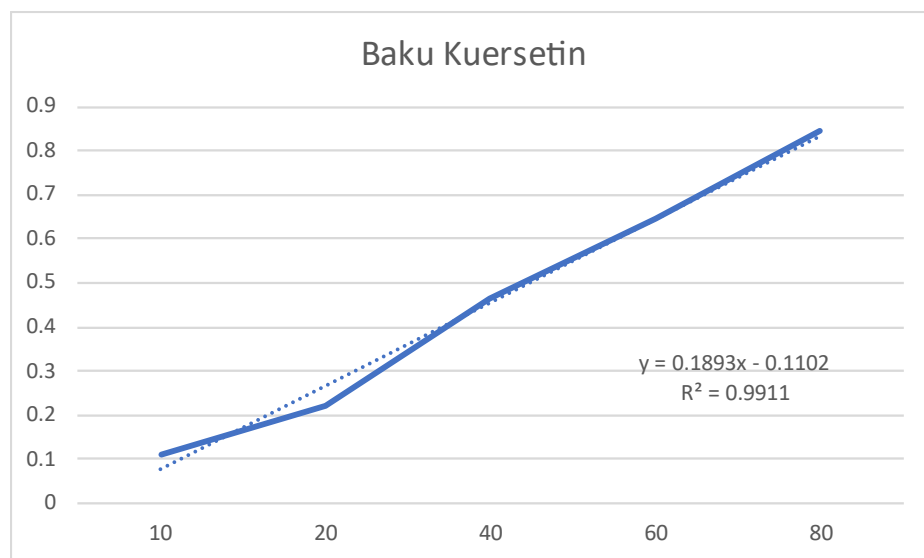
2. Trendline Kadar Glukosa



Lampiran 10 Pengukuran Kadar Flavonoid Total

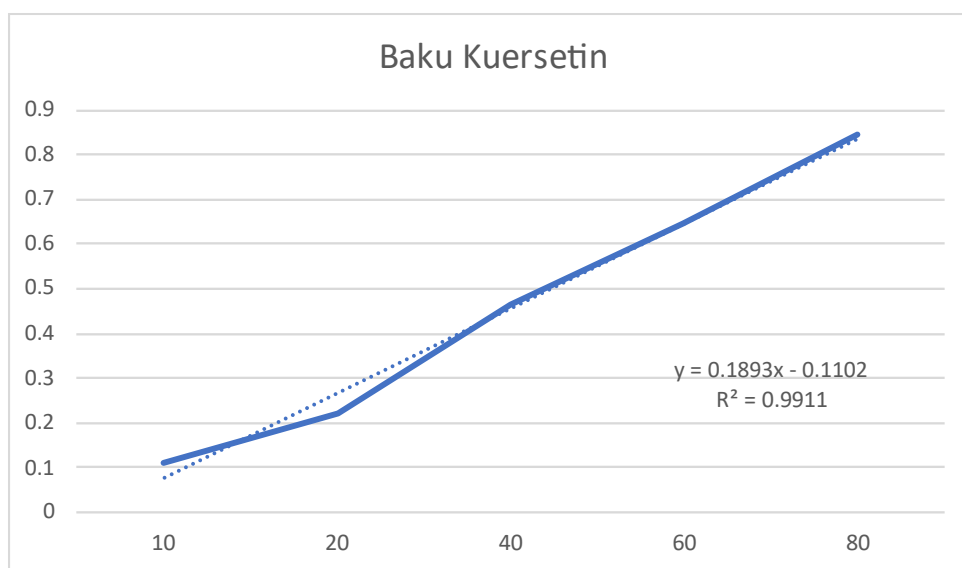
1. Hasil Kadar Flavonoid Total pada Ekstrak Jahe

Konsentrasi	Absorbansi
10	0.11026
20	0.22269
40	0.46469
60	0.64463
80	0.84557



2. Hasil Kadar Flavonoid Total pada Ekstrak Kencur

Konsentrasi	Absorbansi
10	0.11026
20	0.22269
40	0.46469
60	0.64463
80	0.84557



Lampiran 11 Hasil SPSS ONEWAY Anova

1. ANOVA Bobot Berat Badan

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
hari_0	Between Groups	28.400	4	7.100	.106	.979
	Within Groups	1341.600	20	67.080		
	Total	1370.000	24			
hari_7	Between Groups	3022.640	4	755.660	6.651	.001
	Within Groups	2272.400	20	113.620		
	Total	5295.040	24			
hari_14	Between Groups	5254.160	4	1313.540	14.359	.000
	Within Groups	1829.600	20	91.480		
	Total	7083.760	24			
hari_21	Between Groups	7931.840	4	1982.960	19.929	.000
	Within Groups	1990.000	20	99.500		
	Total	9921.840	24			
hari_28	Between Groups	9711.440	4	2427.860	6.976	.001
	Within Groups	6960.400	20	348.020		
	Total	16671.840	24			

2. ANOVA Heart Rate

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
hari_0	Between Groups	172.451	4	43.113	1.784	.172
	Within Groups	483.208	20	24.160		
	Total	655.659	24			
hari_14	Between Groups	3527.407	4	881.852	3.835	.018
	Within Groups	4599.538	20	229.977		
	Total	8126.945	24			
hari_28	Between Groups	7163.927	4	1790.982	2.914	.047
	Within Groups	12291.630	20	614.581		
	Total	19455.557	24			

3. ANOVA PWV

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
T0	Between Groups	17.235	4	4.309	.442	.776
	Within Groups	194.765	20	9.738		
	Total	212.000	24			
T14	Between Groups	7062.289	4	1765.572	41.494	.000
	Within Groups	851.010	20	42.551		
	Total	7913.299	24			
T28	Between Groups	25186.887	4	6296.722	92.861	.000
	Within Groups	1356.157	20	67.808		
	Total	26543.044	24			

4. ANOVA Triglicerida

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
hari_0	Between Groups	16524.462	4	4131.116	.845	.513
	Within Groups	97827.180	20	4891.359		
	Total	114351.642	24			
hari_28	Between Groups	9693.106	4	2423.277	284.496	.000
	Within Groups	170.356	20	8.518		
	Total	9863.462	24			

5. ANOVA Asam Urat

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
hari_0	Between Groups	.331	4	.083	1.020	.421
	Within Groups	1.622	20	.081		
	Total	1.953	24			
hari_28	Between Groups	35.703	4	8.926	10.816	.000
	Within Groups	16.505	20	.825		
	Total	52.207	24			

2. ANOVA Glukosa

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
hari_0	Between Groups	1276627.414	4	319156.854	1.302	.303
	Within Groups	4900730.992	20	245036.550		
	Total	6177358.406	24			
hari_28	Between Groups	227531.306	4	56882.826	.968	.447
	Within Groups	1175194.228	20	58759.711		
	Total	1402725.534	24			

Lampiran 12 Riwayat Hidup**Data Pribadi**

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