

LAMPIRAN

Lampiran 1. Hasil Determinasi



DIREKTORAT PENGELOLAAN KOLEKSI ILMIAH
Gedung B.J. Habibie JL. M.H Thamrin No. 8, Jakarta Pusat 10340
www.brin.go.id

Nomor : B-3048/II.6.2/DI.05.07/9/2022
Lampiran : -
Perihal : Hasil Identifikasi/Determinasi Tumbuhan

6 September 2022

Yth.
Bpk./Ibu/Sdr(j). **Geeta Rizki S**
Universitas Esa Unggul

Bersama ini kami sampaikan hasil identifikasi/determinasi tumbuhan yang Saudara kirimkan ke "Herbarium Bogoriense", Direktorat Pengelolaan Koleksi Ilmiah BRIN Cibinong, adalah sebagai berikut :

No.	No. Kol.	Jenis	Suku
1.	Tanaman Yakon	<i>Smallanthus sonchifolius</i> (Poepp.) H.Rob.	Asteraceae

Demikian, semoga berguna bagi Saudara.

Pt. Direktorat Pengelolaan Koleksi Ilmiah,
Badan Riset dan Inovasi Nasional

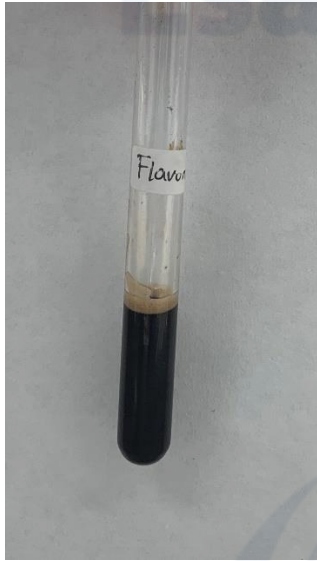


Dr. Silva Abraham, S.Si, M.Si

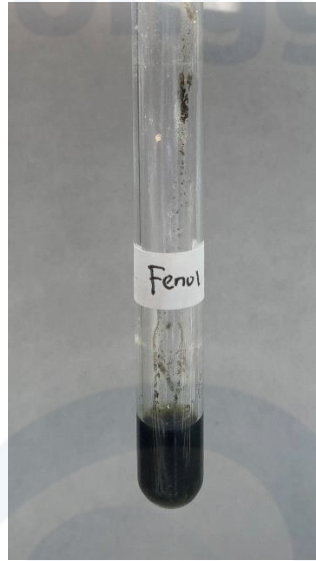


Dokumen ini ditandatangani secara elektronik menggunakan sertifikat dari BSR, silahkan lakukan verifikasi pada dokumen elektronik yang dapat diunduh dengan melakukan scan QR Code

Lampiran 2. Hasil Uji Skrining



(+) Flavonoid



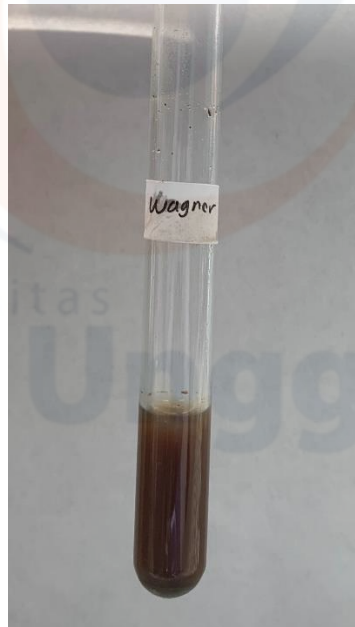
(+) Fenolik



(+) Tanin



(+) Alkaloid dengan
pereaksi Dragendorff



(+) Alkaloid dengan
pereaksi Wagner



(-) Saponin

Lampiran 3. *Ethical Clearance*



DEWAN PENEGAKAN KODE ETIK UNIVERSITAS ESA UNGGUL
KOMISI ETIK PENELITIAN
Jl. Arjuna Utara No.9 Kebon Jeruk Jakarta Barat 11510
Telp. 021-5674223 email: dpke@esaunggul.ac.id

Nomor : 0922-06.023 /DPKE-KEP/FINAL-EA/UEU/V1/2022

KETERANGAN LOLOS KAJI ETIK
ETHICAL APPROVAL

Komisi Etik Penelitian Universitas Esa Unggul dalam upaya melindungi hak asasi dan kesejahteraan subyek penelitian kesehatan, telah mengkaji dengan teliti protokol berjudul:

EFEK ANTIDIABETES DAUN YAKON PADA TIKUS SD YANG DIINDUKSI ALOKSAN

Peneliti Utama : Tyas Putri Utami, M.Biomed.
Nama Institusi : Universitas Esa Unggul

dan telah menyetujui protokol tersebut di atas.

Jakarta, 26 Juni 2022

Plt. Ketua

Dr. CSP Wekadigunawan, DVM, MPH, PhD

- * *Ethical approval* berlaku satu tahun dari tanggal persetujuan.
- ** Peneliti berkewajiban
1. Menjaga kerahasiaan identitas subyek penelitian
 2. Memberitahukan status penelitian apabila:
 - a. Setelah masa berlakunya keterangan lolos kaji etik, penelitian masih belum selesai, dalam hal ini *ethical approval* harus diperpanjang
 - b. Penelitian berhenti di tengah jalan
 3. Melaporkan kejadian serius yang tidak diinginkan (*serious adverse events*).
 4. Peneliti tidak boleh melakukan tindakan apapun pada subyek sebelum penelitian lolos kaji etik dan *informed consent*.

Lampiran 4. Data Berat Badan Tikus

Kelompok		Berat Badan Tikus (g)		
		Sebelum Treatment	Hari Ke-7 Treatment	Hari Ke-14 Treatment
KN	1	238	254	261
	2	185	189	202
	3	187	207	220
	4	177	193	205
K (-)	1	183	202	190
	2	164	167	154
	3	197	215	209
	4	185	191	192
	5	245	235	204
K (+) sitagliptin	1	199	209	204
	2	175	173	147
	3	189	199	198
	4	205	220	135
	5	161	166	211
D1	1	172	156	163
	2	199	200	197
	3	168	158	150
	4	205	193	187
	5	243	196	198
D2	1	146	145	144
	2	163	150	137
	3	201	197	207
	4	240	248	203
	5	222	209	250
D3	1	207	214	214
	2	180	182	166
	3	153	161	158
	4	228	220	220

Lampiran 5. Data Rata-Rata Berat Badan Tikus (g)

Kelompok	Rata-Rata Berat Badan Tikus (gram)		
	Sebelum Treatment	Hari Ke-7 Treatment	Hari Ke-14 Treatment
Kontrol Normal	196,75	210,75	222
Kontrol (-)	194,8	202	189,8
Kontrol (+)	185,8	193,4	179
D1	197,4	180,6	179
D2	194,4	189,8	188,2
D3	192	194,25	189,5

Lampiran 6. Perhitungan Dosis Aloksan

Diketahui :

Dosis aloksan yang digunakan = 160 mg/kgBB

Konsentrasi = 20 mg/mL

Dihitung dosis aloksan dengan rumus:

$$\text{Dosis aloksan} = \frac{\text{BB Tikus}}{1000 \text{ g}} \times \text{dosis aloksan yang digunakan}$$

$$\text{Maka, volume pemberian aloksan} = \frac{\text{dosis aloksan}}{\text{konsentrasi}}$$

Kelompok	Berat Badan (gram)	Volume Aloksan (mL)
KN	1	247
	2	189
	3	194
	4	178
K (-)	1	220
	2	192
	3	209
	4	234
	5	251
K (+)	1	207
	2	199
	3	209
	4	208
	5	229
D1	1	203
	2	202
	3	192
	4	208
	5	208
D2	1	169
	2	197
	3	220
	4	259
	5	269
D3	1	243
	2	222
	3	187
	4	259

Lampiran 7. Perhitungan Dosis Pemberian Ekstrak Daun Yakon

1) Dosis 200 mg/kgBB

$$dosis\ yakon = \frac{BB}{1000\ g} \times 200\ mg/kgBB$$

Kelompok	Berat Badan (gram)	Dosis yakon (mg)
D1	1	34,4
	2	39,8
	3	33,6
	4	41
	5	48,6

2) Dosis 300 mg/kgBB

$$dosis\ yakon = \frac{BB}{1000\ g} \times 300\ mg/kgBB$$

Kelompok	Berat Badan (gram)	Dosis yakon (mg)
D2	1	43,8
	2	48,9
	3	60,3
	4	72
	5	66,6

3) Dosis 400 mg/kgBB

$$dosis\ yakon = \frac{BB}{1000\ g} \times 400\ mg/kgBB$$

Kelompok	Berat Badan (gram)	Dosis yakon (mg)
D3	1	82,8
	2	72
	3	61,2
	4	91,2

Lampiran 8. Perhitungan Dosis Pemberian Sitagliptin

Diketahui:

Dosis sitagliptin untuk manusia dewasa = 100 mg

Tabel konversi dosis hewan percobaan

	Mencit 20g	Tikus 200g	Kelinci 1,5 kg	Manusia 70 kg
Mencit 20g	1,0	7,0	27,80	387,9
Tikus 200g	0,14	1	3,9	56,0
Kelinci 1,5 kg	0,04	0,25	1,0	14,2
Manusia 70 kg	0,0026	0,018	0,07	1,0

Sumber: (Stevani, 2016)

Konversi dosis manusia (70 kg) ke tikus (200 g):

- Manusia (70 kg) : 100 mg/hari
- Ke tikus (200 g) : $0,018 \times 100 \text{ mg} = 1,8 \text{ mg} \rightarrow$ dosis untuk tikus BB 200 g

$$\text{Dosis Sitagliptin} = \frac{\text{BB}}{200 \text{ g}} \times \text{dosis yang diinginkan}$$

Kelompok	Berat Badan (gram)	Dosis Sitagliptin (mg)
K (+)	1	1,8
	2	1,6
	3	1,7
	4	1,8
	5	1,4

Lampiran 9. Data Kadar Glukosa Darah (mg/dL)

Kelompok	Kadar Glukosa Darah (mg/dL)			
	Sebelum Treatment	Hari Ke-7 Treatment	Hari Ke-14 Treatment	
KN	1	82	113	91
	2	77	105	84
	3	97	97	99
	4	88	116	100
K (-)	1	600	434	509
	2	600	600	600
	3	342	210	173
	4	460	216	379
	5	428	541	593
K (+) sitagliptin	1	382	276	175
	2	600	582	66
	3	485	489	182
	4	366	281	333
	5	600	568	133
D1	1	600	507	497
	2	395	107	175
	3	600	450	429
	4	337	452	518
	5	470	265	268
D2	1	436	403	423
	2	348	490	294
	3	412	231	248
	4	449	385	399
	5	466	526	305
D3	1	421	386	323
	2	544	445	600
	3	569	389	461
	4	429	422	426

Lampiran 10. Perhitungan Dosis Ketamin-Xylazine

Diketahui:

Dosis Ketamin-xylazine cocktail = 0,1 ml/100 g

Dihitung Ketamin-xylazine cocktail dengan rumus:

$$\text{Dosis Ketamin-xylazine cocktail} = \frac{0,1 \text{ ml}}{100 \text{ g}} \times \text{Berat Badan Tikus}$$

Kelompok		Berat Badan (gram)	Volume (ml)
KN	1	261	0.3
	2	202	0.2
	3	220	0.2
	4	205	0.2
K (-)	1	190	0.2
	2	154	0.2
	3	209	0.2
	4	192	0.2
	5	204	0.2
K (+)	1	204	0.2
	2	147	0.1
	3	198	0.2
	4	135	0.1
	5	211	0.2
D1	1	163	0.2
	2	197	0.2
	3	150	0.2
	4	187	0.2
	5	198	0.2
D2	1	144	0.1
	2	137	0.1
	3	207	0.2
	4	203	0.2
	5	250	0.3
D3	1	214	0.2
	2	166	0.2
	3	158	0.2
	4	220	0.2

Lampiran 11. Supernatan dan Pelet



Lampiran 12. Perhitungan Deret Standar MDA

Diketahui:

TEP 96%

 ρ : 0,919 g/ml

Mr : 220,31 g/mol

Vol : 5 ml = 0,005 L

- Larutan stok I

$$M = \frac{\rho \times 1000 \times \text{kadar}}{Mr}$$

$$= \frac{0,919 \text{ g/ml} \times 1000 \times \frac{96}{100}}{220,31 \text{ g/mol}}$$

$$= 4,0045$$

$$M = \frac{gr}{\frac{mr}{V}}$$

$$4,0045 = \frac{gr}{\frac{220,31 \text{ g/mol}}{0,005 \text{ L}}}$$

$$\text{Gram} = 44,11 \text{ g}$$

- TEP 1:80.000

$$\frac{4,0045}{80.000} = 0,000050 \text{ mol/L} = 50 \text{ nmol/ml}$$

- Larutan stok II (50 nmol/ml)

$$M1 \times V1 = M2 \times V2$$

$$4,0045 \times V1 = 0,000050 \times 100 \text{ ml}$$

$$V1 = 0,00125 \text{ ml} = 1,25 \mu\text{L}$$

- Larutan standar 0,3125 nmol/ml

$$V = \frac{0,3125 \text{ nmol/ml}}{50 \text{ nmol/ml}} \times 400 \mu\text{L} = 2,5 \mu\text{L}$$

- Larutan standar 0,625 nmol/ml

$$V = \frac{0,625 \text{ nmol/ml}}{50 \text{ nmol/ml}} \times 400 \mu\text{L} = 5 \mu\text{L}$$

- Larutan standar 1,25 nmol/ml

$$V = \frac{1,25 \text{ nmol/ml}}{50 \text{ nmol/ml}} \times 400 \mu\text{L} = 10 \mu\text{L}$$

- 4) Larutan standar 2,5 nmol/ml

$$V = \frac{2,5 \text{ nmol/ml}}{50 \text{ nmol/ml}} \times 400 \mu\text{l} = 20 \mu\text{L}$$

- 5) Larutan standar 5 nmol/ml

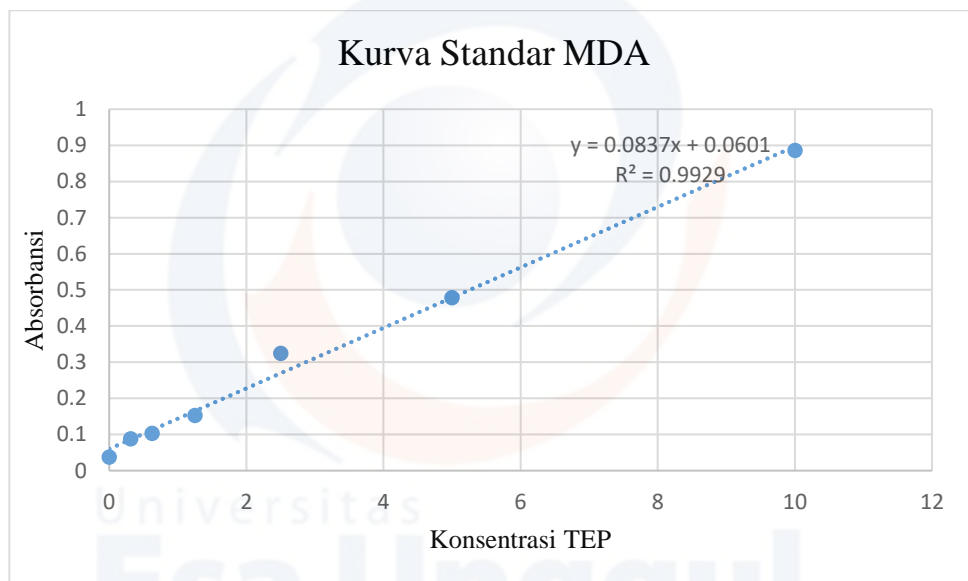
$$V = \frac{5 \text{ nmol/ml}}{50 \text{ nmol/ml}} \times 400 \mu\text{l} = 40 \mu\text{L}$$

- 6) Larutan standar 10 nmol/ml

$$V = \frac{10 \text{ nmol/ml}}{50 \text{ nmol/ml}} \times 400 \mu\text{l} = 80 \mu\text{L}$$

Lampiran 13. Data Absorbansi Standar MDA

No.	Konsentrasi	Rata-Rata Absorbansi
1	0	0.0375
2	0.3125	0.08755
3	0.625	0.10285
4	1.25	0.1526
5	2.5	0.32435
6	5	0.47805
7	10	0.88545



Lampiran 14. Data Sampel MDA

Kelompok	Absorbansi	x (nmol)	Berat Organ (gram)	MDA Jaringan (nmol/gram Jaringan)	
KN	1	0.291	2.759	0.78	26.531
	2	0.378	3.799	0.94	30.309
	3	0.643	6.959	1.02	51.172
	4	0.211	1.800	0.42	32.141
K (-)	1	0.578	6.184	0.8	57.975
	2	0.560	5.973	0.61	73.433
	3	0.324	3.154	0.88	26.882
	4	0.231	2.044	0.81	18.922
	5	0.181	1.449	1	10.869
K (+)	1	0.308	2.958	1.02	21.751
	2	0.185	1.495	0.72	15.569
	3	0.183	1.468	1	11.008
	4	0.247	2.238	0.89	18.857
	5	0.402	4.087	1	30.650
D1	1	0.235	2.094	0.59	26.624
	2	0.443	4.578	0.99	34.684
	3	0.201	1.686	0.54	23.422
	4	0.178	1.406	0.94	11.220
	5	0.542	5.762	1.03	41.958
D2	1	0.222	1.935	0.57	25.467
	2	0.243	2.189	0.61	26.918
	3	0.245	2.207	1.16	14.267
	4	0.207	1.757	0.95	13.875
	5	0.305	2.930	0.98	22.420
D3	1	0.293	2.788	0.91	22.977
	2	0.261	2.397	0.87	20.661
	3	0.301	2.878	0.81	26.644
	4	0.437	4.499	1	33.746

Lampiran 15. Rata-Rata Hasil Kadar MDA

Kelompok	Rata-Rata \pm SD (nmol/g Jaringan)
KN	35.038 \pm 11.006
K(-)	37.616 \pm 26.821
K(+)	19.567 \pm 7.371
D1	27.581 \pm 11.652
D2	20.589 \pm 6.170
D3	26.007 \pm 5.717

Lampiran 16. Deret Standar SOD

Diketahui:

Konsentrasi S6 (standar) = 7,21 U/ml

a) S5

$$\begin{aligned}M_1 \times V_1 &= M_2 \times V_2 \\7,21 \text{ U/ml} \times 5 \text{ ml} &= M_2 \times 10 \text{ ml} \\M_2 &= 3,605 \text{ U/ml}\end{aligned}$$

b) S4

$$\begin{aligned}M_1 \times V_1 &= M_2 \times V_2 \\3,605 \text{ U/ml} \times 5 \text{ ml} &= M_2 \times 10 \text{ ml} \\M_2 &= 1,8025 \text{ U/ml} \rightarrow 1,803 \text{ U/ml}\end{aligned}$$

c)

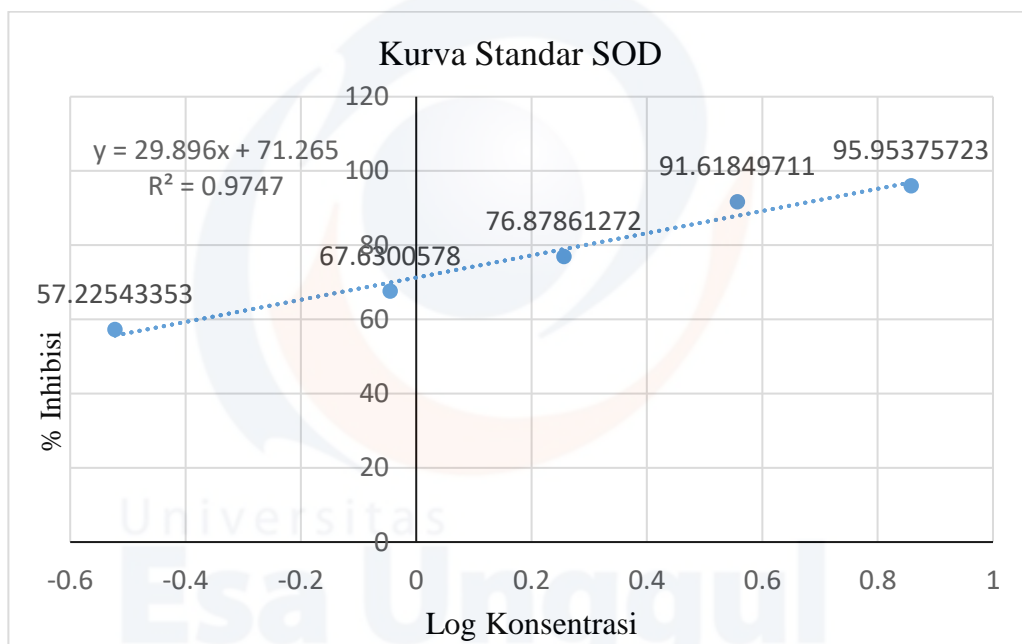
$$\begin{aligned}M_1 \times V_1 &= M_2 \times V_2 \\1,8025 \text{ U/ml} \times 5 \text{ ml} &= M_2 \times 10 \text{ ml} \\M_2 &= 0,90125 \text{ U/ml} \rightarrow 0,9013 \text{ U/ml}\end{aligned}$$

d) S2

$$\begin{aligned}M_1 \times V_1 &= M_2 \times V_2 \\0,90125 \text{ U/ml} \times 3 \text{ ml} &= M_2 \times 9 \text{ ml} \\M_2 &= 0,30042 \text{ U/ml}\end{aligned}$$

Lampiran 17. Data Absorbansi Standar SOD

No.	Larutan Standar	Konsentrasi	Log Konsentrasi	Rata-Rata Absorbansi (3 min)	Rata-Rata Absorbansi (3 sec)	A2-A1/3	%Inhibisi
1	Blanko			0.0757	0.0584	0.005767	
2	S2	0.3004167	-0.5223	0.0525	0.0451	0,002467	57.22543
3	S3	0.90125	-0.0452	0.056	0.0504	0.001867	67.63006
4	S4	1.8025	0.25588	0.0531	0.0491	0.001333	76.87861
5	S5	3.605	0.55691	0.05	0.04855	0.000483	91.6185
6	S6	7.21	0.85794	0.0444	0.0437	0.000233	95.95376



Lampiran 18. Data Sampel SOD

Kelompok	No.	Rata-Rata Absorbansi (3 min)	Rata-Rata Absorbansi (3 sec)	A2-A1/3	%Inhibisi	Log x	x	Berat Organ (gram)	SOD (U/gram jaringan)
KN	1	0.37605	0.3593	0.005583	3.184828	-2.28928	0.005137	0.78	0.659
	2	0.3719	0.3563	0.0052	9.831739	-2.06694	0.008572	0.94	0.912
	3	0.2667	0.2511	0.0052	9.831804	-2.06694	0.008572	1.02	0.840
	4	0.2266	0.21115	0.00515	10.69876	-2.03794	0.009163	0.42	2.182
K (-)	1	0.2609	0.2554	0.001833	68.20991	-0.11423	0.768719	0.8	96.090
	2	0.31275	0.305	0.002583	55.20488	-0.54924	0.282331	0.61	46.284
	3	0.22885	0.22215	0.002233	61.27391	-0.34624	0.450571	0.88	51.201
	4	0.22605	0.22065	0.0018	68.78792	-0.0949	0.803714	0.81	99.224
	5	0.2618	0.2561	0.0019	67.05393	-0.1529	0.703236	1	70.324
K (+)	1	0.5232	0.51778	0.001807	68.67233	-0.09876	0.796591	1.02	78.097
	2	0.1447	0.1399	0.0016	72.2559	0.0211	1.0497952	0.72	145.805
	3	0.5228	0.51678	0.002007	65.20432	-0.21477	0.609864	1	60.986
	4	0.21035	0.20155	0.002933	49.13589	-0.75224	0.176911	0.89	19.878
	5	0.5236	0.51775	0.00195	66.18683	-0.1819	0.657805	1	65.780
D1	1	0.2123	0.2096	0.0009	84.39397	0.427113	2.673701	0.59	453.170
	2	0.2113	0.21	0.000433	92.48603	0.697787	4.986394	0.99	503.676
	3	0.26015	0.2562	0.001317	77.16899	0.185443	1.532649	0.54	283.824
	4	0.21055	0.20925	0.000433	92.48594	0.697784	4.986361	0.94	530.464
	5	0.212	0.2106	0.000467	91.90798	0.678451	4.769264	1.03	463.035
D2	1	0.1677	0.1625	0.001733	69.94394	-0.05623	0.878557	0.57	154.133
	2	0.22015	0.2172	0.000983	82.94898	0.378779	2.392098	0.61	392.147
	3	0.2137	0.2099	0.001267	78.03595	0.214442	1.638482	1.16	141.248
	4	0.22	0.2177	0.000767	86.70596	0.504447	3.194828	0.95	336.298
	5	0.2142	0.2095	0.001567	72.83395	0.040439	1.097586	0.98	111.999
D3	1	0.21835	0.21115	0.0024	58.38394	-0.4429	0.360658	0.91	39.633
	2	0.21841	0.21108	0.002443	57.63251	-0.46804	0.340378	0.87	39.124
	3	0.21914	0.21201	0.002377	58.78851	-0.42937	0.372073	0.81	45.935
	4	0.21824	0.21113	0.00237	58.90411	-0.4255	0.375401	1	37.540

Lampiran 19. Rata-Rata Analisis Aktivitas SOD

Kelompok	Rata-Rata \pm SD (U/g Jaringan)
KN	1.148 \pm 0.697
K(-)	72.624 \pm 24.578
K(+)	74.109 \pm 45.659
D1	446.834 \pm 96.307
D2	227.165 \pm 127.581
D3	40.558 \pm 3.694

Lampiran 20. Hasil Analisis Statistik Berat Badan Tikus Sebelum *Treatment* dan Hari Ke-14 *Treatment*

A. Uji Normalitas

1) KN

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kn_s_t	.387	4	.	.768	4	.056
kn_h14	.279	4	.	.837	4	.186

a. Lilliefors Significance Correction

2) K(+)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ne_s_t	.271	5	.200*	.883	5	.321
ne_h14	.304	5	.148	.859	5	.224

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

3) K(-)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
po_s_t	.171	5	.200*	.955	5	.776
po_h14	.305	5	.144	.831	5	.142

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

4) D1

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
d1_s_t	.201	5	.200*	.916	5	.504
d1_h14	.245	5	.200*	.871	5	.272

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

5) D2

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
d2_s_t	.187	5	.200*	.947	5	.717
d2_h14	.225	5	.200*	.910	5	.465

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

6) D3

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
d3_s_t	.177	4	.	.986	4	.934
d3_h14	.278	4	.	.832	4	.174

a. Lilliefors Significance Correction

B. Uji Homogenitas

Test of Homogeneity of Variances

BB

Levene Statistic	df1	df2	Sig.
.531	1	54	.469

C. Uji *Pair Sample T test*

Paired Samples Test

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	kn_s_t- kn_h14	-25.250000	6.849574	3.424787	-36.149201	-14.350799	-7.373	3	.005
Pair 2	ne_s_t- ne_h14	5.000000	21.783021	9.741663	-22.047193	32.047193	.513	4	.635
Pair 3	po_s_t- po_h14	6.800000	44.885410	20.073365	-48.932597	62.532597	.339	4	.752
Pair 4	d1_s_t- d1_h14	18.400000	16.318701	7.297945	-1.862343	38.662343	2.521	4	.065
Pair 5	d2_s_t- d2_h14	6.200000	25.868900	11.568924	-25.920482	38.320482	.536	4	.620
Pair 6	d3_s_t- d3_h14	2.500000	10.148892	5.074446	-13.649151	18.649151	.493	3	.656

Lampiran 21. Hasil Analisis Statistik Kadar Glukosa Darah Hari Ke-14 *Treatment*

A. Uji Normalitas Hari Ke-14 *Treatment*

Tests of Normality

kel		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
KGD	normal	.268	4	.	.899	4	.427
	negatif	.227	5	.200*	.878	5	.299
	positif	.283	5	.200*	.928	5	.581
	d1	.235	5	.200*	.895	5	.381
	d2	.251	5	.200*	.913	5	.485
	d3	.220	4	.	.979	4	.899

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

B. Uji Homegenitas

Test of Homogeneity of Variances

KGD			
Levene Statistic	df1	df2	Sig.
2.955	5	22	.034

D. Uji Kruskal Wallis

Ranks

kel	N	Mean Rank	
KGD	normal	4	3.50
	negatif	5	20.30
	positif	5	8.30
	d1	5	17.90
	d2	5	15.00
	d3	4	21.13
Total	28		

Test Statistics^{a,b}

KGD	
Chi-Square	15.955
df	5
Asymp. Sig.	.007

a. Kruskal Wallis Test

b. Grouping Variable: kel

E. Uji Man Whitney

1) KN – K(-)

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	normal	4	2.50	10.00
	negatif	5	7.00	35.00
	Total	9		

Test Statistics^a

KGD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

2) KN – K(+)

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	normal	4	3.50	14.00
	positif	5	6.20	31.00
	Total	9		

Test Statistics^a

KGD	
Mann-Whitney U	4.000
Wilcoxon W	14.000
Z	-1.470
Asymp. Sig. (2-tailed)	.142
Exact Sig. [2*(1-tailed Sig.)]	.190 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

3) KN – D1

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	normal	4	2.50	10.00
	d1	5	7.00	35.00
	Total	9		

Test Statistics^a

KGD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

4) KN – D2

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	normal	4	2.50	10.00
	d2	5	7.00	35.00
Total		9		

Test Statistics^a

	KGD
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

5) KN – D3

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	normal	4	2.50	10.00
	d3	4	6.50	26.00
Total		8		

Test Statistics^a

	KGD
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

6) K(-) – K(+)

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	negatif	5	7.40	37.00
	positif	5	3.60	18.00
Total		10		

Test Statistics^a

		KGD	
Mann-Whitney U			3.000
Wilcoxon W			18.000
Z			-1.984
Asymp. Sig. (2-tailed)			.047
Exact Sig. [2*(1-tailed Sig.)]			.056 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

7) K(-) – D1

Ranks

		kel	N	Mean Rank	Sum of Ranks
KGD	negatif		5	6.20	31.00
	d1		5	4.80	24.00
	Total		10		

Test Statistics^a

		KGD	
Mann-Whitney U			9.000
Wilcoxon W			24.000
Z			-.731
Asymp. Sig. (2-tailed)			.465
Exact Sig. [2*(1-tailed Sig.)]			.548 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

8) K(-) – D2

Ranks

		kel	N	Mean Rank	Sum of Ranks
KGD	negatif		5	6.60	33.00
	d2		5	4.40	22.00
	Total		10		

Test Statistics^a

		KGD	
Mann-Whitney U			7.000
Wilcoxon W			22.000
Z			-1.149
Asymp. Sig. (2-tailed)			.251
Exact Sig. [2*(1-tailed Sig.)]			.310 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

9) K(-) – D3

Ranks

		kel	N	Mean Rank	Sum of Ranks
KGD	negatif		5	5.10	25.50
	d3		4	4.88	19.50
	Total		9		

Test Statistics^a

KGD	
Mann-Whitney U	9.500
Wilcoxon W	19.500
Z	-.123
Asymp. Sig. (2-tailed)	.902
Exact Sig. [2*(1-tailed Sig.)]	.905 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

10) K(+) – D1

Ranks

kel	N	Mean Rank	Sum of Ranks
KGD positif	5	3.70	18.50
d1	5	7.30	36.50
Total	10		

Test Statistics^a

KGD	
Mann-Whitney U	3.500
Wilcoxon W	18.500
Z	-1.886
Asymp. Sig. (2-tailed)	.059
Exact Sig. [2*(1-tailed Sig.)]	.056 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

11) K(+) – D2

Ranks

kel	N	Mean Rank	Sum of Ranks
KGD positif	5	3.60	18.00
d2	5	7.40	37.00
Total	10		

Test Statistics^a

KGD	
Mann-Whitney U	3.000
Wilcoxon W	18.000
Z	-1.984
Asymp. Sig. (2-tailed)	.047
Exact Sig. [2*(1-tailed Sig.)]	.056 ^b

a. Grouping Variable: kel
 b. Not corrected for ties.

12) K(+) – D3

Ranks

kel	N	Mean Rank	Sum of Ranks
KGD positif	5	3.20	16.00
d3	4	7.25	29.00
Total	9		

Test Statistics^a

KGD	
Mann-Whitney U	1.000
Wilcoxon W	16.000
Z	-2.205
Asymp. Sig. (2-tailed)	.027
Exact Sig. [2*(1-tailed Sig.)]	.032 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

13) D1 – D2

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	d1	5	6.20	31.00
	d2	5	4.80	24.00
	Total	10		

Test Statistics^a

KGD	
Mann-Whitney U	9.000
Wilcoxon W	24.000
Z	-.731
Asymp. Sig. (2-tailed)	.465
Exact Sig. [2*(1-tailed Sig.)]	.548 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

14) D1 – D3

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	d1	5	4.60	23.00
	d3	4	5.50	22.00
	Total	9		

Test Statistics^a

KGD	
Mann-Whitney U	8.000
Wilcoxon W	23.000
Z	-.490
Asymp. Sig. (2-tailed)	.624
Exact Sig. [2*(1-tailed Sig.)]	.730 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

15) D2 – D3

Ranks

	kel	N	Mean Rank	Sum of Ranks
KGD	d2	5	3.40	17.00
	d3	4	7.00	28.00
	Total	9		

Test Statistics^a

	KGD
Mann-Whitney U	2.000
Wilcoxon W	17.000
Z	-1.960
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.063 ^b

a. Grouping Variable: kel

b. Not corrected for ties.

Lampiran 22. Hasil Analisis Statistik Kadar Glukosa Darah Sebelum *Treatment* dan Hari Ke-14 *Treatment*

A. Uji Normalitas

1) KN

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
kn_s_t	.179	4	.	.979	4	.897
kn_h14_t	.268	4	.	.899	4	.427

a. Lilliefors Significance Correction

2) K(-)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
neg_s_t	.244	5	.200*	.894	5	.375
neg_h14_t	.227	5	.200*	.878	5	.299

*, This is a lower bound of the true significance.
a. Lilliefors Significance Correction

3) K(+)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
po_s_t	.242	5	.200*	.846	5	.182
po_h14_t	.283	5	.200*	.928	5	.581

*, This is a lower bound of the true significance.
a. Lilliefors Significance Correction

4) D1

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
d1_s_t	.243	5	.200*	.889	5	.353
d1_h14_t	.235	5	.200*	.895	5	.381

*, This is a lower bound of the true significance.
a. Lilliefors Significance Correction

5) D1

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
d2_s_t	.218	5	.200*	.905	5	.435
d2_h14_t	.251	5	.200*	.913	5	.485

*, This is a lower bound of the true significance.
a. Lilliefors Significance Correction

6) D3

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
d3_s_t	.290	4	.	.828	4	.163
d3_h14_t	.220	4	.	.979	4	.899

a. Lilliefors Significance Correction

B. Uji Homogenitas

Test of Homogeneity of Variances

kgd

Levene Statistic	df1	df2	Sig.
5.015	5	50	.001

C. Uji Wilcoxon

Test Statistics^a

	kn_h14_t- kn_s_t	neg_h14_t- neg_s_t	po_h14_t- po_s_t	d1_h14_t- d1_s_t	d2_h14_t- d2_s_t	d3_h14_t- d3_s_t
Z	-1.826 ^b	-.730 ^c	-2.023 ^c	-1.214 ^c	-2.023 ^c	-1.095 ^c
Asymp. Sig. (2-tailed)	.068	.465	.043	.225	.043	.273

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

c. Based on positive ranks.

Lampiran 23. Hasil Analisis Statistik Kadar MDA

A. Uji Normalitas

Tests of Normality

Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
mda KN	.354	4	.	.818	4	.138
K(-)	.256	5	.200 [*]	.904	5	.434
K(+)	.183	5	.200 [*]	.974	5	.898
D1	.161	5	.200 [*]	.987	5	.967
D2	.247	5	.200 [*]	.849	5	.193
D3	.206	4	.	.940	4	.657

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

B. Uji Homogenitas

Test of Homogeneity of Variances

mda

Levene Statistic	df1	df2	Sig.
6.700	5	22	.001

C. Uji Kruskal Wallis

Ranks

Kelompok	N	Mean Rank
mda KN	4	20.75
K(-)	5	16.40
K(+)	5	9.20
D1	5	16.20
D2	5	10.60
D3	4	15.25
Total	28	

Test Statistics^{a,b}

mda

Chi-Square	6.022
df	5
Asymp. Sig.	.304

a. Kruskal Wallis Test

b. Grouping Variable: Kelompok

Lampiran 24. Hasil Analisis Statistik Aktivitas SOD

A. Uji Normalitas

Tests of Normality

Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
SOD KN	.383	4	.	.768	4	.056
K(-)	.230	5	.200 [*]	.877	5	.294
K(+)	.265	5	.200 [*]	.925	5	.563
D1	.326	5	.088	.836	5	.154
D2	.316	5	.114	.836	5	.154
D3	.349	4	.	.837	4	.188

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

B. Uji Homogenitas

Test of Homogeneity of Variances

SOD

Levene Statistic	df1	df2	Sig.
7.332	5	22	.000

C. Uji Kruskal Wallis

Ranks

Kelompok	N	Mean Rank
SOD KN	4	2.50
K(-)	5	13.60
K(+)	5	13.00
D1	5	25.60
D2	5	21.00
D3	4	7.50
Total	28	

Test Statistics^{a,b}

SOD

Chi-Square	23.861
df	5
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Kelompok

D. Uji Man Whitney

1) KN – K (-)

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	KN	4	2.50	10.00
	K(-)	5	7.00	35.00
	Total	9		

Test Statistics^a

SOD

Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

2) KN – K (+)

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	KN	4	2.50	10.00
	K(+)	5	7.00	35.00
	Total	9		

Test Statistics^a

SOD

Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

3) KN – D1

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	KN	4	2.50	10.00
	D1	5	7.00	35.00
	Total	9		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

4) KN – D2

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	KN	4	2.50	10.00
	D2	5	7.00	35.00
	Total	9		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

5) KN – D3

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	KN	4	2.50	10.00
	D3	4	6.50	26.00
	Total	8		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.309
Asymp. Sig. (2-tailed)	.021
Exact Sig. [2*(1-tailed Sig.)]	.029 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

6) K (-) – K (+)

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(-)	5	5.60	28.00
	K(+)	5	5.40	27.00
	Total	10		

Test Statistics^a

SOD	
Mann-Whitney U	12.000
Wilcoxon W	27.000
Z	-.104
Asymp. Sig. (2-tailed)	.917
Exact Sig. [2*(1-tailed Sig.)]	1.000 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

7) K (-) – D1

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(-)	5	3.00	15.00
	D1	5	8.00	40.00
	Total	10		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	15.000
Z	-2.611
Asymp. Sig. (2-tailed)	.009
Exact Sig. [2*(1-tailed Sig.)]	.008 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

8) K (-) – D2

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(-)	5	3.00	15.00
	D2	5	8.00	40.00
	Total	10		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	15.000
Z	-2.611
Asymp. Sig. (2-tailed)	.009
Exact Sig. [2*(1-tailed Sig.)]	.008 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

9) K (-) – D3

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(-)	5	7.00	35.00
	D3	4	2.50	10.00
	Total	9		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

10) K (+) – D1

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(+)	5	3.00	15.00
	D1	5	8.00	40.00
	Total	10		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	15.000
Z	-2.611
Asymp. Sig. (2-tailed)	.009
Exact Sig. [2*(1-tailed Sig.)]	.008 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

11) K (+) – D2

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(+)	5	3.40	17.00
	D2	5	7.60	38.00
	Total	10		

Test Statistics^a

SOD	
Mann-Whitney U	2.000
Wilcoxon W	17.000
Z	-2.193
Asymp. Sig. (2-tailed)	.028
Exact Sig. [2*(1-tailed Sig.)]	.032 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

12) K (+) – D3

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
SOD	K(+)	5	6.20	31.00
	D3	4	3.50	14.00
	Total	9		

Test Statistics^a

SOD	
Mann-Whitney U	4.000
Wilcoxon W	14.000
Z	-1.470
Asymp. Sig. (2-tailed)	.142
Exact Sig. [2*(1-tailed Sig.)]	.190 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

13) D1 – D2

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
SOD	D1	5	7.60	38.00
	D2	5	3.40	17.00
	Total	10		

Test Statistics^a

SOD	
Mann-Whitney U	2.000
Wilcoxon W	17.000
Z	-2.193
Asymp. Sig. (2-tailed)	.028
Exact Sig. [2*(1-tailed Sig.)]	.032 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

14) D1 – D3

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	D1	5	7.00	35.00
	D3	4	2.50	10.00
	Total	9		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.

15) D2 – D3

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
SOD	D2	5	7.00	35.00
	D3	4	2.50	10.00
	Total	9		

Test Statistics^a

SOD	
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.449
Asymp. Sig. (2-tailed)	.014
Exact Sig. [2*(1-tailed Sig.)]	.016 ^b

a. Grouping Variable: Kelompok

b. Not corrected for ties.