




LAMPIRAN

Lampiran 1. Ethical Clearance

	KOMISI ETIK PENELITIAN KESEHATAN FAKULTAS KEDOKTERAN GIGI UNIVERSITAS ISLAM SULTAN AGUNG <small>Sekretariat: Fakultas Kedokteran Gigi UNISSULA Jl. Raya Kallgawe Km.04 Semarang 50112 Telp. (024) 6883584, Fax 024-6894366</small>
KETERANGAN LOLOS KAJI ETIK DESCRIPTION OF ETHICAL APPROVAL "ETHICAL APPROVAL" No. 446/B.1-KEPK/SA-FKG/I/2023	
Protokol penelitian yang diusulkan oleh : <i>The research protocol proposed by</i>	
Peneliti utama <i>Principal In Investigator</i>	: dr. Fransisca Prameshinta H, M.Si Med
Pembimbing <i>Supervisor</i>	: 1. Daniel Aryo W 2. Ezra Clement Lie
Nama Institusi <i>Name of the Institution</i>	: FAKULTAS KEDOKTERAN UNIKA SOEGIJAPRANATA
Tempat Penelitian <i>Research Place</i>	: LABORATORIUM INTEGRATED BIOMEDICAL LABORATORY FAKULTAS KEDOKTERAN UNISSULA
Dengan Judul <i>Title</i>	: EFEKTIVITAS EKSTRAK UMBI BIT TERHADAP KADAR SUPEROXIDE DISMUTASE DAN PROFIL FUNGSI HEPAR PADA TIKUS WISTAR JANTAN YANG DIINDUKSI ALOKSAN
Dinyatakan layak etik sesuai 7 (tujuh) Standar WHO 2011, yaitu: 1) Nilai Sosial, 2) Nilai Ilmiah, 3) Pemerataan Beban dan Manfaat, 4) Risiko, 5) Bujukan / Eksploitasi, 6) Kerahasiaan dan Privacy, dan 7) Persetujuan Setelah Penjelasan, yang merujuk pada Pedoman CIOMS 2016. Hal ini seperti yang ditunjukkan oleh terpenuhinya indikator setiap standar.	
<i>Declared to be ethically appropriate in accordance to 7 (seven) WHO 2011 Standards : 1) Social Values, 2) Scientific Values, 3) Equitable Assessment and Benefits, 4) Risks, 5) Persuasion /</i>	
<i>Guidelines This is as indicated by the fulfillment of the indicators of each standard.</i>	
Pernyataan Laik Etik ini berlaku selama kurun waktu tanggal 1 Januari 2023 sampai dengan tanggal 1 Januari 2024.	
<i>This declaration of ethics applies during the periode January 1, 2023 until January 1, 2024.</i>	
Mengetahui, Wakil Dekan I	Semarang, 9 Januari 2023 Ketua Komisi Etik Penelitian Kesehatan Fakultas Kedokteran Gigi UNISSULA.
 Drg. Muzli Anurwaningsih, M.Med.Ed NIK. 211010013	 Drg. Rochman Hidayanto, Sp. PM NIK. 211010013

Lampiran 2. Surat Izin Penelitian

FAKULTAS KEDOKTERAN



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Nomor : 0157/B.7.3/FK/XI/2022 23 November 2022.
Lampiran : -
Perihal : Permohonan Ijin Mencari Data

Kepada Yth
Bapak/Ibu
Kepala Laboratorium IBL UNISSULA
di Tempat

Dengan Hormat,

Melalui surat ini kami memberitahukan bahwa mahasiswa Fakultas Kedokteran Unika Soegijapranata dibawah ini bermaksud mengadakan penelitian/ mencari data untuk keperluan skripsi.

Nama : Ezra Clement Lie
NIM : 19.P1.0031
Alamat : Jl. Anggrek Raya No. 9 Sukoharjo
Judul Penelitian : "Pengaruh Pemberian Ekstrak Umbi Bit Terhadap Kadar Superoxide Dismutase pada Tikus Hiperglikemia"
Dosen Pembimbing : 1. dr. Fransisca Prameshinta Hardimarta, M.Si.Med
2. Ferdinandus Krisna Pukan, S.Si.,M.Sc

Waktu Penelitian : November-Desember 2022

Sehubungan dengan hal tersebut, kami mohon kiranya dapat diberikan ijin kepada mahasiswa yang bersangkutan untuk mengadakan penelitian/mencari data di Instansi/Perusahaan yang Bapak/Ibu pimpin.

Hormat kami
Ka. Progdik Kedokteran,



dr. F. Prameshinta Hardimarta, M.Si.Med

Lampiran 3. Hewan Uji Sebelum Perlakuan dan 3-6 Hari Setelah Injeksi Aloksan

Kode Sampel	Berat Badan (gram)	Kadar Gula Darah (mg/dl)
K1.1	210	65,59 mg/dl
K1.2	200	71,95 mg/dl
K1.3	200	75,09 mg/dl
K1.4	200	70,24 mg/dl
K1.5	205	72,28 mg/dl
K2.1	200	437 mg/dl
K2.2	200	217 mg/dl
K2.3	200	407 mg/dl
K2.4	200	227 mg/dl
K2.5	200	230 mg/dl
K3.1	205	HI mg/dl
K3.2	200	251 mg/dl
K3.3	200	250 mg/dl
K3.4	200	470 mg/dl
K3.5	205	HI mg/dl
K4.1	205	394 mg/dl
K4.2	200	300 mg/dl
K4.3	210	378 mg/dl
K4.4	205	HI mg/dl
K4.5	200	586 mg/dl
K5.1	200	456 mg/dl
K5.2	200	275 mg/dl
K5.3	200	317 mg/dl
K5.4	200	271 mg/dl
K5.5	200	388 mg/dl
K6.1	200	404 mg/dl
K6.2	200	275 mg/dl
K6.3	200	300 mg/dl
K6.4	200	HI mg/dl
K6.5	200	501 mg/dl

Lampiran 4. Kadar SOD Hewan Uji Setelah Perlakuan Hari ke-15

No	Kode Sampel	Absorbansi	Kadar SOD (ng/ml)
1	K1.1	1.629	2.377
2	K1.2	1.183	1.628
3	K1.3	1.739	2.569
4	K1.4	1.948	2.938
5	K1.5	1.822	2.714
6	K2.1	1.079	1.460
7	K2.2	0.966	1.281
8	K2.3	1.41	2.004
9	K2.4	1.34	1.887
10	K2.5	1.315	1.845
11	K3.1	1.557	2.254
12	K3.2	1.344	1.893
13	K3.3	1.137	1.553
14	K3.4	1.478	2.119
15	K3.5	1.259	1.752
16	K4.1	1.228	1.701
17	K4.2	1.395	1.979
18	K4.3	1.087	1.473
19	K4.4	1.33	1.870
20	K4.5	1.117	1.521
21	K5.1	1.32	1.853
22	K5.2	1.602	2.331
23	K5.3	1.724	2.542
24	K5.4	1.617	2.357
25	K5.5	1.431	2.039
26	K6.1	1.121	1.527
27	K6.2	1.298	1.817
28	K6.3	0.9327	1.228
29	K6.4	1.236	1.715
30	K6.5	0.8477	1.097

Lampiran 5. Hasil Analisis Statistik Kadar SOD

a. Uji Deskriptif Kadar SOD

Descriptives

Kelompok Perlakuan		Statistic	Std. Error		
Kadar SOD	Baseline	Mean	2.44520	.223931	
		95% Confidence Interval for Mean	Lower Bound	1.82347	
			Upper Bound	3.06693	
		5% Trimmed Mean	2.46322		
		Median	2.56900		
		Variance	.251		
		Std. Deviation	.500724		
		Minimum	1.628		
		Maximum	2.938		
		Range	1.310		
		Interquartile Range	.824		
		Skewness	-1.344	.913	
		Kurtosis	2.150	2.000	
		Kontrol Negatif	Kontrol Negatif	Mean	1.69540
95% Confidence Interval for Mean	Lower Bound			1.31196	
	Upper Bound			2.07884	
5% Trimmed Mean	1.70128				
Median	1.84500				
Variance	.095				
Std. Deviation	.308814				
Minimum	1.281				
Maximum	2.004				
Range	.723				
Interquartile Range	.575				
Skewness	-.629			.913	
Kurtosis	-2.024			2.000	
Kontrol Positif	Kontrol Positif			Mean	1.91420
		95% Confidence Interval for Mean	Lower Bound	1.56596	
			Upper Bound	2.26244	
		5% Trimmed Mean	1.91539		
		Median	1.89300		

	Variance		.079	
	Std. Deviation		.280460	
	Minimum		1.553	
	Maximum		2.254	
	Range		.701	
	Interquartile Range		.534	
	Skewness		-.068	.913
	Kurtosis		-1.372	2.000
Umbi Bit 100 mg	Mean		1.70880	.097449
	95% Confidence Interval for Mean	Lower Bound	1.43824	
		Upper Bound	1.97936	
	5% Trimmed Mean		1.70689	
	Median		1.70100	
	Variance		.047	
	Std. Deviation		.217902	
	Minimum		1.473	
	Maximum		1.979	
	Range		.506	
	Interquartile Range		.428	
	Skewness		.168	.913
	Kurtosis		-2.266	2.000
Umbi Bit 200 mg	Mean		2.22440	.122908
	95% Confidence Interval for Mean	Lower Bound	1.88315	
		Upper Bound	2.56565	
	5% Trimmed Mean		2.22739	
	Median		2.33100	
	Variance		.076	
	Std. Deviation		.274830	
	Minimum		1.853	
	Maximum		2.542	
	Range		.689	
	Interquartile Range		.503	
	Skewness		-.442	.913
	Kurtosis		-1.247	2.000
Umbi Bit 300 mg	Mean		1.47680	.138048
	95% Confidence Interval for Mean	Lower Bound	1.09352	
		Upper Bound	1.86008	
	5% Trimmed Mean		1.47900	
	Median		1.52700	
	Variance		.095	
	Std. Deviation		.308685	
	Minimum		1.097	
	Maximum		1.817	
	Range		.720	
	Interquartile Range		.603	
	Skewness		-.243	.913
	Kurtosis		-2.320	2.000

b. Uji Normalitas Kadar SOD

Tests of Normality

Kelompok Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
Kadar SOD	Baseline	.246	5	.200*	.904	5	.431
	Kontrol Negatif	.286	5	.200*	.893	5	.372
	Kontrol Positif	.167	5	.200*	.977	5	.919
	Umbi Bit 100 mg	.206	5	.200*	.931	5	.604
	Umbi Bit 200 mg	.251	5	.200*	.946	5	.710
	Umbi Bit 300 mg	.190	5	.200*	.932	5	.612

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

a. Lilliefors Significance Correction

c. Uji Homogenitas Kadar SOD

Test of Homogeneity of Variances

Kadar SOD		Levene	df1	df2	Sig.
		Statistic			
	Based on Mean	.681	5	24	.642
	Based on Median	.302	5	24	.907
	Based on Median and with adjusted df	.302	5	13.896	.903
	Based on trimmed mean	.635	5	24	.675

d. Uji One Way ANOVA

ANOVA

Kadar SOD	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.297	5	.659	6.153	.001
Within Groups	2.572	24	.107		
Total	5.870	29			

e. Uji Post Hoc LSD

Multiple Comparisons

Dependent Variable: Kadar SOD

LSD

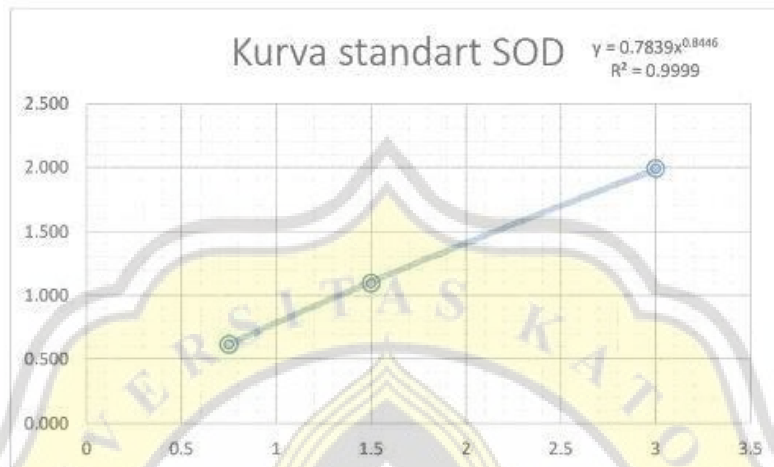
(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Baseline	Kontrol Negatif	.749800*	.207050	.001	.32247	1.17713
	Kontrol Positif	.531000*	.207050	.017	.10367	.95833
	Umbi Bit 100 mg	.736400*	.207050	.002	.30907	1.16373
	Umbi Bit 200 mg	.220800	.207050	.297	-.20653	.64813
	Umbi Bit 300 mg	.968400*	.207050	.000	.54107	1.39573
Kontrol Negatif	Baseline	-.749800*	.207050	.001	-1.17713	-.32247
	Kontrol Positif	-.218800	.207050	.301	-.64613	.20853
	Umbi Bit 100 mg	-.013400	.207050	.949	-.44073	.41393
	Umbi Bit 200 mg	-.529000*	.207050	.017	-.95633	-.10167
	Umbi Bit 300 mg	-.218600	.207050	.302	-.20873	.64593
Kontrol Positif	Baseline	-.531000*	.207050	.017	-.95833	-.10367
	Kontrol Negatif	.218800	.207050	.301	-.20853	.64613
	Umbi Bit 100 mg	.205400	.207050	.331	-.22193	.63273
	Umbi Bit 200 mg	-.310200	.207050	.147	-.73753	.11713
	Umbi Bit 300 mg	.437400*	.207050	.045	.01007	.86473
Umbi Bit 100 mg	Baseline	-.736400*	.207050	.002	-1.16373	-.30907
	Kontrol Negatif	.013400	.207050	.949	-.41393	.44073
	Kontrol Positif	-.205400	.207050	.331	-.63273	.22193
	Umbi Bit 200 mg	-.515600*	.207050	.020	-.94293	-.08827
	Umbi Bit 300 mg	.232000	.207050	.274	-.19533	.65933
Umbi Bit 200 mg	Baseline	-.220800	.207050	.297	-.64813	.20653
	Kontrol Negatif	.529000*	.207050	.017	.10167	.95633
	Kontrol Positif	.310200	.207050	.147	-.11713	.73753
	Umbi Bit 100 mg	.515600*	.207050	.020	.08827	.94293
	Umbi Bit 300 mg	.747600*	.207050	.001	.32027	1.17493
Umbi Bit 300 mg	Baseline	-.968400*	.207050	.000	-1.39573	-.54107
	Kontrol Negatif	-.218600	.207050	.302	-.64593	.20873
	Kontrol Positif	-.437400*	.207050	.045	-.86473	-.01007
	Umbi Bit 100 mg	-.232000	.207050	.274	-.65933	.19533
	Umbi Bit 200 mg	-.747600*	.207050	.001	-1.17493	-.32027

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

Lampiran 6. Standard Absorbansi SOD

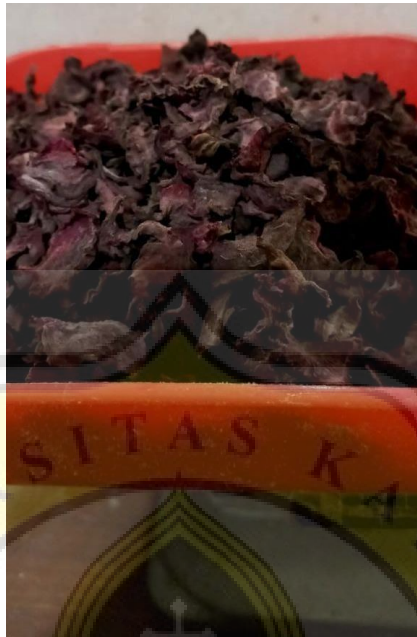
HASIL ANALISIS KADAR SOD

Kurva Baku



Standart (ng/ml)	absorbansi
12	3,141
6	2,612
3	1,990
1,5	1,096
0,75	0,6171

Lampiran 7. Dokumentasi Penelitian



Proses pembuatan ekstrak. Penimbangan umbi bit yang sudah dikeringkan.



Proses pembuatan ekstrak. Umbi bit yang sudah kering di blender supaya menjadi serbuk.



Proses pembuatan ekstrak. Umbi bit setelah di blender dan menjadi simplisia.



Proses pembuatan ekstrak. Metode remaserasi.



Proses pembuatan ekstrak. Penggunaan Mesin *Rotatory Evaporator*



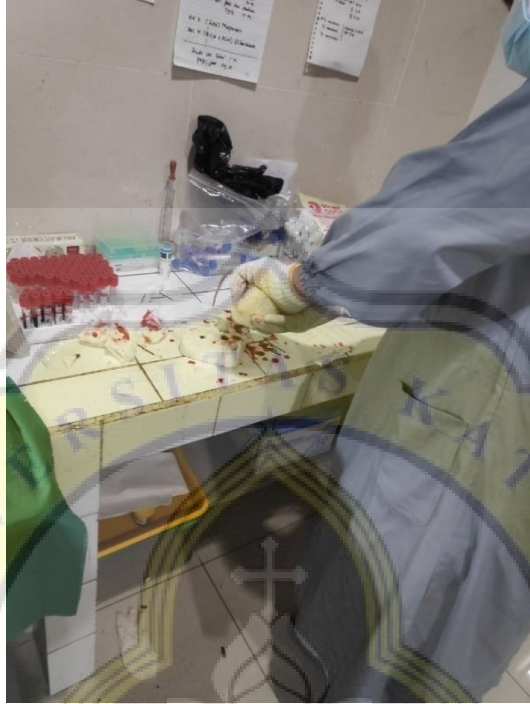
Proses pembuatan ekstrak. Penyaringan ekstrak



Proses pembuatan ekstrak. Ekstrak kental umbi bit



Proses pembuatan ekstrak. Bahan untuk perlakuan terhadap hewan uji, kontrol positif menggunakan glibenklamid dan perlakuan kelompok IV,V, dan VI dengan ekstrak umbi bit dosis 100, 200 dan 300 mg/kgBB.



Proses pengambilan sampel. Pengambilan darah tikus dari sinus orbitalis.



Proses pengambilan sampel. Sentrifugasi sampel darah tikus untuk mengambil supernatan



Proses pengukuran kadar SOD. Pengukuran kadar SOD menggunakan ELISA kit.

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Mar 8, 2023 8:36 AM GMT+7

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