


LAMPIRAN

Lampiran 1

Surat Izin Penelitian


UNIVERSITAS GADJAH MADA
PUSAT STUDI PANGAN DAN GIZI

No. : PSPG – UGM/18/IP/VIII/2016
Hal. : *Permohonan Izin Penelitian dan Pengambilan Data*

Kepada
Yth. Dekan
Fakultas Kedokteran dan Ilmu Kesehatan
Universitas Muhammadiyah Yogyakarta
Jl Lingkar Selatan. Tamantirto, Kasihan, Bantul
Yogyakarta

Dengan hormat.

Menindaklanjuti surat Saudara Nomor :675/C.6 – III/PN-FKIK UMY/VII/2016, 676/C.6 – III/PN-FKIK UMY/VII/2016, 678/C.6 – III/PN-FKIK UMY/VII/2016, perihal Permohonan Izin Penelitian sehubungan dengan pelaksanaan penelitian untuk keperluan Penulisan Karya Ilmiah (KTI) untuk memperoleh derajat sarjana Mahasiswa Fakultas Kedokteran dan Ilmu Kesehatan Universitas Muhammadiyah Yogyakarta :

Nama	: 1. Arifin Nugroho	NIM	: 20130310058
	2. Anatyo Nizar Faiz Aulia	NIM	: 20130310207
	3. Ambar Putri Widjaya	NIM	: 20130310010

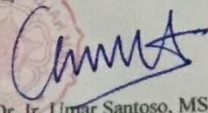
Institusi: Fakultas Kedokteran dan Ilmu Kesehatan
Universitas Muhammadiyah Yogyakarta

Judul : Efektifitas Seduhan Daun Kersen (*Muntingia calabura L.*) Terhadap Kadar Enzim Endogen (MDA, SOD, GPx) Pada Tikus Diabetes Mellitus Yang Diinduksi Streptozotzin (STS).

Waktu Ijin Lab : 13 Juli – 13 Agustus 2016

Dengan ini kami beritahukan bahwa permohonan izin penelitian tersebut dapat kami setujui sesuai peraturan yang berlaku.

Demikian kami sampaikan atas perhatian dan kerjasamanya diucapkan terima kasih.

Kepala,

Prof. Dr. Ir. Umar Santoso, MSc.
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Lampiran 2

Surat Keterangan Kelayakan Etika Penelitian



Fakultas Kedokteran dan Ilmu Kesehatan
Universitas Muhammadiyah Yogyakarta

KETERANGAN KELAYAKAN ETIKA PENELITIAN

Nomor : 422/EP-FKIK-UMY/XI/2016

Komisi Etika Penelitian Fakultas Kedokteran dan Ilmu Kesehatan Universitas Muhammadiyah Yogyakarta yang terdiri atas :


1. Prof. dr.H. Djauhar Ismail, Sp.A(K)., Ph.D.
2. Prof.Dr.dr.H. Soewito A, Sp.THT-KL
3. drg. Ana Medawati, M.Kes
4. drh. Tri Wulandari, M.Kes
5. Dr. dr. Titiek Hidayati, M. Kes
6. Dr. dr. Tri Wahyuliati, Sp. S., M. Kes
7. Titih Huriah, Ns., M. Kep., Sp. Kom
8. Dr. drg. Tita Ratya Utari, Sp. Ort
9. Sabtanti Harimurti, Ph. D., Apt
10. Dr. dr. Arlina Dewi, MMR
11. Dra. Irma Risdiana, Apt., MPH
12. dr. Inayati Habib, Sp. MK., M. Kes

Telah mengkaji permohonan kelayakan etika penelitian yang diajukan oleh :

Nama Peneliti : Arifin Nugroho
NIM : 20130310058
Judul Penelitian : Efektifitas Seduhan Daun Kersen (*Muntingia calabura L.*) Terhadap Kadar Enzim Endogen Superoksida Dismutase (SOD) Pada Tikus Diabetes Melitus Yang Diinduksi *Streptozotocin-Nicotinamide* (STZ-NA)
Pada Tanggal : 29 November 2016
Dengan Hasil : Layak Etik

Demikian surat keterangan ini diberikan untuk dapat digunakan sebagaimana mestinya.

Yogyakarta, 30 November 2016

Sekretaris,


Dr. dr. Titiek Hidayati, M. Kes

Kampus:

Jl. Lingkar Selatan, Tamantirto, Kasihan, Bantul, Yogyakarta 55183
 Telp. (0274) 387656 ext. 213, 7491350 Fax. (0274) 387658

Muda mendunia

Lampiran 3

Perhitungan Dosis

Tabel 9. Konversi Dosis Berbagai Senyawa Bioaktif Pada Hewan dan Manusia (Laurence & Bacharach, 2013)

	20 g Mencit	200 g Tikus	400 g Marmot	1,5 kg Kelinci	2,0 kg Kucing	4,0 kg Kera	12,0 kg Anjing	70 kg Manusia
20 g Mencit	1,0	7,0	12,29	27,8	29,7	84,1	124,2	387,9
200 g Tikus	0,14	1,0	1,74	3,9	4,2	9,2	17,8	56,0
400 g Marmot	0,08	0,57	1,0	2,25	2,4	5,2	10,2	31,5
1,5 kg Kelinci	0,04	0,25	0,44	1,0	1,08	2,4	4,5	14,2
2,0 kg Kucing	0,03	0,23	0,41	0,92	1,0	2,2	4,1	13,0
4,0 kg Kera	0,016	0,11	0,19	0,42	0,45	1,0	1,9	6,1
12,0 kg Anjing	0,008	0,06	0,10	0,22	0,24	0,52	1,0	3,1
70 kg Manusia	0,0026	0,018	0,031	0,07	0,076	0,16	0,32	1,0

1. Metformin

Dosis metformin pada manusia adalah 50 mg/kgBB, dosis ini kemudian dikonversi untuk tikus putih, seperti pada table diatas, maka dosis untuk tikus putih didapatkan sebagai berikut:

$$50 \text{ mg} \times 0,018 = 0,9 \text{ mg}/200 \text{ grBB}$$

Maka dosis yang digunakan pada tikus yaitu 0,9/200gBB/hari.

2. Streptozotocin

Dosis yang digunakan adalah 65mg/kgBB secara intraperitoneal untuk menjadikan tikus DM tipe 2 (Szkudelski, 2012).

3. Nicotinamide

Dosis yang digunakan adalah 230mg/kgBB secara intraperitoneal untuk menjadikan tikus DM tipe 2 (Szkudelski, 2012).

Lampiran 4

Tanggal Rencana Penelitian

Desember 2015

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15 Pengerjan proposal	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Januari 2016

					1	2
3	4	5	6	7	8	9 Survey Tikus
10	11	12	13	14	15 Pengajuan proposal	16 Pembelian stz, metformin
17 Survey daun kersen	18	19	20	21	22	23
24	25	26	27	28	29	30

Februari 2016

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15 Persiapan kandang	16 Adaptasi tikus	17 Adaptasi tikus	18 Adaptasi tikus	19 Adaptasi tikus	20 Adaptasi tikus
21 Adaptasi tikus	22 Adaptasi tikus	23 Pengambilan sampel pre induksi	24 Induksi stz-na	25	26	27
28 Pengambilan sampel pos induksi	29 Intervensi seduhan kersen					

Maret 2016

		1 Intervensi seduhan kersen	2 Intervensi seduhan kersen	3 Intervensi seduhan kersen	4 Intervensi seduhan kersen	5 Intervensi seduhan kersen
6 Intervensi seduhan kersen	7 Intervensi seduhan kersen	8 Intervensi seduhan kersen	9 Intervensi seduhan kersen	10 Intervensi seduhan kersen	11 Intervensi seduhan kersen	12 Intervensi seduhan kersen
13 Intervensi seduhan kersen	14 Pengambilan sampel post perlakuan	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Lampiran 5

Analisis data

Rerata BB

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
KP		Statistic	df	Sig.	Statistic	df	Sig.
GDP Sebelum STZ	Normal	.146	6	.200*	.979	6	.946
	Negatif	.161	6	.200*	.954	6	.773
	positif	.180	6	.200*	.957	6	.795
	P1(250 mg kersen)	.190	6	.200*	.956	6	.786
	P2(500 mg kersen)	.229	6	.200*	.864	6	.204
	P3(750 mg kersen)	.167	6	.200*	.949	6	.733
GDP Sesudah STZ	Normal	.199	6	.200*	.958	6	.802
	Negatif	.170	6	.200*	.946	6	.708
	positif	.227	6	.200*	.956	6	.787
	P1(250 mg kersen)	.209	6	.200*	.928	6	.568
	P2(500 mg kersen)	.165	6	.200*	.989	6	.986
	P3(750 mg kersen)	.200	6	.200*	.936	6	.626
GDP Sesudah Kersen	Normal	.163	6	.200*	.957	6	.795
	Negatif	.178	6	.200*	.946	6	.707
	positif	.151	6	.200*	.980	6	.953
	P1(250 mg kersen)	.181	6	.200*	.941	6	.669
	P2(500 mg kersen)	.139	6	.200*	.963	6	.839
	P3(750 mg kersen)	.212	6	.200*	.912	6	.449

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variance

		Levene Statistic	df 1	df 2	Sig.
GDP Sebelum STZ	Based on Mean	.308	5	30	.905
	Based on Median	.295	5	30	.912
	Based on Median and with adjusted df	.295	5	26.373	.911
	Based on trimmed mean	.307	5	30	.905
GDP Sesudah STZ	Based on Mean	3.129	5	30	.022
	Based on Median	2.924	5	30	.029
	Based on Median and with adjusted df	2.924	5	19.170	.040
	Based on trimmed mean	3.123	5	30	.022
GDP Sesudah Kersen	Based on Mean	4.641	5	30	.003
	Based on Median	4.073	5	30	.006
	Based on Median and with adjusted df	4.073	5	17.466	.012
	Based on trimmed mean	4.603	5	30	.003

Report

Kelompok Perlakuan		Berat Badan sebelum STZ	Berat Badan Sebelum Perlakuan
Normal	Mean	171.83	178.67
	N	6	6
	Std. Dev iation	10.304	11.219
negatif	Mean	168.50	171.50
	N	6	6
	Std. Dev iation	21.998	21.998
positif	Mean	179.83	183.67
	N	6	6
	Std. Dev iation	15.224	15.253
P1	Mean	169.50	173.17
	N	6	6
	Std. Dev iation	16.121	15.804
P2	Mean	176.17	179.83
	N	6	6
	Std. Dev iation	14.851	14.798
P3	Mean	184.00	188.50
	N	6	6
	Std. Dev iation	10.640	11.606
Total	Mean	174.97	179.22
	N	36	36
	Std. Dev iation	15.313	15.534

Kadar GDP

Tests of Normality

GDP	KP	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
GDP Sebelum STZ	Normal	.146	6	.200*	.979	6	.946
	Negatif	.161	6	.200*	.954	6	.773
	positif	.180	6	.200*	.957	6	.795
	P1(250 mg kersen)	.190	6	.200*	.956	6	.786
	P2(500 mg kersen)	.229	6	.200*	.864	6	.204
	P3(750 mg kersen)	.167	6	.200*	.949	6	.733
GDP Sesudah STZ	Normal	.199	6	.200*	.958	6	.802
	Negatif	.170	6	.200*	.946	6	.708
	positif	.227	6	.200*	.956	6	.787
	P1(250 mg kersen)	.209	6	.200*	.928	6	.568
	P2(500 mg kersen)	.165	6	.200*	.989	6	.986
	P3(750 mg kersen)	.200	6	.200*	.936	6	.626
GDP Sesudah Kersen	Normal	.163	6	.200*	.957	6	.795
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	positif	.151	6	.200*	.980	6	.953
	P1(250 mg kersen)	.181	6	.200*	.941	6	.669
	P2(500 mg kersen)	.139	6	.200*	.963	6	.839
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GDP Sesudah Kersen	Based on Mean	4.641	5	30	.003
	Based on Median	4.073	5	30	.006
	Based on Median and with adjusted df	4.073	5	17.466	.012
	Based on trimmed mean	4.603	5	30	.003

Report

KP		GDP Sebelum STZ	GDP Sesudah STZ	GDP Sesudah Kersen
Normal	Mean	58.5233	58.8167	59.2150
	Std. Dev iation	1.53022	1.71887	1.84952
	Median	58.3300	58.6900	59.1500
	Minimum	56.44	56.37	56.50
	Maximum	60.61	61.00	61.38
Negatif	Mean	60.7333	213.3200	214.2283
	Std. Dev iation	2.26798	5.71214	5.26715
	Median	60.7950	213.3200	213.6200
	Minimum	57.20	205.79	207.32
	Maximum	63.26	220.08	220.73
positif	Mean	59.4700	206.8217	99.2550
	Std. Dev iation	1.62443	1.91776	1.57444
	Median	59.2800	206.7550	99.3900
	Minimum	57.58	204.25	97.15
	Maximum	62.12	210.04	101.63
P1(250 mg kersen)	Mean	62.2467	211.0050	157.6567
	Std. Dev iation	1.72179	4.26886	1.88026
	Median	62.1200	210.2350	157.9300
	Minimum	60.23	206.18	154.47
	Maximum	65.15	218.53	159.76
P2(500 mg kersen)	Mean	59.9750	207.5283	136.9917
	Std. Dev iation	1.91065	2.22048	2.35347
	Median	60.4200	207.3350	136.7900
	Minimum	56.44	204.25	134.15
	Maximum	61.74	210.81	140.24
P3(750 mg kersen)	Mean	58.8383	211.8400	103.1150
	Std. Dev iation	2.08355	3.18844	2.42234
	Median	59.0900	212.5450	103.8600
	Minimum	56.06	207.34	99.59
	Maximum	61.36	215.44	105.69
Total	Mean	59.9644	184.8886	128.4103
	Std. Dev iation	2.14967	57.31869	50.04926
	Median	60.2300	208.1050	119.9200
	Minimum	56.06	56.37	56.50
	Maximum	65.15	220.08	220.73

Paired GDP

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(Negatif) - GDP Sesudah STZ(Negatif)	-152.587	5.70807	2.33031	-158.577	-146.596	-65.479	5	.000
Pair 2	GDP Sesudah STZ(Negatif) - GDP akhir(tanpa perlakuan)	-.90833	.73262	.29909	-1.67717	-.13949	-3.037	5	.029

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP sebelum STZ(positif) - GDP sesudah STZ(positif)	-147.352	2.09253	.85427	-149.548	-145.156	-172.488	5	.000
Pair 2	GDP sesudah STZ(positif) - GDP Sesudah Metformin	107.56667	.53772	.21952	107.00236	108.13097	489.998	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(P1) - GDP Sesudah STZ(P1)	-148.758	4.67916	1.91026	-153.669	-143.848	-77.873	5	.000
Pair 2	GDP Sesudah STZ(P1) - GDP Sesudah kersen(P1)	53.34833	3.33242	1.36045	49.85117	56.84549	39.214	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ(P2) - GDP Sesudah STZ(P2)	-147.553	2.84999	1.16351	-150.544	-144.562	-126.818	5	.000
Pair 2	GDP Sesudah STZ(P2) - GDP Sesudah Kersen(P2)	70.53667	.75277	.30732	69.74668	71.32665	229.523	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Sebelum STZ (P3) - GDP Sesudah STZ (P3)	-153.002	2.19411	.89574	-155.304	-150.699	-170.810	5	.000
Pair 2	GDP Sesudah STZ (P3) - GDP Sesudah Kersen(P3)	108.72500	1.82749	.74607	106.80717	110.64283	145.731	5	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	GDP Minggu 1 (Normal) - GDP Minggu 2(Normal)	-.29333	.30467	.12438	-.61307	.02640	-2.358	5	.065
Pair 2	GDP Minggu 2(Normal) - GDP Minggu 4(Normal)	-.39833	.24095	.09837	-.65119	-.14547	-4.049	5	.010

Kadar SOD

Tests of Normality

Kelompok perlakuan		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Kadar SOD sesudah kersen	Normal	.171	6	.200*	.966	6	.863
	Negatif	.122	6	.200*	.982	6	.960
	Positif	.187	6	.200*	.952	6	.754
	P1(250 mg kersen)	.248	6	.200*	.918	6	.492
	P2(500 mg kersen)	.122	6	.200*	.982	6	.961
	P3(750 mg kersen)	.195	6	.200*	.923	6	.524

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variance

		Levene Statistic	df 1	df 2	Sig.
Kadar SOD sesudah kersen	Based on Mean	.708	5	30	.622
	Based on Median	.440	5	30	.817
	Based on Median and with adjusted df	.440	5	19.576	.815
	Based on trimmed mean	.674	5	30	.646

Report

Kadar SOD

Kelompok perlakuan	Mean	N	Std. Deviation
Normal	73.1300	6	5.38447
Placebo	15.3067	6	3.82077
metformin	66.3267	6	6.29224
P1(talok 250 mg)	23.1283	6	6.66588
P2(talok 500mg)	45.9200	6	3.81649
P3(talok 750mg)	61.2250	6	5.77424
Total	47.5061	36	22.59787

Descriptives

GDP sebelum -GDP sesudah perlakuan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Normal	6	-.3983	.23651	.09655	-.6465	-.1501	-.74	-.13
Negatif	6	-.9067	.72943	.29779	-1.6722	-.1412	-2.07	-.21
Positif	6	107.5650	.53810	.21968	107.0003	108.1297	106.95	108.41
P1	6	53.3483	3.33637	1.36207	49.8470	56.8496	51.44	60.00
P2	6	70.5367	.75277	.30732	69.7467	71.3267	69.86	71.99
P3	6	108.7217	1.82603	.74547	106.8054	110.6380	106.70	111.03
Total	36	56.4778	45.52155	7.58692	41.0755	71.8801	-2.07	111.03

Test of Homogeneity of Variances

GDP sebelum -GDP sesudah perlakuan

Levene Statistic	df 1	df 2	Sig.
3.699	5	30	.010

ANOVA

GDP sebelum -GDP sesudah perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	72447.843	5	14489.569	5464.348	.000
Within Groups	79.550	30	2.652		
Total	72527.392	35			

Multiple Comparisons

Dependent Variable: GDP sebelum -GDP sesudah perlakuan

Tukey HSD

(I) Kelompok perlakuan	(J) Kelompok perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Normal	Negatif	.50833	.94015	.994	-2.3512	3.3679
	Positif	-107.96333*	.94015	.000	-110.8229	-105.1038
	P1	-53.74667*	.94015	.000	-56.6062	-50.8871
	P2	-70.93500*	.94015	.000	-73.7946	-68.0754
	P3	-109.12000*	.94015	.000	-111.9796	-106.2604
Negatif	Normal	-.50833	.94015	.994	-3.3679	2.3512
	Positif	-108.47167*	.94015	.000	-111.3312	-105.6121
	P1	-54.25500*	.94015	.000	-57.1146	-51.3954
	P2	-71.44333*	.94015	.000	-74.3029	-68.5838
	P3	-109.62833*	.94015	.000	-112.4879	-106.7688
Positif	Normal	107.96333*	.94015	.000	105.1038	110.8229
	Negatif	108.47167*	.94015	.000	105.6121	111.3312
	P1	54.21667*	.94015	.000	51.3571	57.0762
	P2	37.02833*	.94015	.000	34.1688	39.8879
	P3	-1.15667	.94015	.819	-4.0162	1.7029
P1	Normal	53.74667*	.94015	.000	50.8871	56.6062
	Negatif	54.25500*	.94015	.000	51.3954	57.1146
	Positif	-54.21667*	.94015	.000	-57.0762	-51.3571
	P2	-17.18833*	.94015	.000	-20.0479	-14.3288
	P3	-55.37333*	.94015	.000	-58.2329	-52.5138
P2	Normal	70.93500*	.94015	.000	68.0754	73.7946
	Negatif	71.44333*	.94015	.000	68.5838	74.3029
	Positif	-37.02833*	.94015	.000	-39.8879	-34.1688
	P1	17.18833*	.94015	.000	14.3288	20.0479
	P3	-38.18500*	.94015	.000	-41.0446	-35.3254
P3	Normal	109.12000*	.94015	.000	106.2604	111.9796
	Negatif	109.62833*	.94015	.000	106.7688	112.4879
	Positif	1.15667	.94015	.819	-1.7029	4.0162
	P1	55.37333*	.94015	.000	52.5138	58.2329
	P2	38.18500*	.94015	.000	35.3254	41.0446

*. The mean difference is significant at the .05 level.

GDP sebelum -GDP sesudah perlakuan

Tukey HSD^a

Kelompok perlakuan	N	Subset for alpha = .05			
		1	2	3	4
Negatif	6	-.9067			
Normal	6	-.3983			
P1	6		53.3483		
P2	6			70.5367	
Positif	6				107.5650
P3	6				108.7217
Sig.		.994	1.000	1.000	.819

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6.000.

SOD normal-SOD perlakuan

Tukey HSD

KP	N	Subset for alpha = 0.05		
		1	2	3
positif	6	6.8033		
P3	6	11.9050		
P2	6		27.2100	
P1	6			50.0017
negatif	6			57.8233
Sig.		.593	1.000	.196

Means for groups in homogeneous subsets are displayed.

Lampiran 6

Dokumentasi Penelitian

Kandang Tikus



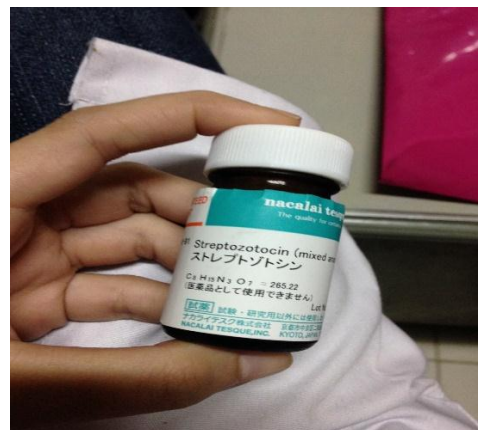
Penimbangan Tikus



Nicotinamide



Streptozotocin



Pembedahan & Pengambilan Hepar Pada Tikus



Lampiran 7

Jadwal Penelitian

Tabel 10. Jadwal Penelitian

Tanggal	Kegiatan
15 Desember 2015	Pengerjaan proposal permohonan penelitian di laboratorium Pusat Studi Pangan dan Gizi UGM
9 Januari 2016	Survey dan tikus putih
15 Januari 2016	Pengajuan proposal penelitian di laboratorium Pusat Studi Pangan dan Gizi UGM
16 Januari 2016	Pembelian STZ, NA, metformin
17 Januari 2016	Survey daun kersen
15 Februari 2016	Memasukkan bahan dan persiapan kandang di laboratorium Pusat Studi dan Pangan UGM
16 Februari 2016 – 22 februari 2016	Adaptasi tikus putih
23 Februari 2016	Pengambilan sampel GDP, SGOT, SGPT, HDL, LDL, TG, dan kolesterol
24 Februari 2016	Induksi STZ-NA
28 Februari 2016	Pengambilan sampel GDP, SGOT, SGPT, HDL, LDL, TG, dan kolesterol
29 Februari 2016	Persiapan seduhan daun kersen
29 Februari – 13 Maret 2016	Intervensi seduhan daun kersen
14 Maret 2016	Pengambilan sampel GDP, SGOT, SGPT, HDL, LDL, TG, kolesterol dan pembedahan untuk mengambil hepar tikus guna pengujian kadar enzim SOD, GPx dan MDA.