

LAMPIRAN

LAMPIRAN 1
HASIL DETERMINASI

**LABORATORIUM BIOLOGI**
FAKULTAS MIPA
UNIVERSITAS AHMAD DAHLAN
Jl. Prof. Dr. Soepomo, Yogyakarta Telp. (0274) 563515

SURAT KETERANGAN
Nomor : 002/Lab.Bio/B/1/2019

Yang bertanda tangan di bawah ini Kepala Laboratorium Biologi Universitas Ahmad Dahlan menerangkan bahwa :

Nama : Yulia Wira Utami
NIM : 20150350091
Prodi, PT : Farmasi, Universitas Muhammadiyah Yogyakarta

Telah melakukan determinasi tanaman dengan bimbingan Hery Setiyawan, M.Si di Laboratorium Biologi Universitas Ahmad Dahlan, pada tanggal 17 Januari 2019

Tanaman tersebut adalah :
Piper nigrum L.

Demikian Surat Keterangan ini untuk dapat dipergunakan seperlunya.

Yogyakarta, 17 Januari 2019
Kepala Laboratorium Biologi

Drs. Hadi Sasongko, M.Si.



LAMPRAN 2

ETHICAL CLEARANCE



UMY UNIVERSITAS
MUHAMMADIYAH
YOGYAKARTA

Unggul di Bidang

FAKULTAS
KEDOKTERAN DAN
ILMU KESEHATAN

Nomor : 633/EP-FKIK-UMY/I/2019

KETERANGAN LOLOS UJI ETIK
ETHICAL APPROVAL

Komite Etik Penelitian Fakultas Kedokteran dan Ilmu Kesehatan Universitas Muhammadiyah Yogyakarta dalam upaya melindungi hak asasi dan kesejahteraan responden/subyek penelitian, telah mengkaji dengan teliti protokol berjudul :

The Ethics Committee of the Faculty of Medicine and Health Sciences, University of Muhammadiyah Yogyakarta, with regards of the protection of human rights and welfare in research, has carefully reviewed the research protocol entitled :

“Uji toksisitas Subkronik Piperin dalam Lada Putih (*Piper nigrum L*) terhadap Berat Badan, Skor Ulkus dan Histologi lambung Mencit Balb/C”

Peneliti Utama : Sri Tasminatun
Principal Investigator : Yulia Wira Utami

Nama Institusi : Program Studi Farmasi FKIK UMY
Name of the Institution

Negara : Indonesia
Country

Dan telah menyetujui protokol tersebut diatas.
And approved the above-mentioned protocol.

Yogyakarta, 04 Januari 2019
Ketua



**Dr. dr. Tutik Hidayati, M.Kes.,
Sp.Ed.P., FISP.H., FISCM.**

***Peneliti Berkewajiban :**

1. Menjaga kerahasiaan identitas subyek penelitian
2. Memberitahukan status penelitian apabila :
 - a. Setelah masa berlakunya keterangan lolos uji etik (1 tahun sejak tanggal terbit), penelitian masih belum selesai, dalam hal ini *ethical clearance* 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 responden/subyek sebelum penelitian lolos uji etik.

ADDRESS

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LAMPIRAN 3

KESETARAAN DOSIS MENCIT KE DOSIS MANUSIA

1. Dosis piperin 17,5 mg/KgBB

Konversi dosis piperin untuk 20 gram mencit :

$$17,5 \text{ mg/KgBB} \times \frac{20}{1000} \text{ gr (berat mencit)} = 0,35 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit ke manusia 70 kg

$$0,35 \text{ mg} \times 387,9 = 135,765 / 70 \text{ kgBB manusia}$$

$$= 1,9395 \text{ mg/KgBB manusia}$$

$$\text{Biji lada putih} = \frac{\text{dosis}}{\text{rendemen ekstrak}}$$

$$= \frac{1,9395}{2,23\%}$$

$$= 86,97 \text{ mg biji lada putih}$$

2. Dosis piperin 35 mg/KgBB

Konversi dosis piperin untuk 20 gram mencit :

$$35 \text{ mg/KgBB} \times \frac{20}{1000} \text{ gr (berat mencit)} = 0,7 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit ke manusia 70 kg

$$0,7 \text{ mg} \times 387,9 = 271,53 / 70 \text{ kgBB manusia}$$

$$= 3,879 \text{ mg/KgBB manusia}$$

$$\text{Biji lada putih} = \frac{\text{dosis}}{\text{rendemen ekstrak}}$$

$$= \frac{3,879}{2,23\%}$$

$$= 173,94 \text{ mg biji lada putih}$$

3. Dosis piperin 70 mg/KgBB

Konversi dosis piperin untuk 20 gram mencit :

$$70 \text{ mg/KgBB} \times \frac{20}{1000} \text{ gr (berat mencit)} = 1,4 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit ke manusia 70 kg

$$1,4 \text{ mg} \times 387,9 = 543,06 / 70 \text{ kgBB manusia}$$

$$= 7,758 \text{ mg/KgBB manusia}$$

$$\text{Biji lada putih} = \frac{\text{dosis}}{\text{rendemen ekstrak}}$$

$$= \frac{7,758}{2,23\%}$$

$$= 347,89 \text{ mg biji lada putih}$$

4. Dosis piperin 140 mg/KgBB

Konversi dosis piperin untuk 20 gram mencit :

$$140 \text{ mg/KgBB} \times \frac{20}{1000} \text{ gr (berat mencit)} = 2,8 \text{ mg (untuk mencit 20 gram)}$$

Konversi dosis mencit ke manusia 70 kg

$$2,8 \text{ mg} \times 387,9 = 1086,12 / 70 \text{ kgBB manusia}$$

$$= 15,516 \text{ mg/KgBB manusia}$$

$$\text{Biji lada putih} = \frac{\text{dosis}}{\text{rendemen ekstrak}}$$

$$= \frac{15,516}{2,23\%}$$

$$= 695,78 \text{ mg biji lada putih}$$

LAMPIRAN 4
HASIL UJI STATISTIK SPSS

1. HASIL UJI STTISTIK SPSS JUMLAH ULKUS

Descriptives(a)

KELOMPOK			Statistic	Std. Error	
SKOR	17,5 mg	Mean	4.2500	1.06262	
		95% Confidence Interval for Mean	1.5184		
		Lower Bound	6.9816		
		Upper Bound	4.3056		
		5% Trimmed Mean	5.0000		
	Median	6.775			
	Variance	2.60288			
	Std. Deviation	1.00			
	Minimum	6.50			
	Maximum	5.50			
	Range	5.13			
	Interquartile Range	-.364	.845		
	Skewness	-2.499	1.741		
	Kurtosis	5.8333	.66667		
	35 mg	Mean	95% Confidence Interval for Mean	4.1196	
Lower Bound			7.5471		
Upper Bound			5.9815		
5% Trimmed Mean			6.5000		
Median			2.667		
Variance		1.63299			
Std. Deviation		2.50			
Minimum		6.50			
Maximum		4.00			
Range		1.00			
Interquartile Range		-2.449	.845		
Skewness		6.000	1.741		
Kurtosis		4.9167	1.01994		
70 mg		Mean	95% Confidence Interval for Mean	2.2948	
			Lower Bound	7.5385	
	Upper Bound		5.0463		
	5% Trimmed Mean		6.5000		
	Median		6.242		
	Variance	2.49833			
	Std. Deviation	1.00			
	Minimum	6.50			
	Maximum	5.50			
	Range	4.38			
	Interquartile Range				

140 mg	Skewness		-1.122	.845	
	Kurtosis		-.957	1.741	
	Mean		4.7500	1.10868	
	95% Confidence Interval for Mean	Lower Bound		1.9001	
		Upper Bound		7.5999	
	5% Trimmed Mean		4.8611		
	Median		6.5000		
	Variance		7.375		
	Std. Deviation		2.71570		
	Minimum		1.00		
	Maximum		6.50		
	Range		5.50		
	Interquartile Range		5.13		
	Skewness		-.983	.845	
	Kurtosis		-1.786	1.741	

a SKOR is constant when KELOMPOK = KONTROL. It has been omitted.

Tests of Normality(b)

KELOMPOK	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
SKOR 17,5 mg	.306	6	.082	.800	6	.058
35 mg	.492	6	.000	.496	6	.000
70 mg	.404	6	.003	.696	6	.006
140 mg	.407	6	.002	.662	6	.002

a Lilliefors Significance Correction

b SKOR is constant when KELOMPOK = KONTROL. It has been omitted.

Kruskal-Wallis Test

Ranks

KELOMPOK	N	Mean Rank
SKOR KONTROL	6	5.00
17,5 mg	6	16.17
35 mg	6	20.83
70 mg	6	17.92
140 mg	6	17.58
Total	30	

Test Statistics(a,b)

	SKOR
Chi-Square	14.071
Df	4
Asymp. Sig.	.007

a Kruskal Wallis Test

b Grouping Variable: KELOMPOK

Mann-Whitney Test

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	KONTR OL 17,5 mg	6	4.00	24.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.702
Asymp. Sig. (2-tailed)	.007
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	KONTR OL 35 mg	6	3.50	21.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-3.207
Asymp. Sig. (2-tailed)	.001
Exact Sig. [2*(1-tailed Sig.)]	.002(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	KONT ROL 70 mg	6	4.00	24.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.739
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELO MPOK	N	Mean Rank	Sum of Ranks
SKOR	KONT ROL 140 mg	6	4.00	24.00
	Total	6	9.00	54.00
		12		

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.739
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELO MPOK	N	Mean Rank	Sum of Ranks
SKOR	17,5 mg	6	5.42	32.50
	35 mg	6	7.58	45.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	11.500
Wilcoxon W	32.500
Z	-1.238
Asymp. Sig. (2-tailed)	.216
Exact Sig. [2*(1-tailed Sig.)]	.310(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELO POK	N	Mean Rank	Sum of Ranks
SKOR	17,5 mg	6	6.08	36.50
	70 mg	6	6.92	41.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	15.500
Wilcoxon W	36.500
Z	-.447
Asymp. Sig. (2-tailed)	.655
Exact Sig. [2*(1-tailed Sig.)]	.699(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17,5 mg	6	6.17	37.00
	140 mg	6	6.83	41.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	16.000
Wilcoxon W	37.000
Z	-.359
Asymp. Sig. (2-tailed)	.720
Exact Sig. [2*(1-tailed Sig.)]	.818(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	35 mg	6	7.08	42.50
	70 mg	6	5.92	35.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	14.500
Wilcoxon W	35.500
Z	-.738
Asymp. Sig. (2-tailed)	.461
Exact Sig. [2*(1-tailed Sig.)]	.589(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	35 mg	6	7.17	43.00
	140 mg	6	5.83	35.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	14.000
Wilcoxon W	35.000
Z	-.841
Asymp. Sig. (2-tailed)	.400
Exact Sig. [2*(1-tailed Sig.)]	.589(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR 70 mg	6	6.58	39.50
140 mg	6	6.42	38.50
Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	17.500
Wilcoxon W	38.500
Z	-.096
Asymp. Sig. (2-tailed)	.924
Exact Sig. [2*(1-tailed Sig.)]	.937(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

2. HASIL UJI STATISTIK KEPARAHAN ULKUS

Descriptives(a)

KELOMPOK			Statistic	Std. Error
SKOR	17.5 mg	Mean	2.4167	.49018
		95% Confidence Interval for Mean	Lower Bound	1.1566
		Upper Bound	3.6767	
		5% Trimmed Mean	2.4352	
		Median	2.5000	
		Variance	1.442	
		Std. Deviation	1.20069	
		Minimum	1.00	
		Maximum	3.50	
		Range	2.50	
		Interquartile Range	2.13	
		Skewness	-.099	.845
		Kurtosis	-3.026	1.741
		35 mg	Mean	3.3333
95% Confidence Interval for Mean	Lower Bound		2.9049	
Upper Bound	3.7618			
5% Trimmed Mean	3.3704			
Median	3.5000			
Variance	.167			
Std. Deviation	.40825			
Minimum	2.50			
Maximum	3.50			
Range	1.00			
Interquartile Range	.25			
Skewness	-2.449		.845	
Kurtosis	6.000		1.741	
70 mg	Mean		2.9167	.41667
	95% Confidence Interval for Mean	Lower Bound	1.8456	
	Upper Bound	3.9877		
	5% Trimmed Mean	2.9907		

	Median		3.5000	
	Variance		1.042	
	Std. Deviation		1.02062	
	Minimum		1.00	
	Maximum		3.50	
	Range		2.50	
	Interquartile Range		1.38	
	Skewness		-1.783	.845
	Kurtosis		2.774	1.741
140 mg	Mean		2.7500	.47871
	95% Confidence Interval for Mean	Lower Bound	1.5194	
		Upper Bound	3.9806	
	5% Trimmed Mean		2.8056	
	Median		3.5000	
	Variance		1.375	
	Std. Deviation		1.17260	
	Minimum		1.00	
	Maximum		3.50	
	Range		2.50	
	Interquartile Range		2.13	
	Skewness		-1.047	.845
	Kurtosis		-1.405	1.741

a SKOR is constant when KELOMPOK = KONTROL. It has been omitted.

Tests of Normality(b)

KELOMPOK	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
SKOR 17.5 mg	.317	6	.061	.763	6	.027
35 mg	.492	6	.000	.496	6	.000
70 mg	.383	6	.006	.684	6	.004
140 mg	.405	6	.003	.684	6	.004

a Lilliefors Significance Correction

b SKOR is constant when KELOMPOK = KONTROL. It has been omitted.

Kruskal-Wallis Test

Ranks

	KELOMPOK	N	Mean Rank
SKOR	KONTROL	6	5.00
	17.5 mg	6	15.75
	35 mg	6	21.00
	70 mg	6	18.08
	140 mg	6	17.67
	Total	30	

Test Statistics(a,b)

	SKOR
Chi-Square	14.328
Df	4
Asymp. Sig.	.006

a Kruskal Wallis Test

b Grouping Variable: KELOMPOK

Mann-Whitney Test

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	KONTROL	6	4.00	24.00
	17.5 mg	6	9.00	54.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.708
Asymp. Sig. (2-tailed)	.007
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	KONTROL	6	3.50	21.00
	35 mg	6	9.50	57.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-3.207
Asymp. Sig. (2-tailed)	.001
Exact Sig. [2*(1-tailed Sig.)]	.002(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELO MPOK	N	Mean Rank	Sum of Ranks
SKOR	KONT ROL 70 mg	6	4.00	24.00
	Total	12	9.00	54.00

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.739
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELO MPOK	N	Mean Rank	Sum of Ranks
SKOR	KONT ROL 140 mg	6	4.00	24.00
	Total	12	9.00	54.00

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.739
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17.5 mg	6	5.25	31.50
	35 mg	6	7.75	46.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	10.500
Wilcoxon W	31.500
Z	-1.433
Asymp. Sig. (2-tailed)	.152
Exact Sig. [2*(1-tailed Sig.)]	.240(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17.5 mg	6	5.92	35.50
	70 mg	6	7.08	42.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	14.500
Wilcoxon W	35.500
Z	-.628
Asymp. Sig. (2-tailed)	.530
Exact Sig. [2*(1-tailed Sig.)]	.589(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17.5 mg	6	6.08	36.50
	140 mg	6	6.92	41.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	15.500
Wilcoxon W	36.500
Z	-.451
Asymp. Sig. (2-tailed)	.652
Exact Sig. [2*(1-tailed Sig.)]	.699(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	35 mg	6	7.08	42.50
	70 mg	6	5.92	35.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	14.500
Wilcoxon W	35.500
Z	-.738
Asymp. Sig. (2-tailed)	.461
Exact Sig. [2*(1-tailed Sig.)]	.589(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks**Test Statistics(b)**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	35 mg	6	7.17	43.00
	140 mg	6	5.83	35.00
	Total	12		

	SKOR
Mann-Whitney U	14.000
Wilcoxon W	35.000
Z	-.841
Asymp. Sig. (2-tailed)	.400
Exact Sig. [2*(1-tailed Sig.)]	.589(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

Test Statistics(b)

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	70 mg	6	6.58	39.50
	140 mg	6	6.42	38.50
	Total	12		

	SKOR
Mann-Whitney U	17.500
Wilcoxon W	38.500
Z	-.096
Asymp. Sig. (2-tailed)	.924
Exact Sig. [2*(1-tailed Sig.)]	.937(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

3. HASIL UJI STATISTIK SKOR INTEGRITAS KERUSAKAN MUKOSA LAMBUNG

Descriptives

KELOMPOK			Statistic	Std. Error	
SKOR	KONTROL	Mean	.4667	.13333	
		95% Confidence Interval for Mean	Lower Bound	.1239	
			Upper Bound	.8094	
		5% Trimmed Mean	.4741		
		Median	.5000		
		Variance	.107		
		Std. Deviation	.32660		
		Minimum	.00		
		Maximum	.80		
		Range	.80		
		Interquartile Range	.65		
		Skewness	-.383	.845	
		Kurtosis	-1.481	1.741	
		17.5 mg	Mean	1.0333	.09545

		95% Confidence Interval for Mean	Lower Bound	.7880	
			Upper Bound	1.2787	
		5% Trimmed Mean		1.0259	
		Median		1.0000	
		Variance		.055	
		Std. Deviation		.23381	
		Minimum		.80	
		Maximum		1.40	
		Range		.60	
		Interquartile Range		.45	
		Skewness		.668	.845
		Kurtosis		-.446	1.741
	35 mg	Mean		1.2333	.21551
		95% Confidence Interval for Mean	Lower Bound	.6793	
			Upper Bound	1.7873	
		5% Trimmed Mean		1.2481	
		Median		1.4000	
		Variance		.279	
		Std. Deviation		.52789	
		Minimum		.40	
		Maximum		1.80	
		Range		1.40	
		Interquartile Range		.95	
		Skewness		-.856	.845
		Kurtosis		-.479	1.741
	70 mg	Mean		1.5333	.22311
		95% Confidence Interval for Mean	Lower Bound	.9598	
			Upper Bound	2.1069	
		5% Trimmed Mean		1.5370	
		Median		1.6000	
		Variance		.299	
		Std. Deviation		.54650	
		Minimum		.80	
		Maximum		2.20	
		Range		1.40	
		Interquartile Range		1.10	
		Skewness		-.271	.845
		Kurtosis		-1.423	1.741
	140 mg	Mean		2.5333	.17638
		95% Confidence Interval for Mean	Lower Bound	2.0799	
			Upper Bound	2.9867	
		5% Trimmed Mean		2.5370	
		Median		2.7000	

Variance	.187	
Std. Deviation	.43205	
Minimum	2.00	
Maximum	3.00	
Range	1.00	
Interquartile Range	.85	
Skewness	-.608	.845
Kurtosis	-1.843	1.741

Tests of Normality

KELOMPOK	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
SKOR KONTROL	.180	6	.200(*)	.920	6	.505
17.5 mg	.223	6	.200(*)	.908	6	.421
35 mg	.291	6	.124	.908	6	.423
70 mg	.215	6	.200(*)	.934	6	.610
140 mg	.231	6	.200(*)	.840	6	.129

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

Kruskal-Wallis Test

Ranks

KELOMPOK	N	Mean Rank
SKOR KONTROL	6	4.75
17.5 mg	6	12.50
35 mg	6	14.67
70 mg	6	18.58
140 mg	6	27.00
Total	30	

Test Statistics(a,b)

	SKOR
Chi-Square	20.919
df	4
Asymp. Sig.	.000

a Kruskal Wallis Test

b Grouping Variable: KELOMPOK

Mann-Whitney Test

Ranks

KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR KONTROL	6	3.83	23.00
17.5 mg	6	9.17	55.00
Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	2.000
Wilcoxon W	23.000
Z	-2.613
Asymp. Sig. (2-tailed)	.009
Exact Sig. [2*(1-tailed Sig.)]	.009(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	KONTR OL 35 mg	6	4.25	25.50
	Total	12		52.50

Test Statistics(b)

	SKOR
Mann-Whitney U	4.500
Wilcoxon W	25.500
Z	-2.185
Asymp. Sig. (2-tailed)	.029
Exact Sig. [2*(1-tailed Sig.)]	.026(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	KONTR OL 70 mg	6	3.67	22.00
	Total	12		56.00

Test Statistics(b)

	SKOR
Mann-Whitney U	1.000
Wilcoxon W	22.000
Z	-2.746
Asymp. Sig. (2-tailed)	.006
Exact Sig. [2*(1-tailed Sig.)]	.004(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	KONTR OL 140 mg	6	3.50	21.00
	Total	12		57.00

Test Statistics(b)

	SKOR
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.898
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17.5 mg	6	5.50	33.00
	35 mg	6	7.50	45.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	12.000
Wilcoxon W	33.000
Z	-.976
Asymp. Sig. (2-tailed)	.329
Exact Sig. [2*(1-tailed Sig.)]	.394(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17.5 mg	6	4.83	29.00
	70 mg	6	8.17	49.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	8.000
Wilcoxon W	29.000
Z	-1.627
Asymp. Sig. (2-tailed)	.104
Exact Sig. [2*(1-tailed Sig.)]	.132(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	17.5 mg	6	3.50	21.00
	140 mg	6	9.50	57.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.903
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	35 mg	6	5.42	32.50
	70 mg	6	7.58	45.50
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	11.500
Wilcoxon W	32.500
Z	-1.052
Asymp. Sig. (2-tailed)	.293
Exact Sig. [2*(1-tailed Sig.)]	.310(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELOM POK	N	Mean Rank	Sum of Ranks
SKOR	35 mg	6	3.50	21.00
	140 mg	6	9.50	57.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.898
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

Ranks

	KELO MPOK	N	Mean Rank	Sum of Ranks
SKOR	70 mg	6	4.00	24.00
	140 mg	6	9.00	54.00
	Total	12		

Test Statistics(b)

	SKOR
Mann-Whitney U	3.000
Wilcoxon W	24.000
Z	-2.428
Asymp. Sig. (2-tailed)	.015
Exact Sig. [2*(1-tailed Sig.)]	.015(a)

a Not corrected for ties.

b Grouping Variable: KELOMPOK

4. HASIL UJI STATISTIK BERAT BADAN MENCIT**Descriptives**

KELOMPOK			Statistic	Std. Error	
BB	KONTROL	Mean	41.3883	1.43410	
		95% Confidence Interval for Mean	Lower Bound		37.7019
			Upper Bound		45.0748
		5% Trimmed Mean	41.4498		
		Median	41.8300		
		Variance	12.340		
		Std. Deviation	3.51282		
		Minimum	36.00		
		Maximum	45.67		
		Range	9.67		
	Interquartile Range	5.67			
	Skewness	-.475	.845		
	Kurtosis	-.552	1.741		
	17.5 mg	Mean	40.7783	1.57387	
		95% Confidence Interval for Mean	Lower Bound		36.7326
			Upper Bound		44.8241
		5% Trimmed Mean	40.9943		
Median		41.6650			
Variance		14.862			
Std. Deviation		3.85518			
Minimum		33.67			
Maximum	44.00				
Range	10.33				
Interquartile Range	5.83				
Skewness	-1.527	.845			
Kurtosis	2.536	1.741			
35 mg	Mean	42.6100	1.00934		

		95% Confidence Interval for Mean	Lower Bound	40.0154	
			Upper Bound	45.2046	
		5% Trimmed Mean		42.5294	
		Median		41.8300	
		Variance		6.113	
		Std. Deviation		2.47237	
		Minimum		40.00	
		Maximum		46.67	
		Range		6.67	
		Interquartile Range		4.17	
		Skewness		.952	.845
		Kurtosis		.050	1.741
	70 mg	Mean		40.0550	.85772
		95% Confidence Interval for Mean	Lower Bound	37.8501	
			Upper Bound	42.2599	
		5% Trimmed Mean		39.9872	
		Median		39.0000	
		Variance		4.414	
		Std. Deviation		2.10099	
		Minimum		38.00	
		Maximum		43.33	
		Range		5.33	
		Interquartile Range		3.58	
		Skewness		.980	.845
		Kurtosis		-.829	1.741
	140 mg	Mean		37.6100	.85446
		95% Confidence Interval for Mean	Lower Bound	35.4135	
			Upper Bound	39.8065	
		5% Trimmed Mean		37.6778	
		Median		38.0000	
		Variance		4.381	
		Std. Deviation		2.09299	
		Minimum		34.33	
		Maximum		39.67	
		Range		5.34	
		Interquartile Range		3.59	
		Skewness		-.690	.845
		Kurtosis		-.813	1.741

Tests of Normality

KELOMPOK	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
BB KONTROL	.210	6	.200(*)	.961	6	.828

17.5 mg	.224	6	.200(*)	.843	6	.139
35 mg	.212	6	.200(*)	.923	6	.528
70 mg	.359	6	.015	.826	6	.099
140 mg	.247	6	.200(*)	.905	6	.404

* This is a lower bound of the true significance.

a Lilliefors Significance Correction

Oneway

ANOVA

BB

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	83.209	4	20.802	2.470	.071
Within Groups	210.548	25	8.422		
Total	293.757	29			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: BB

LSD

(I) KELOMPOK	(J) KELOMPOK	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
KONTROL	17.5 mg	.61000	1.67550	.719	-2.8408	4.0608
	35 mg	-1.22167	1.67550	.473	-4.6724	2.2291
	70 mg	1.33333	1.67550	.434	-2.1174	4.7841
	140 mg	3.77833*	1.67550	.033	.3276	7.2291
17.5 mg	KONTROL	-.61000	1.67550	.719	-4.0608	2.8408
	35 mg	-1.83167	1.67550	.285	-5.2824	1.6191
	70 mg	.72333	1.67550	.670	-2.7274	4.1741
	140 mg	3.16833	1.67550	.070	-.2824	6.6191
35 mg	KONTROL	1.22167	1.67550	.473	-2.2291	4.6724
	17.5 mg	1.83167	1.67550	.285	-1.6191	5.2824
	70 mg	2.55500	1.67550	.140	-.8958	6.0058
	140 mg	5.00000*	1.67550	.006	1.5492	8.4508
70 mg	KONTROL	-1.33333	1.67550	.434	-4.7841	2.1174
	17.5 mg	-.72333	1.67550	.670	-4.1741	2.7274
	35 mg	-2.55500	1.67550	.140	-6.0058	.8958
	140 mg	2.44500	1.67550	.157	-1.0058	5.8958
140 mg	KONTROL	-3.77833*	1.67550	.033	-7.2291	-.3276
	17.5 mg	-3.16833	1.67550	.070	-6.6191	.2824
	35 mg	-5.00000*	1.67550	.006	-8.4508	-1.5492
	70 mg	-2.44500	1.67550	.157	-5.8958	1.0058

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

LAMPIRAN 5

DATA PENGUKURAN BERAT BADAN MENCIT

MINGGU I

NO MENCIT	P. KONTROL (mg)	P. 17,5 (mg)	P.35 (mg)	P. 70 (mg)	P. 140 (mg)
1	43	40	41	38	41
2	37	41	43	41	36
3	38	43	44	39	37
4	42	44	44	43	0
5	44	38	41	42	37
6	38	35	43	0	35
RATA-RATA	40.33	40.17	42.67	33.83	31.00

MINGGU II

NO MENCIT	P. KONTROL (mg)	P. 17,5 (mg)	P. 35 (mg)	P. 70 (mg)	P. 140 (mg)
1	44	42	41	36	38
2	35	42	37	39	30
3	40	44	44	0	40
4	43	45	48	44	0
5	46	40	41	41	39
6	40	33	42	0	35
RATA-RATA	41.33	41.00	42.17	26.67	30.33

MINGGU III

NO MENCIT	P. KONTROL (mg)	P. 17,5 (mg)	P. 35 (mg)	P. 70 (mg)	P. 140 (mg)
1	44	42	41	40	40
2	36	43	0	37	37
3	40	45	45	0	40
4	45	43	48	43	0
5	47	41	42	43	42
6	43	33	42	0	39
RATA-RATA	42.50	41.17	36.33	27.17	33.00

LAMPIRAN 6

SKOR INTEGRITAS KERUSAKAN MUKOSA LAMBUNG

Kelompok	Mencit	Skor desintegritas mukosa gastrer					Rerata
		LP 1	LP2	LP3	LP4	LP5	
KONTROL	1	1	0	0	0	0	0.2
	2	0	0	0	0	0	0
	3	1	1	1	0	0	0.6
	4	1	1	0	1	1	0.8
	5	0	0	0	1	1	0.4
	6	0	1	1	1	1	0.8
P. 17,5	1	1	1	2	2	1	1.4
	2	1	0	1	2	1	1
	3	1	0	1	1	1	0.8
	4	1	2	1	1	1	1.2
	5	0	1	1	1	1	0.8
	6	1	1	1	1	1	1
P. 35	1	1	2	1	1	2	1.4
	2	1	2	2	2	1	1.6
	3	1	0	0	0	1	0.4
	4	1	0	1	1	1	0.8
	5	2	1	2	2	2	1.8
	6	2	1	1	1	2	1.4
P. 70	1	1	1	3	1	2	1.6
	2	2	1	2	3	3	2.2
	3	2	1	2	3	2	2
	4	1	1	1	1	1	1
	5	1	0	1	1	1	0.8
	6	1	2	1	1	3	1.6

P. 140	1	3	3	3	3	2	2.8
	2	2	2	3	3	3	2.6
	3	2	1	2	2	3	2
	4	2	2	2	2	2	2
	5	3	3	3	3	3	3
	6	3	2	3	3	3	2.8

Keterangan :

LP : Lapang Pandang (ada 5 lapang pandang)

Kontrol : Mencit yang diberi corn oil saja (tidak diberi perlakuan)

P. 17,5 : Mencit yang diberi piperin + corn oil dosis 17,5 mg/KgBB

P. 35 : Mencit yang diberi piperin + corn oil dosis 35 mg/KgBB

P. 70 : Mencit yang diberi piperin + corn oil dosis 70 mg/KgBB

P. 140 : Mencit yang diberi piperin + corn oil dosis 140 mg/KgBB

LAMPIRAN 7

SKOR ULKUS

1. Parameter Jumlah Ulkus

PENILAIAN BERDASARKAN JUMLAH ULKUS (J)		P. KONTROL					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (tidak ada ulkus)	1	1	1	1	1	1	1
Timbul kemerahan	1.5						
Timbul Bintik perdarahan	2						
Ada ulkus terhitung sejumlah 1-3	3						
Ada ulkus terhitung sejumlah 4-6	4						
Ada ulkus terhitung sejumlah 7-9	5						
Ada ulkus terhitung sejumlah >9 atau perforasi	6						
		1	1	1	1	1	1
		Rerata		1			

PENILAIAN BERDASARKAN JUMLAH ULKUS (J)		P. 17,5					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (tidak ada ulkus)	1						1
Timbul kemerahan	1.5	1.5	1.5	1.5	1.5	1.5	
Timbul Bintik perdarahan	2	2		2	2	2	
Ada ulkus terhitung sejumlah 1-3	3	3		3	3		
Ada ulkus terhitung sejumlah 4-6	4						
Ada ulkus terhitung sejumlah 7-9	5						
Ada ulkus terhitung sejumlah >9 atau perforasi	6						
		6.5	1.5	6.5	6.5	3.5	1
		Rerata		4.25			

PENILAIAN BERDASARKAN JUMLAH ULKUS (J)		P. 35					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (tidak ada ulkus)	1		1				
Timbul kemerahan	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Timbul Bintik perdarahan	2	2		2	2	2	2
Ada ulkus terhitung sejumlah 1-3	3	3		3	3	3	3
Ada ulkus terhitung sejumlah 4-6	4						
Ada ulkus terhitung sejumlah 7-9	5						
Ada ulkus terhitung sejumlah >9 atau perforasi	6						
		6.5	2.5	6.5	6.5	6.5	6.5
		Rerata	5.83				

PENILAIAN BERDASARKAN JUMLAH ULKUS (J)		P. 70					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (tidak ada tukak)	1			1			1
Timbul kemerahan	1.5	1.5	1.5	1.5	1.5	1.5	
Timbul Bintik perdarahan	2	2	2		2	2	
Ada ulkus terhitung sejumlah 1-3	3	3	3		3	3	
Ada ulkus terhitung sejumlah 4-6	4						
Ada ulkus terhitung sejumlah 7-9	5						
Ada ulkus terhitung sejumlah >9 atau perforasi	6						
		6.5	6.5	2.5	6.5	6.5	1
		Rerata	4.92				

PENILAIAN BERDASARKAN JUMLAH ULKUS (J)		P. 140					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (tidak ada tukak)	1				1		
Timbul kemerahan	1.5	1.5	1.5	1.5		1.5	1.5
Timbul Bintik perdarahan	2	2	2			2	2
Ada ulkus terhitung sejumlah 1-3	3	3	3			3	3
Ada ulkus terhitung sejumlah 4-6	4						
Ada ulkus terhitung sejumlah 7-9	5						
Ada ulkus terhitung sejumlah >9 atau perforasi	6						
		6.5	6.5	1.5	1	6.5	6.5
		Rerata	4.75				

2. Parameter Keparahan Ulkus

Penilaian berdasarkan Keparahan Ulkus (K)		P. KONTROL					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (Tidak ada ulkus)	1	1	1	1	1	1	1
Timbul kemerahan	1.5						
Timbul bintik perdarahan atau ada ulkus dengan panjang < 0.5 mm	2						
Ada ulkus dengan panjang 0.5-1.5 mm	3						
Ada ulkus dengan panjang 1.6-4.0 mm	4						
Ada ulkus dengan panjang >4.0 mm	5						
Sudah ada perforasi	6						
		1	1	1	1	1	1
		RATA-RATA		1			

Penilaian berdasarkan Keparahan Ulkus (K)		P. 17,5					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (Tidak ada ulkus)	1						1
Timbul kemerahan	1.5	1.5	1.5	1.5	1.5	1.5	
Timbul bintik perdarahan atau ada ulkus dengan panjang < 0.5 mm	2	2		2		2	
Ada ulkus dengan panjang 0.5-1.5 mm	3						
Ada ulkus dengan panjang 1.6-4.0 mm	4						
Ada ulkus dengan panjang >4.0 mm	5						
Sudah ada perforasi	6						
		3.5	1.5	3.5	1.5	3.5	1
		Rerata		2.42			

Penilaian berdasarkan Keparahan Ulkus (K)		P. 35					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (Tidak ada ulkus)	1		1				
Timbul kemerahan	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Timbul bintik perdarahan atau ada ulkus dengan panjang < 0.5 mm	2	2		2	2	2	2
Ada ulkus dengan panjang 0.5-1.5 mm	3						
Ada ulkus dengan panjang 1.6-4.0 mm	4						
Ada ulkus dengan panjang >4.0 mm	5						
Sudah ada perforasi	6						
		3.5	2.5	3.5	3.5	3.5	3.5
		Rerata		3.33			

Penilaian berdasarkan Keparahan Ulkus (K)		P. 70					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (Tidak ada ulkus)	1			1			1
Timbul kemerahan	1.5	1.5	1.5	1.5	1.5	1.5	
Timbul bintik perdarahan atau ada ulkus dengan panjang < 0.5 mm	2	2	2		2	2	
Ada ulkus dengan panjang 0.5-1.5 mm	3						
Ada ulkus dengan panjang 1.6-4.0 mm	4						
Ada ulkus dengan panjang >4.0 mm	5						
Sudah ada perforasi	6						
		3.5	3.5	2.5	3.5	3.5	1
		Rerata		2.92			

Penilaian berdasarkan Keparahan Ulkus (K)		P. 140					
KEADAAN	NILAI SKOR	1	2	3	4	5	6
Normal (Tidak ada ulkus)	1				1		
Timbul kemerahan	1.5	1.5	1.5	1.5		1.5	1.5
Timbul bintik perdarahan atau ada ulkus dengan panjang < 0.5 mm	2	2	2			2	2
Ada ulkus dengan panjang 0.5-1.5 mm	3						
Ada ulkus dengan panjang 1.6-4.0 mm	4						
Ada ulkus dengan panjang >4.0 mm	5						
Sudah ada perforasi	6						
		3.5	3.5	1.5	1	3.5	3.5
		Rerata		2.75			

LAMPIRAN 8
DOKUMENTASI



Biji Lada Putih (*Piper Nigrum L*)



Pengecilan ukuran Biji Lada Putih (*Piper Nigrum L*) dengan ditumbuk



Pembuatan serbuk Biji Lada Putih dengan cara diblender



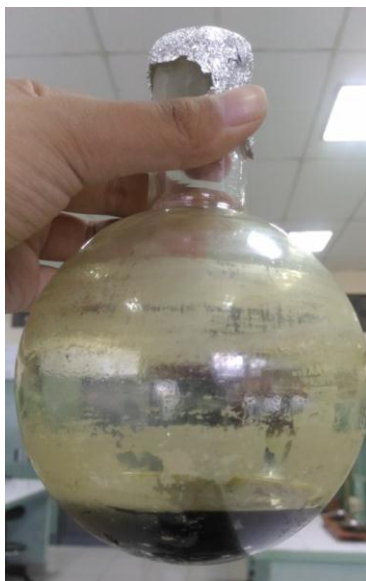
Proses ekstraksi serbuk lada putih (*Piper Nigrum L*) dengan sokletasi



Ekstrak hasil sokhletasi serbuk lada putih (*Piper nigrum L*)



Evaporasi ekstrak lada putih (*Piper nigrum L*) dengan rotary evaporator



Ekstrak kental hasil evaporasi lada putih (*Piper nigrum L*)



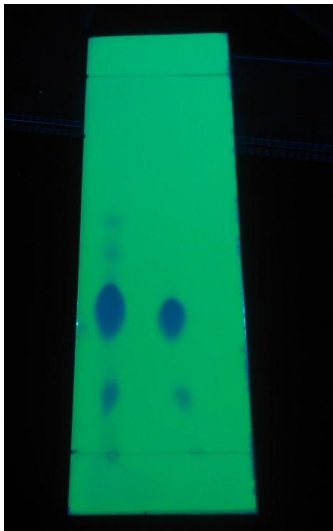
Kristal piperin hasil ekstraksi lada putih (*Piper nigrum L*)



Kristal piperin yang sudah dicuci dengan etanol 96%



Serbuk piperin



Hasil KLT piperin dibawah sinar UV



Karantina mencit balb/c (hewan uji)



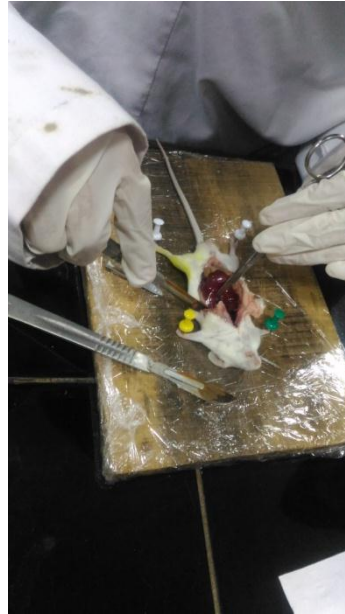
**Penimbangan berat badan
mencit yang dilakukan
seminggu sekali**



**Penyondean
piperin+corn oil pada**



**Persiapan alat-alat bedah untuk proses pembedahan
mencit balb/c**



Proses pembedahan dan pengambilan organ lambung mencit balb/c



Organ lambung mencit balb/c difiksasi dalam formalin 10%



Preparat histologi yang akan diamati dibawah mikroskop



Pengamatan histologi dengan mikroskop

LAMPIRAN 9
HASIL TURNITIN

Yulia Wira Utami turnitin

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