

LAMPIRAN

Lampiran 1. Penyiapan seri histamin

$$M = \frac{\text{bobot (gram)}}{BM} \times \frac{1000}{\text{volume (ml)}}$$

$$2 \times 10^{-1} = \frac{\text{bobot (gram)}}{184,1} \times \frac{1000}{10 \text{ ml}}$$

$$\text{Bobot (gram)} = \frac{184,1 \times 0,2}{100}$$

$$\text{Bobot (gram)} = 0,3682 \text{ gram}$$

- Histamin Stok :

$$0,3682 \text{ ad } 10 \text{ ml} = 2 \times 10^{-1}$$

Lampiran 2. Data hasil persentase kontraksi otot polos trakea dan nilai pD₂.

Kontrol												
log	Respon kontraksi										Mean	SEM
	1	2	3	4	5	6	7	8	9	10		
-8,0	0	0	0	0	14,6	8,7	7,1	0	0	0	3,04	1,66
-7,5	0	0	21,1	0	23,4	17,4	15,7	0	0	0	7,76	3,23
-7,0	0	0	23,2	0	29,2	21,7	21,4	0	0	0	9,55	3,95
-6,5	27,3	0	28,4	0	32,8	26,1	28,6	0	0	0	14,32	4,80
-6,0	36,4	0	36,8	0	40,1	26,1	33,6	8,7	0	0	18,17	5,65
-5,5	40,9	0	38,9	0	40,1	26,1	39,3	8,7	18,2	50	26,22	5,82
-5,0	42,7	0	42,1	12,5	43,8	26,1	40,7	13	30,9	50	30,18	5,30
-4,5	45,5	52,9	44,2	25	47,4	26,1	42,9	13	36,4	50	38,34	4,10
-4,0	50	58,8	52,6	43,8	51,1	26,1	51,4	13	45,5	50	44,23	4,41
-3,5	54,5	61,2	60	62,5	62	30,4	55	17,4	54,5	43,8	50,13	4,80
-3,0	56,4	78,8	63,2	68,8	80,3	34,8	67,9	39,1	67,3	43,8	60,04	5,07
-2,5	70	82,4	68,4	71,3	87,6	43,5	67,9	60,9	77,3	62,5	69,18	3,89
-2,0	81,8	84,7	73,7	81,3	98,5	56,5	85,7	78,3	90,9	87,5	81,89	3,55
-1,5	100	100	100	100	100	100	100	100	100	100	100,00	0,00

Tabel 5. Data Persentase Kontraksi Otot Polos Trakea Akibat Pemberian Alkaloid Seri Konsentrasi Histamin

Piperin 10 μ M												
log	Respon kontraksi										Mean	SEM
	1	2	3	4	5	6	7	8	9	10		
-8,0	0	0	0	0	0						0,00	0,00
-7,5	0	0	21,9	14,29	0						7,24	4,59
-7,0	0	0	25,5	21,43	0						9,39	5,78
-6,5	0	0	30,6	25	0						11,12	6,87
-6,0	0	0	36,5	25	0						12,30	7,75
-5,5	0	0	37,96	26,43	0						12,88	8,09
-5,0	0	0	40,15	28,57	0						13,74	8,61
-4,5	47,1	12,5	43,8	35,71	12,7						30,36	7,48
-4,0	49,4	37,5	45,26	46,43	18,2						39,36	5,64
-3,5	58,8	50	52,55	51,43	27,3						48,02	5,39
-3,0	58,8	56,3	74,45	57,14	40						57,34	5,46
-2,5	76,5	62,5	80,29	60,71	45,5						65,10	6,21
-2,0	82,4	77,5	81,75	64,29	58,2						72,83	4,90
-1,5	82,4	93,8	87,59	72,86	63,6						80,05	5,36

Tabel 6. Data Persentase Kontraksi Otot Polos Trakea Akibat Pemberian Alkaloid lada 10 μ M + Seri Konsentrasi Histamin.

Piperin 100 μM												
log	Respon kontraksi										Mean	SEM
	1	2	3	4	5	6	7	8	9	10		
-8,0	0	0	0	0	0						0,00	0,00
-7,5	0	0	0	0	0						0,00	0,00
-7,0	0	0	0	0	0						0,00	0,00
-6,5	22,7	0	0	0	0						4,54	4,54
-6,0	33,6	0	0	0	0						6,72	6,72
-5,5	38,2	0	0	0	0						7,64	7,64
-5,0	40,9	0	0	0	0						8,18	8,18
-4,5	40,9	10,5	4,35	0	0						11,15	7,68
-4,0	45,5	21,1	4,35	4,3	0						15,05	8,43
-3,5	51,8	26,3	4,35	4,3	12,5						19,85	8,94
-3,0	54,5	38,9	34,8	27,8	37,5						38,70	4,39
-2,5	63,6	60	52,2	43,5	55						54,86	3,46
-2,0	79,1	73,7	58,3	60,9	75						69,40	4,12
-1,5	95,5	94,7	60,9	78,3	92,5						84,38	6,65

Tabel 7. Data Persentase Kontraksi Otot Polos Trakea Akibat Pemberian Alkaloid lada 100 μM + Seri Konsentrasi Histamin.

	Nilai pD2		
	(-) Kontrol	(+) Piperin 10	(+) Piperin 100
	4,00	3,97	2,75
	4,55	3,52	2,58
	4,16	3,69	2,33
	3,84	3,66	2,66
	4,16		
	4,09		
	3,71		
	4,13		
Mean	4,08	3,71	2,58
SEM	0,08	0,06	0,06

Tabel 8. Data Hasil Nilai pD2 keseluruhan.

Lampiran 3. Hasil Uji Statistik Pada Uji Pengaruh Alkaloid Piper nigrum Linn.
10 μ M dan 100 μ M Terhadap Kontraksi Otot Polos Trakea.

Case Processing Summary

Dosis	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
pD2 Seri	8	100,0%	0	,0%	8	100,0%
Piperin 10 μ M	4	100,0%	0	,0%	4	100,0%
Piperin 100 μ M	4	100,0%	0	,0%	4	100,0%

Descriptives

Dosis				Statistic	Std. Error
pD2	Seri	Mean		4,0800	,08836
		95% Confidence Interval for Mean	Lower Bound	3,8711	
			Upper Bound	4,2889	
		5% Trimmed Mean		4,0744	
		Median		4,1100	
		Variance		,062	
		Std. Deviation		,24991	
		Minimum		3,71	
		Maximum		4,55	
		Range		,84	
		Interquartile Range		,28	
		Skewness		,488	,752
		Kurtosis		1,339	1,481
		Piperin 10 μ M		Mean	
95% Confidence Interval for Mean	Lower Bound			3,4100	
	Upper Bound			4,0100	
5% Trimmed Mean				3,7061	
Median				3,6750	
Variance				,036	
Std. Deviation				,18850	
Minimum				3,52	
Maximum				3,97	
Range				,45	
Interquartile Range				,35	
Skewness				1,053	1,014
Kurtosis				2,022	2,619
Piperin 100 μ M				Mean	
		95% Confidence Interval for Mean	Lower Bound	2,2927	
			Upper Bound	2,8673	
		5% Trimmed Mean		2,5844	
		Median		2,6200	
		Variance		,033	
		Std. Deviation		,18055	
		Minimum		2,33	
		Maximum		2,75	
		Range		,42	
		Interquartile Range		,34	
		Skewness		-1,155	1,014
		Kurtosis		1,500	2,619

Tests of Normality

Dosis	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pD2 Seri	,249	8	,153	,936	8	,573
Piperin 10 uM	,292	4	.	,926	4	,574
Piperin 100 uM	,250	4	.	,932	4	,608

a. Lilliefors Significance Correction

Descriptives

pD2

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Seri	8	4,0800	,24991	,08836	3,8711	4,2889	3,71	4,55
Piperin 10 uM	4	3,7100	,18850	,09425	3,4100	4,0100	3,52	3,97
Piperin 100 uM	4	2,5800	,18055	,09028	2,2927	2,8673	2,33	2,75
Total	16	3,6125	,66795	,16699	3,2566	3,9684	2,33	4,55

Test of Homogeneity of Variances

pD2

Levene Statistic	df1	df2	Sig.
,194	2	13	,826

ANOVA

pD2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6,051	2	3,025	61,299	,000
Within Groups	,642	13	,049		
Total	6,692	15			

Multiple Comparisons

Dependent Variable: pD2

	(I) Dosis	(J) Dosis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	Seri	Piperin 10 uM	,37000*	,13604	,043	,0108	,7292
		Piperin 100 uM	1,50000*	,13604	,000	1,1408	1,8592
	Piperin 10 uM	Seri	-,37000*	,13604	,043	-,7292	-,0108
		Piperin 100 uM	1,13000*	,15709	,000	,7152	1,5448
	Piperin 100 uM	Seri	-1,50000*	,13604	,000	-1,8592	-1,1408
		Piperin 10 uM	-1,13000*	,15709	,000	-1,5448	-,7152
LSD	Seri	Piperin 10 uM	,37000*	,13604	,018	,0761	,6639
		Piperin 100 uM	1,50000*	,13604	,000	1,2061	1,7939
	Piperin 10 uM	Seri	-,37000*	,13604	,018	-,6639	-,0761
		Piperin 100 uM	1,13000*	,15709	,000	,7906	1,4694
	Piperin 100 uM	Seri	-1,50000*	,13604	,000	-1,7939	-1,2061
		Piperin 10 uM	-1,13000*	,15709	,000	-1,4694	-,7906

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

pD2

Dosis		N	Subset for alpha = .05	
			1	2
Tukey HSD ^{a,b}	Piperin 100 uM	4	2,5800	
	Piperin 10 uM	4		3,7100
	Seri	8		4,0800
	Sig.		1,000	,056

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4,800.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Lampiran 4. Surat Keterangan Kelayakan Etika Penelitian



Fakultas Kedokteran dan Ilmu Kesehatan
Universitas Muhammadiyah Yogyakarta

Nomor : 412/EP-FKIK-UMY/VII/2017

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 In Vitro Aktivitas Antagonisme Isolat Alkaloid Lada (*Piper nigrum* Linn.) Terhadap Agonis Reseptor H1 Pada Kontraksi Otot Polos Organ Trakea Marmut Terisolasi"

Peneliti Utama : Julio Candra Wijaya
Principal Investigator

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, 21 Juli 2017



Sekretaris
Secretary
Dr. dr. Titiek Hidayati, M. Kes

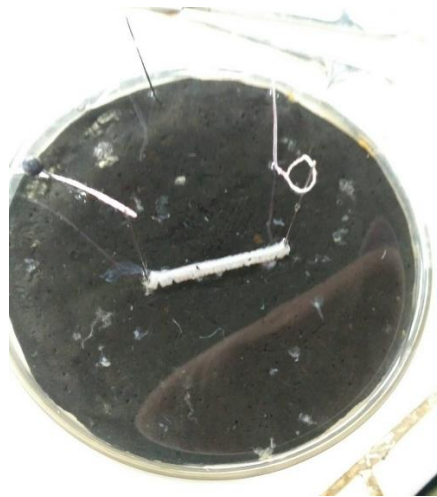
***Peneliti Berkeajiban :**

1. Menjaga kerahasiaan identitas subyek penelitian
2. Memberitahukan status penelitian apabila :
 - a. Setelah masa berlakunya keterangan lolos uji etik, 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 dan *informed consent*

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

Muda mendunia

Lampiran 5. Dokumentasi Penelitian.



Gambar 8. Preparasi organ trakea marmut.



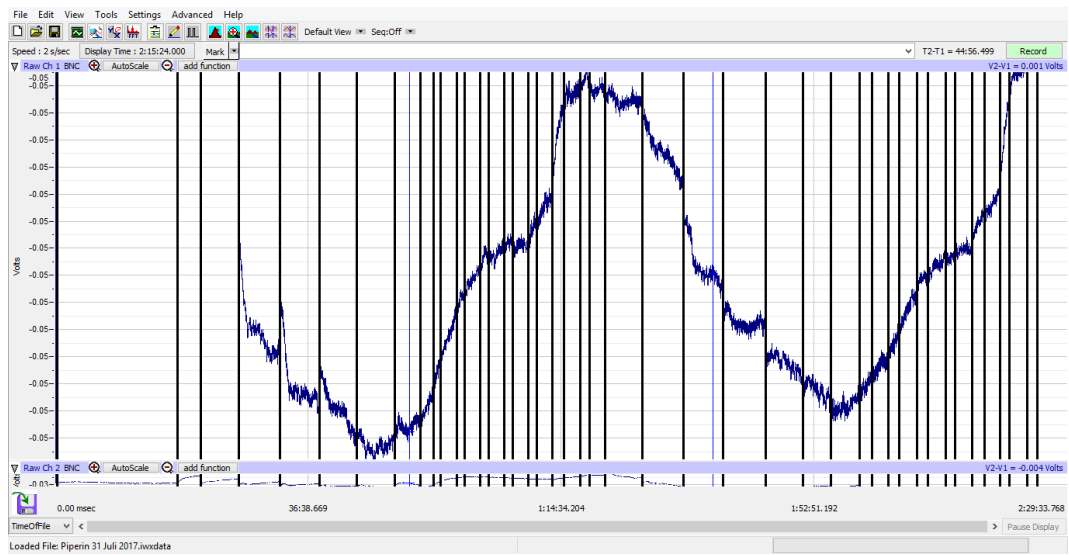
Gambar 9. Satu set alat *organbath*.



Gambar 10. Komponen alat *organbath*.



Gambar 11. Komponen alat *organbath*.



Gambar 12. Data mentah dengan software LabScribe.