

KOMITE ETIK PENELITIAN KESEHATAN  
*HEALTH RESEARCH ETHICS COMMITTEE*  
POLTEKKES TANJUNGPURUN

**KETERANGAN LAYAK ETIK**  
*DESCRIPTION OF ETHICAL EXEMPTION*  
**"ETHICAL EXEMPTION"**  
No.139/KEPK-TJK/X/2022

Protokol penelitian yang diusulkan oleh :  
*The research protocol proposed by*

Peneliti utama  
*Principal In Investigator* : Dinda Agusti

Nama Institusi  
*Name of the Institution* : Jurusan Kesehatan Lingkungan Poltekkes Tanjungpurun

Dengan judul:  
*Title*

**"Efektivitas Ekstrak Buah Ceremai (*Phyllanthus acidus* [L] Skeels) Sebagai Larvasida pada Larva *Aedes aegypti* Instar III"**

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,

*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/Exploitation. 6) Confidentiality and Privacy. and 7) Informed Consent, referring to the 2016 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.*

Pernyataan Layak Etik ini berlaku selama kurun waktu tanggal 23 Mei 2022 sampai dengan tanggal 23 Mei 2023.

*This declaration of ethics applies during the period May 23, 2022 until May 23, 2023.*

May 23, 2022  
Professor and Chairperson



Dr. Aprina, S.Kp., M.Kes



**KEMENTERIAN KESEHATAN REPUBLIK INDONESIA**  
**BADAN PENGEMBANGAN DAN PEMBERDAYAAN**  
**SUMBER DAYA MANUSIA KESEHATAN**

**POLITEKNIK KESEHATAN TANJUNGPINANG**

Jalan Soekarno - Hatta No. 6 Bandar Lampung

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Nomor : PP.03. 01 / I. 1 / 1818 /2022  
Lampiran : ..... Eks  
Hal : Izin Penelitian

28 Maret 2022

Yth, Ketua Jurusan Kesehatan Lingkungan  
Di – Bandar Lampung

Sehubungan dengan penyusunan Skripsi bagi mahasiswa Tingkat IV Program Studi Sanitasi Lingkungan Program Sarjana Terapan Jurusan Kesehatan Lingkungan Politeknik Kesehatan Kementerian Kesehatan Tanjungpinang Tahun Akademik 2021/2022, maka kami mengharapkan dapat diberikan izin kepada mahasiswa untuk dapat melakukan penelitian di Institusi yang Bpk/Ibu pimpin. Adapun mahasiswa yang melakukan penelitian sebagai berikut:

No	NAMA	JUDUL PENELITIAN	TEMPAT PENELITIAN
1	Fitriani Lestari NIM: 1813351043	Pemanfaatan Pati Dan Selulosa Dari Limbah Bonggol Pisang (Musa Paradisiaca L) Sebagai Bahan Baku Bioplastik	Laboratorium Jurusan Kesehatan Lingkungan
2	Icha Putri Tsany NIM: 1813351001	Pengaruh Infusa Batang Serai Dapur (Cymbopogon Citratus) Sebagai Larvasida Aedes Aegypti	
3	Dinda Agusti NIM: 1813351007	Efektivitas Ekstrak Buah Ceremai (Phyllanthus Acidus [L] Skeels) Sebagai Larvasida Pada Larva Aedes Aegypti Instar Iii	
4	Hernita NIM: 1813351025	Hubungan Perilaku Penjamah Makanan Terhadap Angka Kuman Makanan Di Rumah Makan Wilayah Kerja Uptd Puskesmas Natar Tahun 2022	

Atas perhatian dan kerjasamanya diucapkan terima kasih.

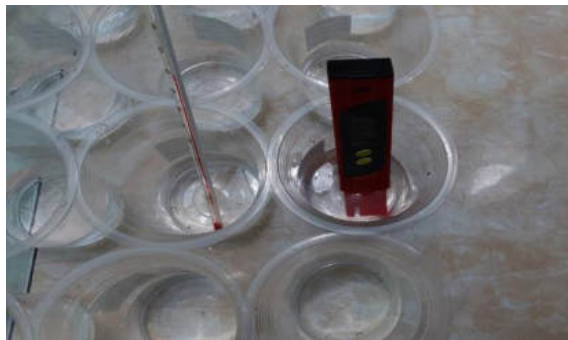
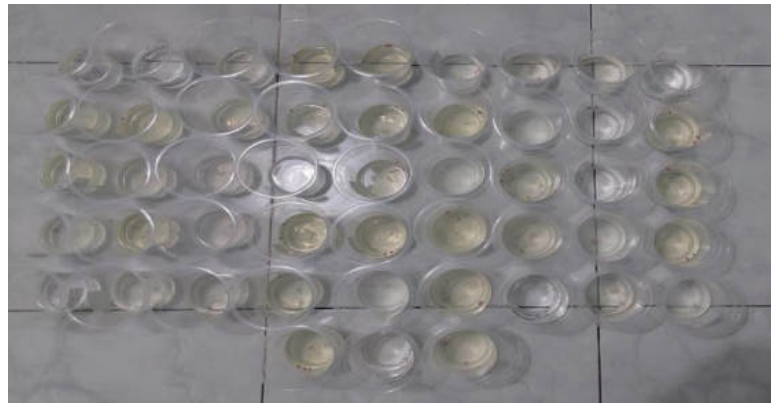


**Warjadin Aliyanto, SKM, M.Kes**  
NIP 196401281985021001

# LAMPIRAN

Lampiran:





Lampiran :

### Tests of Normality

	Perlakuan konsentrasi terhadap larva	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk	
		Statistic	df	Sig.	Statistic	df
Kematian larva	0%	.	8	.	.	8
	2%	,220	8	,200 <sup>*</sup>	,873	8
	4%	,198	8	,200 <sup>*</sup>	,956	8
	6%	,262	8	,112	,916	8
	8%	,143	8	,200 <sup>*</sup>	,913	8
	10%	,132	8	,200 <sup>*</sup>	,950	8

### Tests of Normality

	Perlakuan konsentrasi terhadap larva	Shapiro-Wilk <sup>a</sup>
		Sig.
Kematian larva	0%	.
	2%	,162
	4%	,773
	6%	,397
	8%	,375
	10%	,709

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

a. Lilliefors Significance Correction

### Case Processing Summary

	Perlakuan taraf waktu terhadap larva	Cases				
		Valid		Missing		Total
		N	Percent	N	Percent	N
Kematian larva	6 jam	12	100,0%	0	0,0%	12
	12 jam	12	100,0%	0	0,0%	12
	18 jam	12	100,0%	0	0,0%	12
	24 jam	12	100,0%	0	0,0%	12

### Case Processing Summary

	Perlakuan taraf waktu terhadap larva	Cases
		Total Percent
Kematian larva	6 jam	100,0%
	12 jam	100,0%
	18 jam	100,0%

### Descriptives

Perlakuan taraf waktu terhadap larva		Statistic	Std. Error		
Kematian larva	6 jam	Mean	2,92	,679	
		95% Confidence Interval for Mean	Lower Bound	1,42	
			Upper Bound	4,41	
		5% Trimmed Mean		2,85	
		Median		3,50	
		Variance		5,538	
		Std. Deviation		2,353	
		Minimum		0	
		Maximum		7	
		Range		7	
		Interquartile Range		4	
		Skewness		,169	,637
		Kurtosis		-,924	1,232
			12 jam	Mean	4,33
95% Confidence Interval for Mean	Lower Bound			2,19	
	Upper Bound			6,47	
5% Trimmed Mean				4,20	
Median				4,50	
Variance				11,333	
Std. Deviation				3,367	
Minimum				0	
Maximum				11	
Range				11	
Interquartile Range				5	
Skewness				,546	,637
Kurtosis				,035	1,232
	18 jam			Mean	6,33
		95% Confidence Interval for Mean	Lower Bound	3,55	
			Upper Bound	9,11	
		5% Trimmed Mean		6,26	
		Median		7,00	
		Variance		19,152	
		Std. Deviation		4,376	
		Minimum		0	
		Maximum		14	

	Range		14	
	Interquartile Range		5	
	Skewness		,269	,637
	Kurtosis		-,229	1,232
24 jam	Mean		7,58	1,559
	95% Confidence Interval for Mean	Lower Bound	4,15	
		Upper Bound	11,02	
	5% Trimmed Mean		7,48	
	Median		7,50	
	Variance		29,174	
	Std. Deviation		5,401	
	Minimum		0	
	Maximum		17	
	Range		17	
	Interquartile Range		7	
	Skewness		,358	,637
	Kurtosis		-,330	1,232

### Tests of Normality

	Perlakuan taraf waktu terhadap larva	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk	
		Statistic	df	Sig.	Statistic	df
Kematian larva	6 jam	,177	12	,200 <sup>*</sup>	,913	12
	12 jam	,172	12	,200 <sup>*</sup>	,933	12
	18 jam	,189	12	,200 <sup>*</sup>	,938	12
	24 jam	,136	12	,200 <sup>*</sup>	,948	12

### Tests of Normality

	Perlakuan taraf waktu terhadap larva	Shapiro-Wilk <sup>a</sup>
		Sig.
Kematian larva	6 jam	,233
	12 jam	,417
	18 jam	,471
	24 jam	,601

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

a. Lilliefors Significance Correction

### Descriptives

Kematian larva



	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
0%	8	,00	,000	,000	,00	,00
2%	8	2,38	1,598	,565	1,04	3,71
4%	8	5,00	1,927	,681	3,39	6,61
6%	8	5,75	1,753	,620	4,28	7,22
8%	8	7,00	2,726	,964	4,72	9,28
10%	8	11,63	4,069	1,438	8,22	15,03
Total	48	5,29	4,307	,622	4,04	6,54

### Descriptives

Kematian larva

	Minimum	Maximum
0%	0	0
2%	0	4
4%	2	8
6%	3	8
8%	4	11
10%	6	17
Total	0	17

### ANOVA

Kematian larva

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	638,667	5	127,733	23,000	,000
Within Groups	233,250	42	5,554		
Total	871,917	47			

### Multiple Comparisons

Dependent Variable: Kematian larva

Bonferroni

(I) Perlakuan konsentrasi terhadap larva	(J) Perlakuan konsentrasi terhadap larva	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound
0%	2%	-2,375	1,178	,754	-6,04
	4%	-5,000*	1,178	,002	-8,67
	6%	-5,750*	1,178	,000	-9,42

	8%	-7,000*	1,178	,000	-10,67
	10%	-11,625*	1,178	,000	-15,29
2%	0%	2,375	1,178	,754	-1,29
	4%	-2,625	1,178	,470	-6,29
	6%	-3,375	1,178	,097	-7,04
	8%	-4,625*	1,178	,005	-8,29
	10%	-9,250*	1,178	,000	-12,92
4%	0%	5,000*	1,178	,002	1,33
	2%	2,625	1,178	,470	-1,04
	6%	-,750	1,178	1,000	-4,42
	8%	-2,000	1,178	1,000	-5,67
	10%	-6,625*	1,178	,000	-10,29
6%	0%	5,750*	1,178	,000	2,08
	2%	3,375	1,178	,097	-,29
	4%	,750	1,178	1,000	-2,92
	8%	-1,250	1,178	1,000	-4,92
	10%	-5,875*	1,178	,000	-9,54
8%	0%	7,000*	1,178	,000	3,33
	2%	4,625*	1,178	,005	,96
	4%	2,000	1,178	1,000	-1,67
	6%	1,250	1,178	1,000	-2,42
	10%	-4,625*	1,178	,005	-8,29
10%	0%	11,625*	1,178	,000	7,96
	2%	9,250*	1,178	,000	5,58
	4%	6,625*	1,178	,000	2,96
	6%	5,875*	1,178	,000	2,21
	8%	4,625*	1,178	,005	,96

### Multiple Comparisons

Dependent Variable: Kematian larva

Bonferroni

(I) Perlakuan konsentrasi terhadap larva	(J) Perlakuan konsentrasi terhadap larva	95% Confidence
		Interval
		Upper Bound
0%	2%	1,29
	4%	-1,33
	6%	-2,08
	8%	-3,33
	10%	-7,96
2%	0%	6,04
	4%	1,04

	6%	,29
	8%	-,96
	10%	-5,58
4%	0%	8,67
	2%	6,29
	6%	2,92
	8%	1,67
	10%	-2,96
6%	0%	9,42
	2%	7,04
	4%	4,42
	8%	2,42
	10%	-2,21
8%	0%	10,67
	2%	8,29
	4%	5,67
	6%	4,92
	10%	-,96
10%	0%	15,29
	2%	12,92
	4%	10,29
	6%	9,54
	8%	8,29

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

### Descriptives

Kematian larva

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
6 jam	12	2,92	2,353	,679	1,42	4,41
12 jam	12	4,33	3,367	,972	2,19	6,47
18 jam	12	6,33	4,376	1,263	3,55	9,11
24 jam	12	7,58	5,401	1,559	4,15	11,02
Total	48	5,29	4,307	,622	4,04	6,54

### Descriptives

Kematian larva

	Minimum	Maximum
6 jam	0	7

12 jam	0	11
18 jam	0	14
24 jam	0	17
Total	0	17

### ANOVA

Kematian larva

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	154,750	3	51,583	3,165	,034
Within Groups	717,167	44	16,299		
Total	871,917	47			

### Multiple Comparisons

Dependent Variable: Kematian larva

Bonferroni

(I) Perlakuan taraf waktu terhadap larva	(J) Perlakuan taraf waktu terhadap larva	Mean Difference (I-J)	Std. Error	Sig.
6 jam	12 jam	-1,417	1,648	1,000
	18 jam	-3,417	1,648	,264
	24 jam	-4,667 <sup>*</sup>	1,648	,042
12 jam	6 jam	1,417	1,648	1,000
	18 jam	-2,000	1,648	1,000
	24 jam	-3,250	1,648	,330
18 jam	6 jam	3,417	1,648	,264
	12 jam	2,000	1,648	1,000
	24 jam	-1,250	1,648	1,000
24 jam	6 jam	4,667 <sup>*</sup>	1,648	,042
	12 jam	3,250	1,648	,330
	18 jam	1,250	1,648	1,000

### Multiple Comparisons

Dependent Variable: Kematian larva

Bonferroni

(I) Perlakuan taraf waktu terhadap larva	(J) Perlakuan taraf waktu terhadap larva	95% Confidence Interval	
		Lower Bound	Upper Bound
6 jam	12 jam	-5,97	3,14
	18 jam	-7,97	1,14
	24 jam	-9,22	-,11
12 jam	6 jam	-3,14	5,97

	18 jam	-6,55	2,55
	24 jam	-7,80	1,30
18 jam	6 jam	-1,14	7,97
	12 jam	-2,55	6,55
	24 jam	-5,80	3,30
24 jam	6 jam	,11	9,22
	12 jam	-1,30	7,80
	18 jam	-3,30	5,80

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

### Between-Subjects Factors

		Value Label	N
Perlakuan konsentrasi terhadap larva	1	0%	8
	2	2%	8
	3	4%	8
	4	6%	8
	5	8%	8
	6	10%	8
Perlakuan taraf waktu terhadap larva	1	6 jam	12
	2	12 jam	12
	3	18 jam	12
	4	24 jam	12

### Descriptive Statistics

Dependent Variable: Kematian larva

Perlakuan konsentrasi terhadap larva	Perlakuan taraf waktu terhadap larva	Mean	Std. Deviation	N
0%	6 jam	,00	,000	2
	12 jam	,00	,000	2
	18 jam	,00	,000	2
	24 jam	,00	,000	2
	Total	,00	,000	8
2%	6 jam	,50	,707	2
	12 jam	1,50	,707	2
	18 jam	3,50	,707	2
	24 jam	4,00	,000	2
	Total	2,38	1,598	8

4%	6 jam	3,00	1,414	2
	12 jam	4,00	,000	2
	18 jam	6,00	1,414	2
	24 jam	7,00	1,414	2
	Total	5,00	1,927	8
6%	6 jam	3,50	,707	2
	12 jam	5,00	,000	2
	18 jam	7,00	,000	2
	24 jam	7,50	,707	2
	Total	5,75	1,753	8
8%	6 jam	4,00	,000	2
	12 jam	5,50	,707	2
	18 jam	8,00	1,414	2
	24 jam	10,50	,707	2
	Total	7,00	2,726	8
10%	6 jam	6,50	,707	2
	12 jam	10,00	1,414	2
	18 jam	13,50	,707	2
	24 jam	16,50	,707	2
	Total	11,62	4,069	8
Total	6 jam	2,92	2,353	12
	12 jam	4,33	3,367	12
	18 jam	6,33	4,376	12
	24 jam	7,58	5,401	12
	Total	5,29	4,307	48

### Tests of Between-Subjects Effects

Dependent Variable: Kematian larva

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	856,917 <sup>a</sup>	23	37,257	59,612	,000
Intercept	1344,083	1	1344,083	2150,533	,000
Konsentrasi	638,667	5	127,733	204,373	,000
Waktu	154,750	3	51,583	82,533	,000
Konsentrasi * Waktu	63,500	15	4,233	6,773	,000
Error	15,000	24	,625		
Total	2216,000	48			
Corrected Total	871,917	47			

a. R Squared = ,983 (Adjusted R Squared = ,966)

### 1. Perlakuan konsentrasi terhadap larva

Dependent Variable: Kematian larva

Perlakuan konsentrasi terhadap larva	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0%	,000	,280	-,577	,577
2%	2,375	,280	1,798	2,952
4%	5,000	,280	4,423	5,577
6%	5,750	,280	5,173	6,327
8%	7,000	,280	6,423	7,577
10%	11,625	,280	11,048	12,202

### 2. Perlakuan taraf waktu terhadap larva

Dependent Variable: Kematian larva

Perlakuan taraf waktu terhadap larva	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
6 jam	2,917	,228	2,446	3,388
12 jam	4,333	,228	3,862	4,804
18 jam	6,333	,228	5,862	6,804
24 jam	7,583	,228	7,112	8,054

### 3. Perlakuan konsentrasi terhadap larva \* Perlakuan taraf waktu terhadap larva

Dependent Variable: Kematian larva

Perlakuan konsentrasi terhadap larva	Perlakuan taraf waktu terhadap larva	Mean	Std. Error	95% Confidence Interval
				Lower Bound
0%	6 jam	,000	,559	-1,154
	12 jam	,000	,559	-1,154
	18 jam	3,553E-15	,559	-1,154
	24 jam	,000	,559	-1,154
2%	6 jam	,500	,559	-,654
	12 jam	1,500	,559	,346
	18 jam	3,500	,559	2,346
	24 jam	4,000	,559	2,846
4%	6 jam	3,000	,559	1,846
	12 jam	4,000	,559	2,846

	18 jam	6,000	,559	4,846
	24 jam	7,000	,559	5,846
6%	6 jam	3,500	,559	2,346
	12 jam	5,000	,559	3,846
	18 jam	7,000	,559	5,846
	24 jam	7,500	,559	6,346
8%	6 jam	4,000	,559	2,846
	12 jam	5,500	,559	4,346
	18 jam	8,000	,559	6,846
	24 jam	10,500	,559	9,346
10%	6 jam	6,500	,559	5,346
	12 jam	10,000	,559	8,846
	18 jam	13,500	,559	12,346
	24 jam	16,500	,559	15,346

### 3. Perlakuan konsentrasi terhadap larva \* Perlakuan taraf waktu terhadap larva

Dependent Variable: Kematian larva

Perlakuan konsentrasi terhadap larva	Perlakuan taraf waktu terhadap larva	95% Confidence Interval
		Upper Bound
0%	6 jam	1,154
	12 jam	1,154
	18 jam	1,154
	24 jam	1,154
2%	6 jam	1,654
	12 jam	2,654
	18 jam	4,654
	24 jam	5,154
4%	6 jam	4,154
	12 jam	5,154
	18 jam	7,154
	24 jam	8,154
6%	6 jam	4,654
	12 jam	6,154
	18 jam	8,154
	24 jam	8,654
8%	6 jam	5,154
	12 jam	6,654
	18 jam	9,154
	24 jam	11,654
10%	6 jam	7,654



12 jam	11,154
18 jam	14,654
24 jam	17,654

