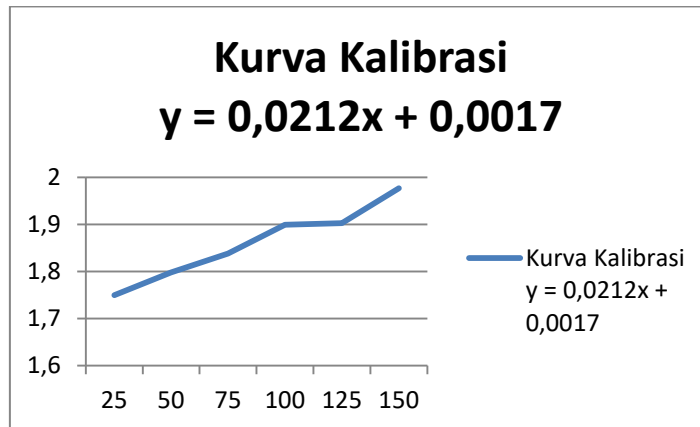


LAMPIRAN

1. Hasil Absorbansi baku seri persamaan

Konsentrasi Fe	Absorbansi
25	1,750
50	1,798
75	1,838
100	1,899
125	1,903
150	1,977



2. Hasil Absorbansi setelah perlakuan

No	Jenis	Dosis	Waktu	ABS
PERCOBAAN I				
1	Muli	0%	2 jam	1,957
2		10%		1,199
3		20%		0,827
4		30%		0,907
5		0%	4 jam	1,978
6		10%		1,665
7		20%		1,520
8		30%		1,120
9		0%	6 jam	1,972
10		10%		1,932
11		20%		1,703
12		30%		1,583
13	Kepok	0%	2 jam	1,961
14		10%		1,159
15		20%		0,904
16		30%		1,270
17		0%	4 jam	1,974
18		10%		1,635
19		20%		1,498

20		30%		1,526
21		0%	6 jam	1,988
22		10%		1,120
23		20%		0,702
24		30%		0,817
25	Tanduk	0%	2 jam	1,969
26		10%		0,809
27		20%		0,889
28		30%		0,837
29		0%	4 jam	1,978
30		10%		1,928
31		20%		1,241
32		30%		0,861
33		0%	6 jam	1,979
34		10%		0,982
35		20%		1,358
36		30%		1,319
37	Janten	0%	2 jam	1,960
38		10%		1,649
39		20%		1,897
40		30%		1,817
41		0%	4 jam	1,978
42		10%		1,778
43		20%		1,871
44		30%		1,940
45		0%	6 jam	1,984
46		10%		1,267
47		20%		1,740
48		30%		1,900
PERCOBAAN II				
49	Muli	0%	2 jam	1,877
50		10%		1,761
51		20%		1,182
52		30%		1,012
53		0%	4 jam	1,910
54		10%		1,561
55		20%		1,670
56		30%		1,130
57		0%	6 jam	1,865
58		10%		1,749
59		20%		1,761
60		30%		1,437
61	Kepok	0%	2 jam	1,957
62		10%		1,348

63		20%		1,179
64		30%		0,843
65		0%	4 jam	1,903
66		10%		1,536
67		20%		1,502
68		30%		1,471
69		0%	6 jam	1,902
70		10%		1,019
71		20%		0,684
72		30%		0,645
73	Tanduk	0%	2 jam	1,899
74		10%		1,198
75		20%		1,271
76		30%		0,838
77		0%	4 jam	1,897
78		10%		1,797
79		20%		1,569
80		30%		1,086
81		0%	6 jam	1,897
82		10%		1,258
83		20%		1,516
84		30%		1,394
85	Janten	0%	2 jam	1,861
86		10%		1,794
87		20%		1,698
88		30%		1,669
89		0%	4 jam	1,838
90		10%		1,749
91		20%		1,882
92		30%		1,761
93		0%	6 jam	1,903
94		10%		1,877
95		20%		1,664
96		30%		1,393

3. Deskriptif

A. Percobaan 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Kadar besi pada air	48	33.03	93.69	71.5142	20.62615
Jenis kulit pisang	48	1	4	2.50	1.130
Variasi dosis	48	1	4	2.50	1.130
Variasi lama waktu perendaman	48	1	3	2.00	.825
Valid N (listwise)	48				

B. . Percobaan 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Kadar besi pada air	48	33.03	93.69	71.5142	20.62615
Jenis kulit pisang	48	1	4	2.50	1.130
Variasi dosis	48	1	4	2.50	1.130
Variasi lama waktu perendaman	48	1	3	2.00	.825
Valid N (listwise)	48				

4. Uji Normalitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Standardized Residual for Kadar	.074	96	.200 [*]	.977	96	.084

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

a. Lilliefors Significance Correction

5. Uji Two Way Anova

Descriptive Statistics

Dependent Variable: Kadar Fe sesudah perlakuan

Jenis serbuk kulit pisang	Variasi dosis	Variasi lama waktu perendaman	Mean	Std. Deviation	N
Muli	0%	2 jam	90.3450	2.66579	2

Kepok		4 jam	91.6150	2.26981	2
		6 jam	90.4150	3.57089	2
		Total	90.7917	2.32587	6
	10%	2 jam	69.7350	18.74540	2
		4 jam	76.0050	3.47189	2
		6 jam	86.7350	6.10233	2
		Total	77.4917	11.80096	6
	20%	2 jam	47.3000	11.83697	2
		4 jam	75.2350	5.11238	2
		6 jam	81.6200	1.93747	2
		Total	68.0517	17.33590	6
	30%	2 jam	45.1800	3.50725	2
		4 jam	52.9850	.33234	2
		6 jam	71.1450	4.87197	2
		Total	56.4367	12.21532	6
	Total	2 jam	63.1400	21.46445	8
		4 jam	73.9600	14.92059	8
		6 jam	82.4787	8.43514	8
		Total	73.1929	17.17493	24
	0%	2 jam	92.3250	.13435	2
		4 jam	91.3550	2.36881	2
		6 jam	91.6650	2.86378	2
		Total	91.7817	1.72118	6
	10%	2 jam	59.0450	6.30032	2
		4 jam	74.7050	3.30219	2
		6 jam	50.3700	3.36583	2
		Total	61.3733	11.57914	6
	20%	2 jam	49.0450	9.17117	2
		4 jam	70.6750	.13435	2
		6 jam	32.6050	.60104	2
		Total	50.7750	17.56584	6
	30%	2 jam	49.7550	14.24820	2
		4 jam	70.6050	1.83141	2
		6 jam	34.4800	5.85484	2
		Total	51.6133	17.64098	6
	Total	2 jam	62.5425	20.05955	8
		4 jam	76.8350	9.29008	8
		6 jam	52.2800	25.55586	8
		Total	63.8858	21.29094	24
Tanduk	0%	2 jam	91.1500	2.33345	2
		4 jam	91.3100	2.70115	2

			6 jam	91.3350	2.73650	2
			Total	91.2650	2.01345	6
			2 jam	47.3350	12.86227	2
		10%	4 jam	87.7700	4.36992	2
			6 jam	52.7500	9.20653	2
			Total	62.6183	20.95918	6
			2 jam	50.8600	12.74206	2
		20%	4 jam	66.1950	10.93894	2
			6 jam	67.7050	5.26795	2
			Total	61.5867	11.46504	6
			2 jam	39.4250	.03536	2
		30%	4 jam	45.8400	7.50947	2
			6 jam	63.9050	2.49609	2
			Total	49.7233	11.89231	6
			2 jam	57.1925	22.50517	8
		Total	4 jam	72.7788	20.27250	8
			6 jam	68.9238	15.61723	8
			Total	66.2983	19.98251	24
		0%	2 jam	90.0350	3.30219	2
			4 jam	89.9200	4.66690	2
			6 jam	91.5900	2.70115	2
			Total	90.5150	2.94825	6
		10%	2 jam	81.1200	4.83661	2
			4 jam	83.1050	.96874	2
			6 jam	74.0700	20.35053	2
			Total	79.4317	10.28259	6
		20%	2 jam	84.7050	6.63973	2
			4 jam	88.4300	.36770	2
			6 jam	80.2050	2.53851	2
			Total	84.4467	4.86860	6
		30%	2 jam	82.1400	4.93561	2
			4 jam	87.2100	5.96798	2
			6 jam	77.5850	16.90692	2
			Total	82.3117	9.36536	6
		Total	2 jam	84.5000	5.31961	8
			4 jam	87.1663	3.96092	8
			6 jam	80.8625	12.29699	8
			Total	84.1763	8.14710	24
		0%	2 jam	90.9637	2.06121	8
			4 jam	91.0500	2.48863	8
			6 jam	91.2513	2.32138	8
			Total	91.0883	2.19845	24

10%	2 jam	64.3088	16.19378	8
	4 jam	80.3963	6.20782	8
	6 jam	65.9813	18.42870	8
	Total	70.2287	15.79003	24
20%	2 jam	57.9775	18.31589	8
	4 jam	75.1338	9.99367	8
	6 jam	65.5338	21.26154	8
	Total	66.2150	17.93067	24
30%	2 jam	54.1250	18.66913	8
	4 jam	64.1600	17.57498	8
	6 jam	61.7788	18.99136	8
	Total	60.0213	18.13774	24
Total	2 jam	66.8437	20.69914	32
	4 jam	77.6850	14.11663	32
	6 jam	71.1363	20.08467	32
	Total	71.8883	18.88264	96

Levene's Test of Equality of Error Variances^a

Dependent Variable: Kadar Fe sesudah
perlakuan

F	df1	df2	Sig.
.	47	48	.

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Jenis + Dosis + Waktu +
Jenis * Dosis + Jenis * Waktu + Dosis * Waktu +
Jenis * Dosis * Waktu

Tests of Between-Subjects Effects

Dependent Variable: Kadar Fe sesudah perlakuan

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	31303.038 ^a	47	666.022	12.441	.000
Intercept	496121.517	1	496121.517	9267.532	.000
Jenis	5951.591	3	1983.864	37.058	.000
Dosis	13065.806	3	4355.269	81.356	.000
Waktu	1907.673	2	953.837	17.818	.000
Jenis * Dosis	3388.869	9	376.541	7.034	.000
Jenis * Waktu	3243.429	6	540.571	10.098	.000

Dosis * Waktu	967.188	6	161.198	3.011	.014
Jenis * Dosis * Waktu	2778.482	18	154.360	2.883	.002
Error	2569.598	48	53.533		
Total	529994.153	96			
Corrected Total	33872.636	95			

a. R Squared = ,924 (Adjusted R Squared = ,850)

6. Uji Lanjutan Post Hoc

a. Jenis Serbuk Kulit Pisang

Multiple Comparisons

Dependent Variable: Kadar Fe sesudah perlakuan

Tukey HSD

(I) Jenis serbuk kulit pisang	(J) Jenis serbuk kulit pisang	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Muli	Kepok	9.3071 [*]	2.11213	.000	3.6859	14.9283
	Tanduk	6.8946 [*]	2.11213	.011	1.2734	12.5158
	Janten	-10.9833 [*]	2.11213	.000	-16.6045	-5.3622
Kepok	Muli	-9.3071 [*]	2.11213	.000	-14.9283	-3.6859
	Tanduk	-2.4125	2.11213	.666	-8.0337	3.2087
	Janten	-20.2904 [*]	2.11213	.000	-25.9116	-14.6692
Tanduk	Muli	-6.8946 [*]	2.11213	.011	-12.5158	-1.2734
	Kepok	2.4125	2.11213	.666	-3.2087	8.0337
	Janten	-17.8779 [*]	2.11213	.000	-23.4991	-12.2567
Janten	Muli	10.9833 [*]	2.11213	.000	5.3622	16.6045
	Kepok	20.2904 [*]	2.11213	.000	14.6692	25.9116
	Tanduk	17.8779 [*]	2.11213	.000	12.2567	23.4991

Based on observed means.

The error term is Mean Square(Error) = 53.533.

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

b. Variasi Dosis

Multiple Comparisons

Dependent Variable: Kadar Fe sesudah perlakuan

Tukey HSD

(I) Variasi dosis	(J) Variasi dosis	Mean Difference (I-	Std. Error	Sig.	95% Confidence Interval
-------------------	-------------------	---------------------	------------	------	-------------------------

		J)			Lower Bound	Upper Bound
0%	10%	20.8596 [*]	2.11213	.000	15.2384	26.4808
	20%	24.8733 [*]	2.11213	.000	19.2522	30.4945
	30%	31.0671 [*]	2.11213	.000	25.4459	36.6883
10%	0%	-20.8596 [*]	2.11213	.000	-26.4808	-15.2384
	20%	4.0137	2.11213	.242	-1.6074	9.6349
	30%	10.2075 [*]	2.11213	.000	4.5863	15.8287
20%	0%	-24.8733 [*]	2.11213	.000	-30.4945	-19.2522
	10%	-4.0137	2.11213	.242	-9.6349	1.6074
	30%	6.1938 [*]	2.11213	.026	.5726	11.8149
30%	0%	-31.0671 [*]	2.11213	.000	-36.6883	-25.4459
	10%	-10.2075 [*]	2.11213	.000	-15.8287	-4.5863
	20%	-6.1938 [*]	2.11213	.026	-11.8149	-.5726

Based on observed means.

The error term is Mean Square(Error) = 53.533.

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

c. Variasi Lama Waktu Perendaman

Multiple Comparisons

Dependent Variable: Kadar Fe sesudah perlakuan

Tukey HSD

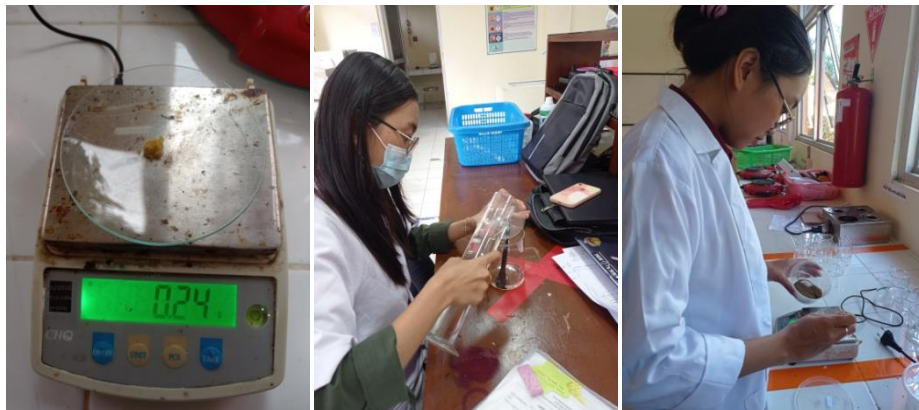
(I) Variasi lama waktu perendaman	(J) Variasi lama waktu perendaman	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2 jam	4 jam	-10.8413 [*]	1.82916	.000	-15.2651	-6.4174
	6 jam	-4.2925	1.82916	.059	-8.7163	.1313
4 jam	2 jam	10.8413 [*]	1.82916	.000	6.4174	15.2651
	6 jam	6.5487 [*]	1.82916	.002	2.1249	10.9726
6 jam	2 jam	4.2925	1.82916	.059	-.1313	8.7163
	4 jam	-6.5487 [*]	1.82916	.002	-10.9726	-2.1249

Based on observed means.

The error term is Mean Square(Error) = 53.533.

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

Dokumentasi penelitian





**KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
DIREKTORAT JENDERAL TENAGA KESEHATAN
POLITEKNIK KESEHATAN TANJUNGPURANG**

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Nomor : PP.03. 01 / I. 1 / 1732.15 / 2022
Lampiran : Eks
Hal : Izin Penelitian

17 Mei 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 Tanjungpurang Tahun Akademik 2021/2022, maka di informasikan mahasiswa yang melakukan penelitian di Institusi yang Bpk/Ibu pimpin. Adapun mahasiswa yang melakukan penelitian sebagai berikut:

No	NAMA	JUDUL PENELITIAN	TEMPAT PENELITIAN
1.	Lingga Adi Negara NIM:1813351038	ANALISIS SANITASI DEPOT AIR MINUM TERHADAP KUALITAS AIR MINUM SECARA MIKROBIOLOGI (ESCHERICHIA COLI)	Laboratorium Jurusan Kesehatan Lingkungan
2.	Melin Nekawati M NIM:1813351010	PEMANFAATAN SERBUK KULIT PISANG (Musa Paradisiaca L.) DALAM PENURUNAN KADAR BESI (Fe) PADA AIR	

Atas perhatian dan kerjasamanya diucapkan terima kasih.



Warjadin Aliyanto, SKM, M.Kes
NIP 196401281985021001

KOMITE ETIK PENELITIAN KESEHATAN
HEALTH RESEARCH ETHICS COMMITTEE
POLTEKKES TANJUNGPINANG

KETERANGAN LAYAK ETIK
DESCRIPTION OF ETHICAL EXEMPTION
"ETHICAL EXEMPTION"
No.262/KEPK-TJK/X/2022

Protokol penelitian yang diusulkan oleh :
The research protocol proposed by

Peneliti utama : Melin Nekawati Manurung
Principal In Investigator
Nama Institusi : Jurusan Kesehatan Lingkungan Poltekkes Tanjungpinang
Name of the Institution

Dengan judul:
Title

**"Pemanfaatan Serbuk Kulit Pisang (*Musa Paradisiaca L.*)
dalam Penurunan Kadar Besi (Fe) pada Air"**

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 2011 CIOMS Guidelines. This is as indicated by the fulfillment of the indicators of each standard.

Pernyataan Etik ini berlaku selama kurun waktu tanggal 21 Juli 2022 sampai dengan tanggal 21 Juli 2023.

This declaration of ethics applies during the period July 21, 2022 until July 21, 2023

July 21, 2022
Professor and Chairperson



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