L A M P I R A N

Lampiran 1. Hasil determinasi tanaman bandotan

UNIVERSITAS SETIA BUDI

UPT-LABORATORIUM

Nomor : 299/DET/UPT-LAB/10.11.2021
Hal : Hasil determinasi tumbuhan
Lamp. : -

Nama Pemesan : Nilam Candra Sari
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Alamat : Program Studi S1 Farmasi, Universitas Setia Budi, Surakarta
Nama sampel : Bandotan (*Ageratum conyzoides* L.)

HASIL DETERMINASI TUMBUHAN

Klasifikasi :
Kingdom : Plantae
Super divisi : Spermatophyta
Divisi : Magnoliophyta
Kelas : Magnoliopsida
Ordo :
Familia : Compositae
Genus : Ageratum
Species : *Ageratum conyzoides* L.

Hasil Determinasi menurut Steenis, C.G.G.J.V, Bloembergen, H, Eyma, P.J. 1992 :
1b – 2b – 3b – 4b – 6b – 7b – 9b – 10b – 11b – 12b – 13b – 14a – 15a. golongan 8. 109b – 119b – 120b – 128b – 129b – 135b – 136b – 139b – 140b – 142b – 143b – 146b – 154a. familia 121. Compositae. 1a – 2b – 3b – 4b – 5b – 11b. 11. Ageratum. *Ageratum conyzoides* L.

Deskripsi:
Habitus : Herba, tinggi 0,1 – 0,2 meter.
Akar : Sistem akar tunggang.

Jl. Letjen Sutoyo, Mojosongo-Solo 57127 Telp. 0271-852518, Fax. 0271-853275
Homepage : www.setiabudi.ac.id, e-mail : Info@setiabudi.ac.id

Batang : Batang bulat, tegak atau berbaring, dari bagian ini keluar akar, berambut jarang.

Daun : Daun tunggal, daun bawah berhadapan dan bertangkai cukup panjang; yang teratas tersebar dan bertangkai pendek; bulattelur, beringgit, panjang 3,8 – 6,5 cm, lebar 3 – 4,2 cm, kedua sisinya berambut panjang, sisi bawah juga dengan kelenjar yang duduk.

Bunga : Bunga bongkol berkelamin satu macam, 3 atau lebih berkumpul jadi karangan bunga bentuk malai rata yang terminal. Bongkol 6 – 8 mm panjangnya, pada tangkai berambut. Daun pembalut dalam 2 – 3 lingkaran, runcing, tidak sama, berambut sangat jarang atau gundul. Dasar bunga bersama tanpa sisik. Bunga sama panjang dengan pembalut. Mahkota dengan tabung sempit dan pinggiran sempit bentuk lonceng, berlekuk 5, panjang1 – 1,5 mm.

Buah : Buah keras bersegi 5 runcing. Rambut sisik pada buah 5, putih, 2 – 3,5 mm panjangnya.

Surakarta, 10 November 2021

Kepala UPT-LAB
Universitas Setia Budi

Asik Gunawan, Amdk

Penanggung jawab
Determinasi Tumbuhan

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Lampiran 2. Sertifikat hasil uji bakteri *Staphylococcus epidermidis* ATCC 12228

PRO – Technology

Laboratorium Uji Mikrobiologi

Jalan Cempaka Putih No.69 - Jakarta Pusat

Indonesia

SERTIFIKAT HASIL UJI

1. Bakteri : Stock Strain *Staphylococcus epidermidis* ATCC 12228
2. Nomor Uji Bakteri : Strain V. 1. 3.
3. Tanggal Uji bakteri : 5 – 10 November 2020

Uraian Hasil Uji

Strain V. 1. 3. Biakan Murni dari *Staphylococcus epidermidis* ATCC 12228

I. Ciri-ciri koloni :
   1. Pewarnaan Gram : Sel bulat, kecil-kecil, menggerombol, berwarna ungu, termasuk Gram positip.
   2. Di tanam pada media Vogel Jhonson Agar : Koloni tidak berwarna hitam, disekitar koloni berwarna merah.

II. Uji Fermentasi Karbohidrat dan Biokimia Penegasan

Uji Fermentasi Karbohidrat			Uji Fisiologis	
Glukosa	Asam (-)	Gas (-)	Katalase	(+) timbul gelembung gas
Laktosa	Asam (-)	Gas (-)	Koagulase (serum)	(-) tidak menggumpalkan serum
Maltosa	Asam (-)	Gas (-)	Oxidase	(-)
Sukrosa	Asam (-)	Gas (-)	Manitol	(-)

Catatan:
1. Hasil Uji ini hanya berlaku untuk contoh yang diuji.

Lampiran 3. Daun bandotan segar

Lampiran 4. Hasil pengeringan daun bandotan

$$\% \text{ Rendemen} = \frac{\text{bobot kering}}{\text{bobot basah}} \; x \; 100\%$$

$$\% \text{ Rendemen} = \frac{1500 \text{ g}}{8000 \text{ g}} \; x \; 100\%$$

% Rendemen = 18,75 %

Lampiran 5. Serbuk daun bandotan

	
Serbuk daun bandotan	**Setelah pengayakan**

Lampiran 6. Hasil perhitungan susut pengeringan serbuk daun bandotan

Data Perhitungan Susut Pengeringan Serbuk

R1 : - Berat Serbuk = 2,02 g
- Susut = 4,8 %

R2 : - Berat Serbuk = 2,03 g
- Susut = 4,9 %

R3 : - Berat Serbuk = 2,01 g
- Susut = 4,3 %

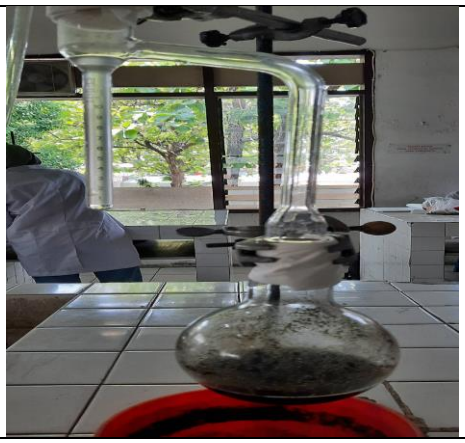
Rata-Rata = $\frac{4,8\% + 4,9\% + 4,3\%}{3}$

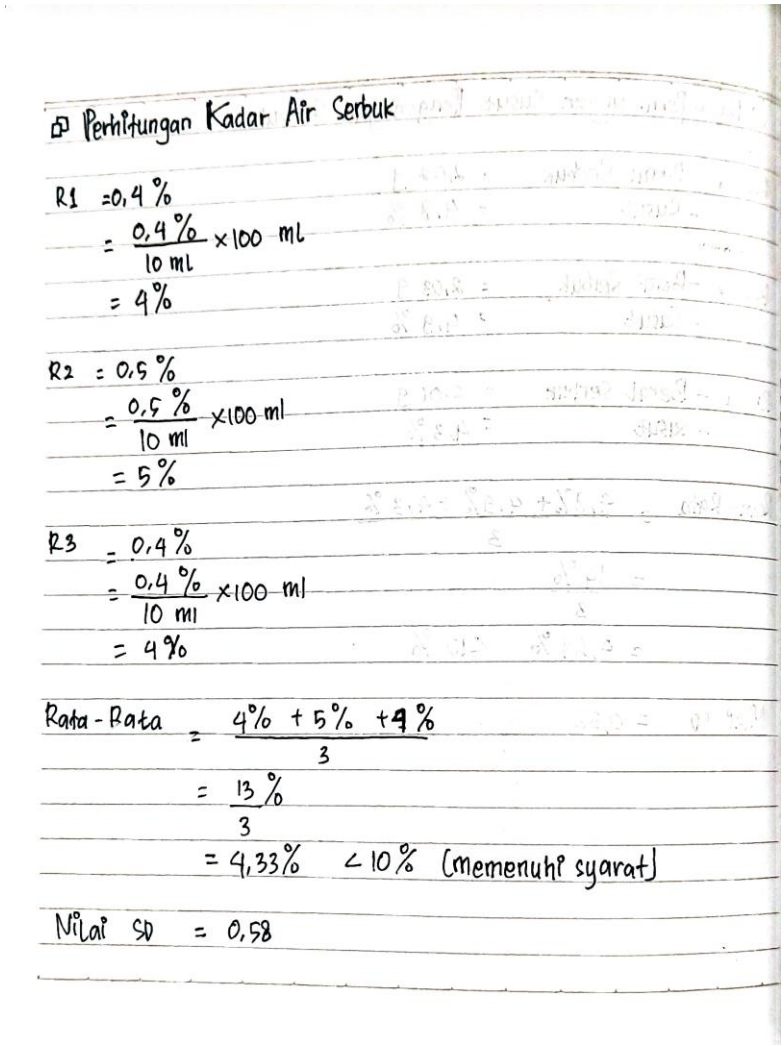
= $\frac{14\%}{3}$

= 4,67 % < 10 %

Nilai SD = 0,32

Lampiran 7. Hasil perhitungan kadar air serbuk daun bandotan





Perhitungan Kadar Air Serbuk

R1 = 0,4 %

$= \frac{0,4\ \%}{10\ ml} \times 100\ ml$

= 4 %

R2 = 0,5 %

$= \frac{0,5\ \%}{10\ ml} \times 100\ ml$

= 5 %

R3 = 0,4 %

$= \frac{0,4\ \%}{10\ ml} \times 100\ ml$

= 4 %

Rata-Rata $= \frac{4\% + 5\% + 4\%}{3}$

$= \frac{13\ \%}{3}$

= 4,33% < 10% (memenuhi syarat)

Nilai SD = 0,58

Lampiran 8. Hasil pembuatan ekstrak etanol daun bandotan

	
Proses maserasi	**Penyaringan**

	
Evaporasi	**Ekstrak kental**

Bobot wadah kosong = 266 g

Wadah + ekstrak = 423 g

Bobot ekstrak = 423 g – 266 g

= 157 g

$$\% \text{ Rendemen} = \frac{\text{bobot ekstrak (g)}}{\text{bobot serbuk (g)}} \; x \; 100\%$$

$$\% \text{ Rendemen} = \frac{157 \text{ g}}{1400 \text{ g}} \; x \; 100\%$$

% Rendemen = 11,21 %

Lampiran 9. Hasil perhitungan kadar air ekstrak daun bandotan

No. : Date. :

Kurs I
- Kurs kosong = 40,0461
- Kurs + sampel = 42,0580

I. 41.9378 } 0,0043
II. 41.9334 } 0,0039
III. 41.9295

Bobot Tetap = (Kurs + sampel) - (kurs kosong)
= 42,0580 - 40,0461
Bobot awal = 2,0119

I. 41.9378 - 40,0461 = 1,8917
II. 41.9334 - 40,0461 = 1,8873
III. 41.9295 - 40,0461 = 1,8834

$$\% \text{ kadar} = \frac{\text{B. awal} - \text{Bobot setelah pemanasan}}{\text{Bobot awal}} \times 100\%$$

$$\text{Kadar I} = \frac{2,0119 - 1,8917}{2,0119} \times 100\% = 5,97\%$$

$$\text{Kadar II} = \frac{2,0119 - 1,8873}{2,0119} \times 100\% = 6,19\%$$

} 0,22% < 0,25%

$$\text{Kadar III} = \frac{2,0119 - 1,8873}{2,0119} \times 100\% = 6,38\%$$

} 0,19% < 0,25%

$$\text{Rata}^2 = \frac{5,97\% + 6,19\% + 6,38\%}{3}$$

$$= \frac{18,54\%}{3}$$

$$= 6,18\% < 10\%$$

KIKY

Kurs II

- Kurs kosong = 40,5148
- Kurs + sampel = 42,5571

I. 42,4365] 0,0043
II. 42,4322] 0,0036
III. 42,4286

Bobot Tetap = (Kurs+sampel) − (kurs kosong)
= 42,5571 − 40,5148
= 2,0423

I - 42,4365 − 40,5148 = 1,9217
II. 42,4322 − 40,5148 = 1,9174
III. 42,4286 − 40,5148 = 1,9138

$$\%\text{kadar} = \frac{\text{Bobot sebelum pengeringan} - \text{Bobot setelah pengeringan}}{\text{Bobot sebelum pengeringan}} \times 100\%$$

$$\text{Kadar I} = \frac{2,0423 - 1,9217}{2,0423} \times 100\% = 5,90\%$$

$$\text{Kadar II} = \frac{2,0423 - 1,9174}{2,0423} \times 100\% = 6,11\%$$

0,21% < 0,25%

$$\text{Kadar III} = \frac{2,0423 - 1,9138}{2,0423} \times 100\% = 6,29\%$$

0,18% < 0,25%

$$\text{Rata}^2 = \frac{5,90\% + 6,11\% + 6,29\%}{3} = \frac{18,3\%}{3}$$

$= 6,1\% < 10\%$

5) Kurs III

- Kurs kosong = 33,5320
- Kurs + sampel = 35,5516

I. 35,4315] 0,0038
II. 35,4277
III. 35,4235] 0,0048

Bobot Tetap = (kurs + sampel) − (kurs kosong)
= 35,5516 − 33,5320
= 2,0196

I. 35,4315 − 33,5320 = 1,8995
II. 35,4297 − 33,5320 = 1,8957
III. 35,4235 − 33,5320 = 1,8915

$$\%\ \text{kadar} = \frac{\text{Bobot sebelum pengeringan} - \text{Bobot setelah pengeringan}}{\text{Bobot sebelum pengeringan}} \times 100\%$$

Kadar I $= \frac{2,0196 - 1,8995}{2,0196} \times 100\% = 5,94\%$] 0,19% < 0,25%

Kadar II $= \frac{2,0196 - 1,8957}{2,0196} \times 100\% = 6,13\%$] 0,21% < 0,25%

Kadar III $= \frac{2,0196 - 1,8915}{2,0196} \times 100\% = 6,34\%$

Rata² $= \frac{5,94\% + 6,13\% + 6,34\%}{3}$

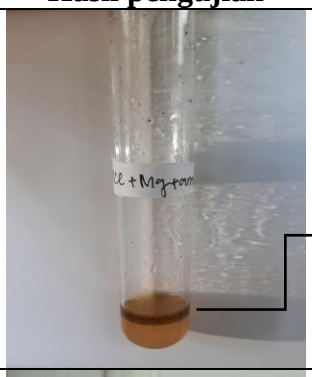
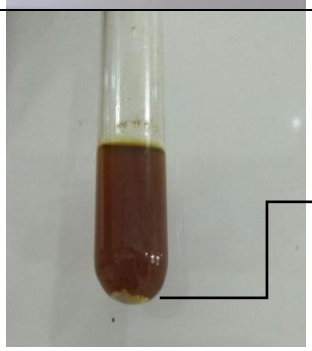
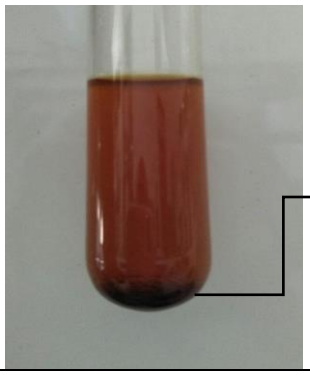
$= \frac{18,41\%}{3}$

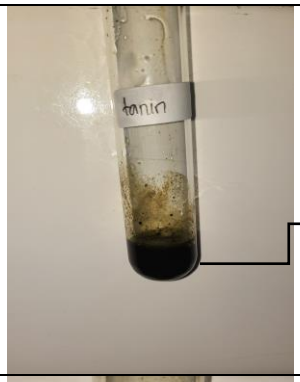
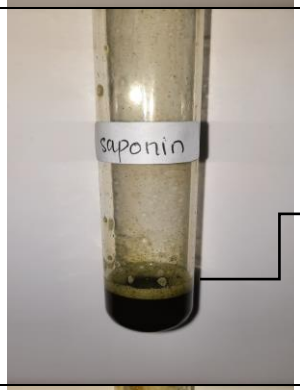
$= 6,13\% < 10\%$

KIKY

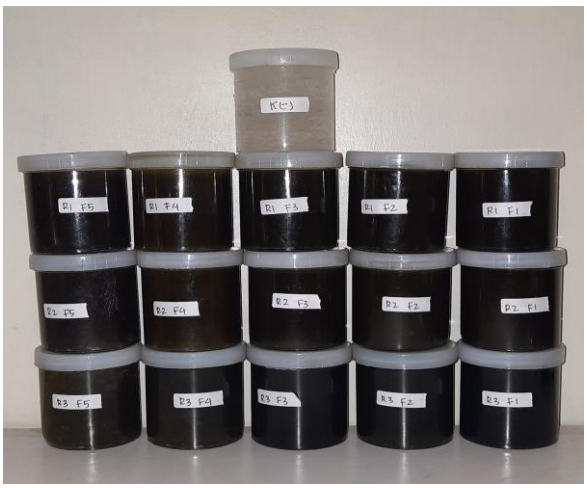
Lampiran 10. Pengujian bebas alkohol

Lampiran 11. Identifikasi kandungan kimia ekstrak daun bandotan

Senyawa	Hasil pengujian	Keterangan
Flavonoid		Positif (+) Terbentuknya lapisan amil alkohol dengan warna merah atau jingga
Alkaloid	  	Positif (+) Pereaksi Mayer : terbentuknya endapan putih Pereaksi Dragendorff : terbentuknya endapan jingga Pereaksi Bouchardat : terbentuknya endapan coklat

Tanin		Positif (+) Terbentuknya warna hijau kehitaman
Saponin		Positif (+) Terbentuknya busa yang stabil
Terpenoid		Negatif (-) Tidak membentuk lapisan cincin coklat

Lampiran 12. Sediaan gel ekstrak daun bandotan

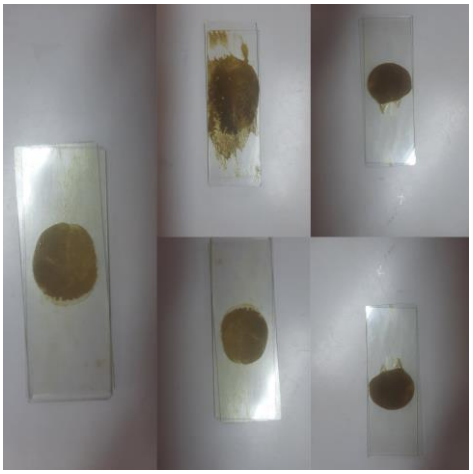


Keterangan :
Formula I : HPMC 1,5% & karbopol 2%
Formula II : HPMC 1,75% & karbopol 1,75%
Formula III : HPMC 2% & karbopol 1,5%
Formula IV : HPMC 2,25% & karbopol 1,25%
Formula V : HPMC 2,5% & karbopol 1%

K (+) : gel mediklin 1%

Lampiran 13. Uji organoleptik

Lampiran 14. Uji homogenitas



Lampiran 15. Uji *p*H

- **Data hasil uji mutu fisik *p*H sediaan gel ekstrak daun bandotan**

Formula	Sebelum *cycling test*			Setelah *cycling test*		
	1	2	3	1	2	3
K (-)	6,30	6,32	6,31	6,20	6,19	6,21
I	5,34	5,31	5,33	5,25	5,23	5,22
II	5,41	5,43	5,40	5,34	5,33	5,32
III	5,63	5,64	5,62	5,52	5,51	5,53
IV	5,71	5,72	5,74	5,60	5,61	5,62
V	5,90	5,93	5,92	5,85	5,86	5,87

- **Uji statistik *Shapiro-Wilk*, analisis *One-Way* ANOVA**

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Formulasi	.137	18	.200*	.917	18	.114
pH	.143	18	.200*	.898	18	.053

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

pH

Levene Statistic	df1	df2	Sig.
.366	5	12	.862

pH

Tukey HSD[a]

Formulasi	N	Subset for alpha = 0.05					
		1	2	3	4	5	6
F1	3	5.3267					
F2	3		5.4133				
F3	3			5.6300			
F4	3				5.7233		
F6	3					5.9167	
KN	3						6.3100
Sig.		1.000	1.000	1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

- **Uji statistik *Shapiro-Wilk*, analisis *Paired Sample T-test***

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KN_sebelum_cycling	.175	3	.	1.000	3	1.000
KN_setelah_cycling	.175	3	.	1.000	3	1.000
F1_sebelum_cycling	.253	3	.	.964	3	.637
F1_setelah_cycling	.253	3	.	.964	3	.637
F2_sebelum_cycling	.253	3	.	.964	3	.637
F2_setelah_cycling	.175	3	.	1.000	3	1.000
F3_sebelum_cycling	.175	3	.	1.000	3	1.000
F3_setelah_cycling	.175	3	.	1.000	3	1.000
F4_sebelum_cycling	.253	3	.	.964	3	.637
F4_setelah_cycling	.175	3	.	1.000	3	1.000
F5_sebelum_cycling	.253	3	.	.964	3	.637
F5_setelah_cycling	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	KN_sebelum_cycling	6.3100	3	.01000	.00577
	KN_setelah_cycling	6.2000	3	.01000	.00577
Pair 2	F1_sebelum_cycling	5.3267	3	.01528	.00882
	F1_setelah_cycling	5.2333	3	.01528	.00882

Pair 3	F2_sebelum_cycling	5.4133	3	.01528	.00882
	F2_setelah_cycling	5.3300	3	.01000	.00577
Pair 4	F3_sebelum_cycling	5.6300	3	.01000	.00577
	F3_setelah_cycling	5.5200	3	.01000	.00577
Pair 5	F4_sebelum_cycling	5.7233	3	.01528	.00882
	F4_setelah_cycling	5.6100	3	.01000	.00577
Pair 6	F5_sebelum_cycling	5.9167	3	.01528	.00882
	F5_setelah_cycling	5.8600	3	.01000	.00577

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	KN_sebelum_cycling & KN_setelah_cycling	3	-.500	.667
Pair 2	F1_sebelum_cycling & F1_setelah_cycling	3	.500	.667
Pair 3	F2_sebelum_cycling & F2_setelah_cycling	3	.327	.788
Pair 4	F3_sebelum_cycling & F3_setelah_cycling	3	-1.000	.000
Pair 5	F4_sebelum_cycling & F4_setelah_cycling	3	.982	.121
Pair 6	F5_sebelum_cycling & F5_setelah_cycling	3	.655	.546

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	KN_sebelum_cycling - KN_setelah_cycling	.11000	.01732	.01000	.06697	.15303	11.000	2	.008
Pair 2	F1_sebelum_cycling - F1_setelah_cycling	.09333	.01528	.00882	.05539	.13128	10.583	2	.009
Pair 3	F2_sebelum_cycling - F2_setelah_cycling	.08333	.01528	.00882	.04539	.12128	9.449	2	.011
Pair 4	F3_sebelum_cycling - F3_setelah_cycling	.11000	.02000	.01155	.06032	.15968	9.526	2	.011
Pair 5	F4_sebelum_cycling - F4_setelah_cycling	.11333	.00577	.00333	.09899	.12768	34.000	2	.001
Pair 6	F5_sebelum_cycling - F5_setelah_cycling	.05667	.01155	.00667	.02798	.08535	8.500	2	.014

Lampiran 16. Uji viskositas

- **Data uji mutu fisik viskositas sediaan gel ekstrak daun bandotan**

Formula	**Sebelum *cycling test***			**Setelah *cycling test***		
	1	2	3	1	2	3
K (-)	300	320	290	290	300	280
I	300	290	310	280	290	300
II	270	250	260	260	230	240
III	210	220	230	200	200	200
IV	190	200	180	180	190	160
V	150	170	160	130	150	140

- **Uji statistik *Shapiro-Wilk*, analisis *One-Way* ANOVA**

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Formulasi	.137	18	.200*	.917	18	.114
Viskositas	.152	18	.200*	.934	18	.233

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Viskositas

Levene Statistic	df1	df2	Sig.
.276	5	12	.918

Viskositas

Tukey HSD[a]

Formulasi	N	Subset for alpha = 0.05			
		1	2	3	4
F5	3	160.00			
F4	3	190.00	190.00		
F3	3		220.00		
F2	3			260.00	
F1	3				300.00
KN	3				303.33
Sig.		.053	.053	1.000	.999

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

- **Uji statistik *Shapiro-Wilk,* analisis *Paired Sample T-test***

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	KN_sebelum_cycling	303.33	3	15.275	8.819
	KN_setelah_cycling	290.00	3	10.000	5.774
Pair 2	F1_sebelum_cycling	300.00	3	10.000	5.774
	F1_setelah_cycling	290.00	3	10.000	5.774
Pair 3	F2_sebelum_cycling	260.00	3	10.000	5.774
	F2_setelah_cycling	243.33	3	15.275	8.819
Pair 4	F3_sebelum_cycling	220.00	3	10.000	5.774
	F3_setelah_cycling	200.00	3	.000	.000
Pair 5	F4_sebelum_cycling	190.00	3	10.000	5.774
	F4_setelah_cycling	176.67	3	15.275	8.819
Pair 6	F5_sebelum_cycling	160.00[a]	3	10.000	5.774
	F5_setelah_cycling	140.00[a]	3	10.000	5.774

a. The correlation and t cannot be computed because the standard error of the difference is 0.

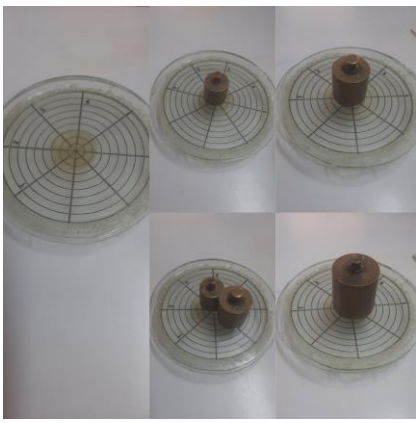
Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	KN_sebelum_cycling & KN_setelah_cycling	3	.982	.121
Pair 2	F1_sebelum_cycling & F1_setelah_cycling	3	.500	.667
Pair 3	F2_sebelum_cycling & F2_setelah_cycling	3	.982	.121
Pair 4	F3_sebelum_cycling & F3_setelah_cycling	3	.	.
Pair 5	F4_sebelum_cycling & F4_setelah_cycling	3	.982	.121

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	KN_sebelum_cycling - KN_setelah_cycling	13.333	5.774	3.333	-1.009	27.676	4.000	2	.057
Pair 2	F1_sebelum_cycling - F1_setelah_cycling	10.000	10.000	5.774	-14.841	34.841	1.732	2	.225
Pair 3	F2_sebelum_cycling - F2_setelah_cycling	16.667	5.774	3.333	2.324	31.009	5.000	2	.038
Pair 4	F3_sebelum_cycling - F3_setelah_cycling	20.000	10.000	5.774	-4.841	44.841	3.464	2	.074
Pair 5	F4_sebelum_cycling - F4_setelah_cycling	13.333	5.774	3.333	-1.009	27.676	4.000	2	.057

Lampiran 17. Uji daya sebar



- **Data uji mutu fisik daya sebar sediaan gel ekstrak daun bandotan**

a. Sebelum *cycling test*

Formula	Beban	R1	R2	R3	Rata-Rata	SD
K (-)	tb	3,07	3,10	3,10	3,09	0,02
	50	3,17	3,17	3,23	3,19	0,03
	100	3,23	3,30	3,30	3,28	0,04
	150	3,30	3,37	3,40	3,36	0,05
	200	3,37	3,43	3,47	3,42	0,05
F1	tb	3,17	3,13	3,13	3,14	0,02
	50	3,23	3,17	3,27	3,22	0,05
	100	3,43	3,23	3,33	3,33	0,10
	150	3,53	3,37	3,47	3,46	0,08
	200	3,77	3,47	3,50	3,58	0,17
F2	tb	4,33	4,23	4,30	4,29	0,05
	50	4,37	4,27	4,40	4,35	0,07
	100	4,57	4,33	4,53	4,48	0,13
	150	4,67	4,47	4,63	4,59	0,11
	200	4,90	4,63	4,77	4,77	0,14

F3	tb	5,07	5,10	5,10	5,09	0,02
	50	5,17	5,17	5,23	5,19	0,03
	100	5,23	5,30	5,30	5,28	0,04
	150	5,30	5,37	5,40	5,36	0,05
	200	5,37	5,43	5,47	5,42	0,05
F4	tb	5,17	5,13	5,13	5,14	0,02
	50	5,23	5,17	5,27	5,22	0,05
	100	5,43	5,23	5,33	5,33	0,10
	150	5,53	5,37	5,47	5,46	0,08
	200	5,77	5,47	5,50	5,58	0,17
F5	tb	5,33	5,23	5,30	5,29	0,05
	50	5,37	5,27	5,40	5,35	0,07
	100	5,57	5,33	5,53	5,48	0,13
	150	5,67	5,47	5,63	5,59	0,11
	200	5,90	5,63	5,77	5,77	0,14

b. Setelah *cycling test*

Formula	**Beban**	**R1**	**R2**	**R3**	**Rata-Rata**	**SD**
K (-)	tb	3,17	3,23	3,20	3,20	0,03
	50	3,23	3,27	3,27	3,26	0,02
	100	3,30	3,33	3,33	3,32	0,02
	150	3,43	3,40	3,40	3,41	0,02
	200	3,50	3,50	3,47	3,49	0,02
F1	tb	3,3	3,33	3,33	3,32	0,02
	50	3,37	3,43	3,43	3,41	0,03
	100	3,47	3,5	3,47	3,48	0,02
	150	3,57	3,57	3,53	3,56	0,02
	200	3,63	3,63	3,63	3,63	0,00
F2	tb	4,43	4,33	4,33	4,36	0,06
	50	4,47	4,67	4,50	4,55	0,11
	100	4,57	4,57	4,63	4,59	0,03
	150	4,7	4,77	4,73	4,73	0,04
	200	4,93	4,93	4,87	4,91	0,03
F3	tb	5,13	5,10	5,13	5,12	0,02
	50	5,27	5,23	5,30	5,27	0,04
	100	5,40	5,30	5,47	5,39	0,09
	150	5,50	5,43	5,57	5,50	0,07
	200	5,60	5,60	5,70	5,63	0,06
F4	tb	5,33	5,33	5,37	5,34	0,02
	50	5,43	5,40	5,50	5,44	0,05
	100	5,53	5,5	5,57	5,53	0,04
	150	5,63	5,63	5,70	5,65	0,04
	200	5,70	5,80	5,77	5,76	0,05
F5	tb	5,40	5,43	5,47	5,43	0,04

	50	5,53	5,53	5,53	5,53	0,00
	100	5,63	5,60	5,63	5,62	0,02
	150	5,77	5,73	5,77	5,76	0,02
	200	5,83	5,80	5,83	5,82	0,02

- **Uji statistik *Shapiro-Wilk*, analisis *Kruskal-Wallis, Mann-Withney***

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Formula	.137	18	.200*	.917	18	.114
Tanpa_beban	.279	18	.001	.779	18	.001
Gram_50	.286	18	.000	.777	18	.001
Gram_100	.269	18	.001	.800	18	.002
Gram_150	.257	18	.003	.804	18	.002
Gram_200	.236	18	.009	.829	18	.004

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

a. Lilliefors Significance Correction

Test Statistics[a,b]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Chi-Square	16.648	15.870	15.548	15.786	16.149
df	5	5	5	5	5
Asymp. Sig.	.005	.007	.008	.007	.006

a. Kruskal Wallis Test

b. Grouping Variable: Formula

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	2.500	2.500	1.500	.500
Wilcoxon W	6.000	8.500	8.500	7.500	6.500
Z	-2.023	-.943	-.899	-1.328	-1.771
Asymp. Sig. (2-tailed)	.043	.346	.369	.184	.077
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.400[b]	.400[b]	.200[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000

Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-2.023	-2.023	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.043	.043	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200

Mann-Whitney U	.000	2.500	2.500	1.500	.500
Wilcoxon W	6.000	8.500	8.500	7.500	6.500
Z	-2.023	-.943	-.899	-1.328	-1.771
Asymp. Sig. (2-tailed)	.043	.346	.369	.184	.077
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.400[b]	.400[b]	.200[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.964	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.050	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-2.023	-2.023	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.043	.043	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	2.500	2.500	1.500	.500
Wilcoxon W	6.000	8.500	8.500	7.500	6.500
Z	-2.023	-.943	-.899	-1.328	-1.771
Asymp. Sig. (2-tailed)	.043	.346	.369	.184	.077
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.400[b]	.400[b]	.200[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-2.023	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.043	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	2.500	2.500	1.500	.500
Wilcoxon W	6.000	8.500	8.500	7.500	6.500
Z	-2.023	-.943	-.899	-1.328	-1.771
Asymp. Sig. (2-tailed)	.043	.346	.369	.184	.077
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.400[b]	.400[b]	.200[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.500	1.500	1.500	1.500
Wilcoxon W	6.000	6.500	7.500	7.500	7.500
Z	-1.993	-1.771	-1.328	-1.328	-1.328
Asymp. Sig. (2-tailed)	.046	.077	.184	.184	.184
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.200[b]	.200[b]	.200[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.964	-1.964	-1.964	-1.964	-1.964
Asymp. Sig. (2-tailed)	.050	.050	.050	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.000	.000	.000	.000
Wilcoxon W	6.000	6.000	6.000	6.000	6.000
Z	-1.993	-1.993	-1.993	-1.964	-1.964
Asymp. Sig. (2-tailed)	.046	.046	.046	.050	.050

Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.100[b]	.100[b]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Test Statistics[a]

	Tanpa_beban	Gram_50	Gram_100	Gram_150	Gram_200
Mann-Whitney U	.000	.500	1.500	1.500	1.500
Wilcoxon W	6.000	6.500	7.500	7.500	7.500
Z	-1.993	-1.771	-1.328	-1.328	-1.328
Asymp. Sig. (2-tailed)	.046	.077	.184	.184	.184
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]	.200[b]	.200[b]	.200[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

- **Uji statistik *Shapiro-Wilk*, analisis *Paired Sample T-test***

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KN_sebelum_cycling	.135	15	.200*	.951	15	.545
KN_setelah_cycling	.125	15	.200*	.941	15	.399
F1_sebelum_cycling	.139	15	.200*	.925	15	.227
F1_setelah_cycling	.121	15	.200*	.930	15	.271
F2_sebelum_cycling	.147	15	.200*	.946	15	.471
F2_setelah_cycling	.090	15	.200*	.955	15	.608
F3_sebelum_cycling	.135	15	.200*	.951	15	.545
F3_setelah_cycling	.133	15	.200*	.950	15	.531
F4_sebelum_cycling	.139	15	.200*	.925	15	.227
F4_setelah_cycling	.105	15	.200*	.947	15	.480
F5_sebelum_cycling	.147	15	.200*	.946	15	.471
F5_setelah_cycling	.157	15	.200*	.922	15	.209

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

a. Lilliefors Significance Correction

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	KN_sebelum_cycling	3.2673	15	.12708	.03281
	KN_setelah_cycling	3.3353	15	.10934	.02823
Pair 2	F1_sebelum_cycling	3.3467	15	.18204	.04700
	F1_setelah_cycling	3.4793	15	.11380	.02938

Pair 3	F2_sebelum_cycling	4.4933	15	.19859	.05128
	F2_setelah_cycling	4.6287	15	.19701	.05087
Pair 4	F3_sebelum_cycling	5.2673	15	.12708	.03281
	F3_setelah_cycling	5.3820	15	.19113	.04935
Pair 5	F4_sebelum_cycling	5.3467	15	.18204	.04700
	F4_setelah_cycling	5.5460	15	.15592	.04026
Pair 6	F5_sebelum_cycling	5.4933	15	.19859	.05128
	F5_setelah_cycling	5.6320	15	.14819	.03826

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	KN_sebelum_cycling & KN_setelah_cycling	15	.937	.000
Pair 2	F1_sebelum_cycling & F1_setelah_cycling	15	.859	.000
Pair 3	F2_sebelum_cycling & F2_setelah_cycling	15	.822	.000
Pair 4	F3_sebelum_cycling & F3_setelah_cycling	15	.951	.000
Pair 5	F4_sebelum_cycling & F4_setelah_cycling	15	.848	.000
Pair 6	F5_sebelum_cycling & F5_setelah_cycling	15	.902	.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	KN_sebelum_cycling - KN_setelah_cycling	-.06800	.04554	.01176	-.09322	-.04278	-5.783	14	.000
Pair 2	F1_sebelum_cycling - F1_setelah_cycling	-.13267	.10250	.02647	-.18943	-.07590	-5.013	14	.000
Pair 3	F2_sebelum_cycling - F2_setelah_cycling	-.13533	.11819	.03052	-.20079	-.06988	-4.435	14	.001
Pair 4	F3_sebelum_cycling - F3_setelah_cycling	-.11467	.08052	.02079	-.15926	-.07008	-5.515	14	.000
Pair 5	F4_sebelum_cycling - F4_setelah_cycling	-.19933	.09662	.02495	-.25284	-.14583	-7.990	14	.000
Pair 6	F5_sebelum_cycling - F5_setelah_cycling	-.13867	.09125	.02356	-.18920	-.08813	-5.885	14	.000

Lampiran 18. Uji daya lekat

- **Data uji mutu fisik daya lekat sediaan gel ekstrak daun bandotan**

Formula	Sebelum *cycling test*			Setelah *cycling test*		
	1	2	3	1	2	3
K (-)	6,24	6,36	6,13	6,19	6,30	6,10
I	6,29	6,30	6,27	6,25	5,26	6,22
II	6,04	6,11	6,09	6,00	6,08	6,05
III	5,93	5,86	5,96	5,88	5,80	5,91
IV	5,58	5,77	5,58	5,55	5,72	5,54
V	5,53	5,31	5,42	5,49	5,27	5,37

- **Uji statistik *Shapiro-Wilk*, analisis *One-Way* ANOVA**

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Formula	.137	18	.200*	.917	18	.114
Daya_Lekat	.164	18	.200*	.917	18	.112

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

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Daya_Lekat

Levene Statistic	df1	df2	Sig.
1.864	5	12	.175

Daya_Lekat

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05

		1	2	3	4
F5	3	5.4200			
F4	3	5.5900			
F3	3		5.9167		
F2	3		6.0800	6.0800	
KN	3			6.2433	6.2433
F1	3				6.2867
Sig.		.096	.116	.116	.970

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

- **Uji statistik *Shapiro-Wilk,* analisis *Paired Sample T-test***

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
KN_sebelum_cycling	.135	15	.200*	.951	15	.545
KN_setelah_cycling	.125	15	.200*	.941	15	.399
F1_sebelum_cycling	.139	15	.200*	.925	15	.227
F1_setelah_cycling	.121	15	.200*	.930	15	.271
F2_sebelum_cycling	.147	15	.200*	.946	15	.471
F2_setelah_cycling	.090	15	.200*	.955	15	.608
F3_sebelum_cycling	.135	15	.200*	.951	15	.545
F3_setelah_cycling	.133	15	.200*	.950	15	.531
F4_sebelum_cycling	.139	15	.200*	.925	15	.227
F4_setelah_cycling	.105	15	.200*	.947	15	.480
F5_sebelum_cycling	.147	15	.200*	.946	15	.471
F5_setelah_cycling	.157	15	.200*	.922	15	.209

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

a. Lilliefors Significance Correction

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	KN_sebelum_cycling	3.2673	15	.12708	.03281
	KN_setelah_cycling	3.3353	15	.10934	.02823
Pair 2	F1_sebelum_cycling	3.3467	15	.18204	.04700
	F1_setelah_cycling	3.4793	15	.11380	.02938
Pair 3	F2_sebelum_cycling	4.4933	15	.19859	.05128
	F2_setelah_cycling	4.6287	15	.19701	.05087

Pair 4	F3_sebelum_cycling	5.2673	15	.12708	.03281
	F3_setelah_cycling	5.3820	15	.19113	.04935
Pair 5	F4_sebelum_cycling	5.3467	15	.18204	.04700
	F4_setelah_cycling	5.5460	15	.15592	.04026
Pair 6	F5_sebelum_cycling	5.4933	15	.19859	.05128
	F5_setelah_cycling	5.6320	15	.14819	.03826

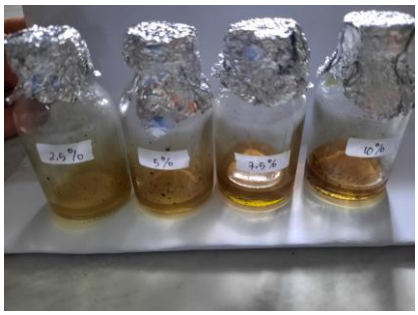
Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	KN_sebelum_cycling & KN_setelah_cycling	15	.937	.000
Pair 2	F1_sebelum_cycling & F1_setelah_cycling	15	.859	.000
Pair 3	F2_sebelum_cycling & F2_setelah_cycling	15	.822	.000
Pair 4	F3_sebelum_cycling & F3_setelah_cycling	15	.951	.000
Pair 5	F4_sebelum_cycling & F4_setelah_cycling	15	.848	.000
Pair 6	F5_sebelum_cycling & F5_setelah_cycling	15	.902	.000

Paired Samples Test

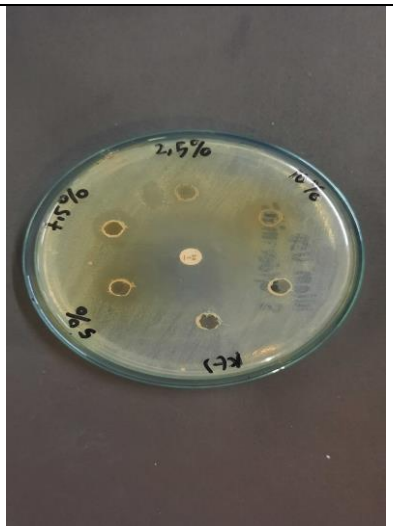
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	KN_sebelum_cycling - KN_setelah_cycling	-.06800	.04554	.01176	-.09322	-.04278	-5.783	14	.000
Pair 2	F1_sebelum_cycling - F1_setelah_cycling	-.13267	.10250	.02647	-.18943	-.07590	-5.013	14	.000
Pair 3	F2_sebelum_cycling - F2_setelah_cycling	-.13533	.11819	.03052	-.20079	-.06988	-4.435	14	.001
Pair 4	F3_sebelum_cycling - F3_setelah_cycling	-.11467	.08052	.02079	-.15926	-.07008	-5.515	14	.000
Pair 5	F4_sebelum_cycling - F4_setelah_cycling	-.19933	.09662	.02495	-.25284	-.14583	-7.990	14	.000
Pair 6	F5_sebelum_cycling - F5_setelah_cycling	-.13867	.09125	.02356	-.18920	-.08813	-5.885	14	.000

Lampiran 19. Pembuatan konsentrasi larutan uji

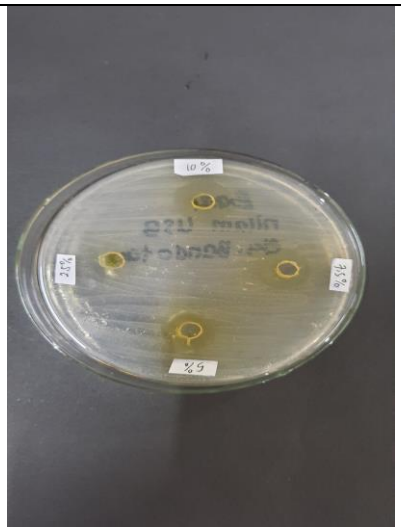


Lampiran 20. Suspensi bakteri

Lampiran 21. Uji aktivitas antibakteri ekstrak daun bandotan



Replikasi 1



Replikasi 2

Replikasi 3

- **Data uji aktivitas antibakteri ekstrak daun bandotan**

Konsentrasi	R1	R2	R3	Rata-Rata	SD
K (-)	0	0	0	0	0
K(+)	33,27	33,36	33,38	33,34	0,06
2,5%	9,01	9,96	9,93	9,63	0,54
5%	12,60	13,40	12,83	12,94	0,41
7,5%	13,10	14,42	12,95	13,49	0,81
10%	16,27	16,14	16,25	16,22	0,07

- **Uji statistik *Shapiro-Wilk*, analisis *Kruskal-Wallis, Mann-Withney***

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Konsentrasi	.137	18	.200*	.917	18	.114
Orientasi_ekstrak	.256	18	.003	.853	18	.009

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

a. Lilliefors Significance Correction

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Orientasi_ekstrak	18	14.2706	10.25203	.00	33.38
Konsentrasi	18	3.50	1.757	1	6

Test Statistics[a,b]

	Orientasi_ekstrak
Chi-Square	16.319
df	5
Asymp. Sig.	.006

a. Kruskal Wallis Test

b. Grouping Variable: Konsentrasi

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037

Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050

Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037

Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	2.000
Wilcoxon W	8.000
Z	-1.091
Asymp. Sig. (2-tailed)	.275
Exact Sig. [2*(1-tailed Sig.)]	.400[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050

Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	2.000
Wilcoxon W	8.000
Z	-1.091
Asymp. Sig. (2-tailed)	.275
Exact Sig. [2*(1-tailed Sig.)]	.400[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

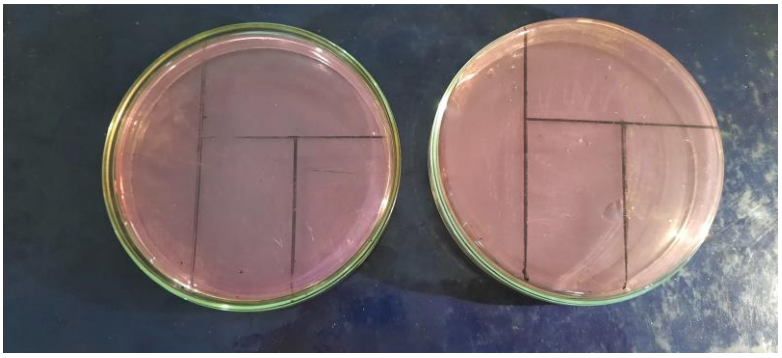
	Orientasi_ekstrak
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050

Exact Sig. [2*(1-tailed Sig.)]	.100[b]

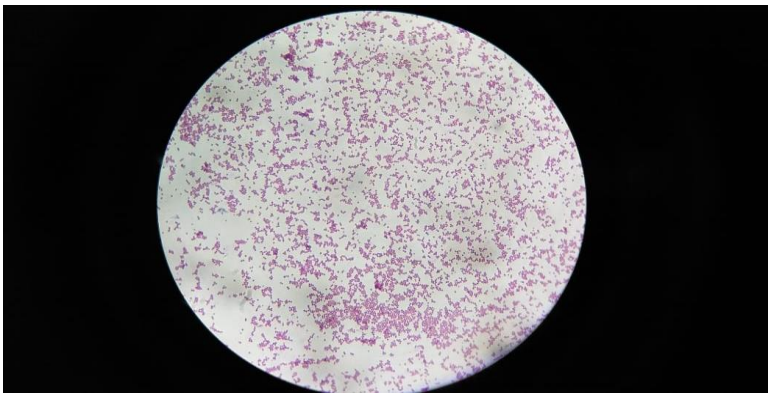
a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

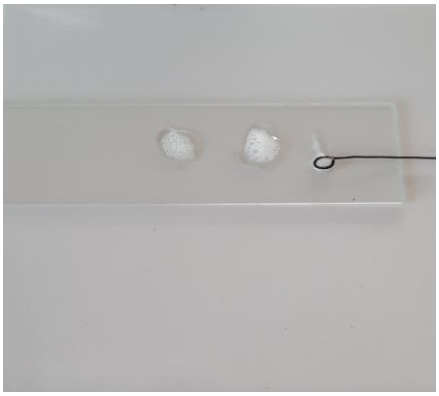
Lampiran 22. Hasil identifikasi goresan



Lampiran 23. Hasil pewarnaan Gram

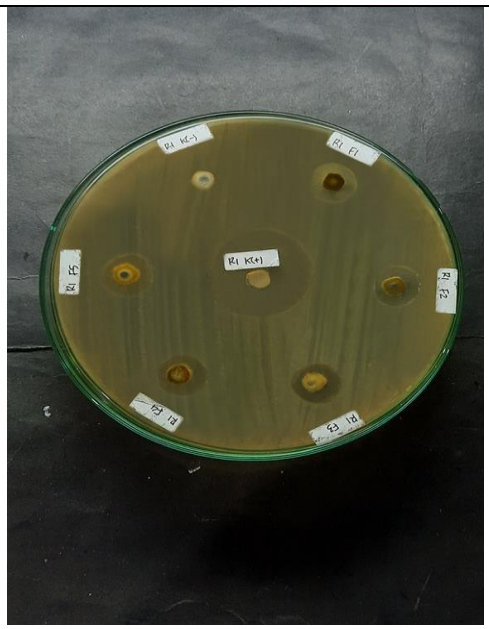
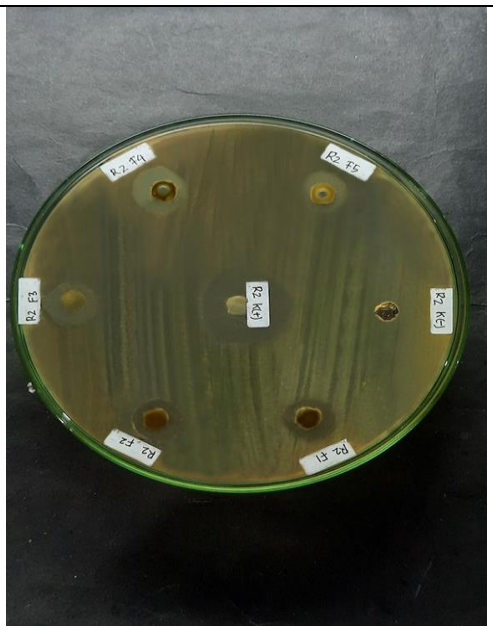


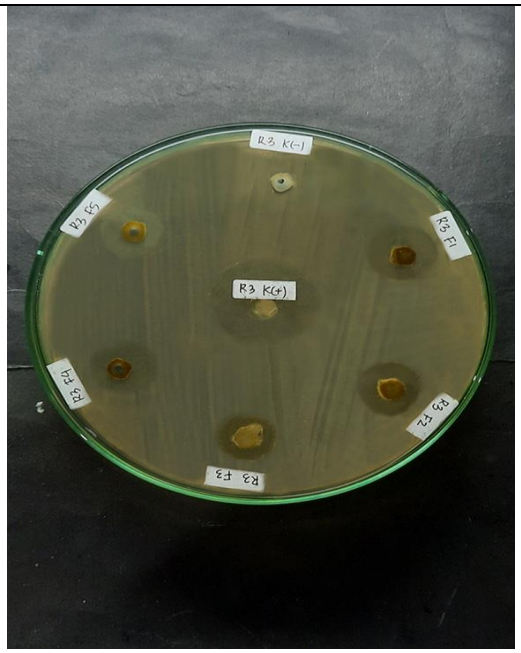
Lampiran 24. Hasil uji katalase



Lampiran 25. Hasil uji koagulase

Lampiran 26. Uji aktivitas antibakteri sediaan gel ekstrak daun bandotan

	
Replikasi 1	**Replikasi 2**



Replikasi 3

- **Data uji aktivitas antibakteri sediaan gel ekstrak daun bandotan**

Konsentrasi	R1	R2	R3	Rata-Rata	SD
K (-)	0,00	0,00	0,00	0,00	0,00
K (+)	38,15	35,16	38,04	37,12	1,70
F1	17,02	16,53	15,67	16,41	0,68
F2	16,02	16,73	16,82	16,52	0,44
F3	16,74	15,79	15,87	16,13	0,53
F4	16,25	16,77	15,90	16,31	0,44
F5	16,28	15,23	16,77	16,09	0,79

- **Uji statistik *Shapiro-Wilk*, analisis *Kruskal-Wallis*, *Mann-Withney***

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Konsentrasi	.121	21	.200*	.926	21	.115
Uji_Aktivitas_Antibakteri	.354	21	.000	.757	21	.000

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

a. Lilliefors Significance Correction

Test Statistics[a,b]

	Uji_Aktivitas_Antibakteri
Chi-Square	13.381

df	6
Asymp. Sig.	.037

a. Kruskal Wallis Test

b. Grouping Variable: Konsentrasi

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
Asymp. Sig. (2-tailed)	.037
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.087
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Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

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Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	4.000
Wilcoxon W	10.000
Z	-.218
Asymp. Sig. (2-tailed)	.827
Exact Sig. [2*(1-tailed Sig.)]	1.000[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
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a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	3.000
Wilcoxon W	9.000
Z	-.655
Asymp. Sig. (2-tailed)	.513
Exact Sig. [2*(1-tailed Sig.)]	.700[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

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Exact Sig. [2*(1-tailed Sig.)]	1.000[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	2.000
Wilcoxon W	8.000
Z	-1.091
Asymp. Sig. (2-tailed)	.275

Exact Sig. [2*(1-tailed Sig.)]	.400[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.

Test Statistics[a]

	Uji_Aktivitas_Antibakteri
Mann-Whitney U	3.000
Wilcoxon W	9.000
Z	-.655
Asymp. Sig. (2-tailed)	.513
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b. Not corrected for ties.

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	Uji_Aktivitas_Antibakteri
Mann-Whitney U	4.500
Wilcoxon W	10.500
Z	.000
Asymp. Sig. (2-tailed)	1.000
Exact Sig. [2*(1-tailed Sig.)]	1.000[b]

a. Grouping Variable: Konsentrasi

b. Not corrected for ties.