L A M P I R A N

Lampiran 1. Hasil determinasi tanaman daun kelor

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
BADAN PENELITIAN DAN PENGEMBANGAN KESEHATAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
TANAMAN OBAT DAN OBAT TRADISIONAL
Jalan Lawu No.11 Tawamangu, Karanganyar, Jawa Tengah 57792
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Nomor : KM.04.02/2/2677/2021 21 November 2021
Lampiran : -
Hal : Keterangan Determinasi

Yth. Dekan Fakultas Farmasi Universitas Setia Budi
Jalan Letjend. Sutoyo Solo 57127

Merujuk surat Saudara nomor: 471/H6-04/10.09.2021 tanggal 10 September 2021 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon	: Ika Sevi Hartanti
Nama Sampel	: Kelor
Sampel	: Segar
Spesies	: *Moringa oleifera* Lam.
Sinonim	: *Guilandina moringa* L.; *Moringa zeylanica* Burmann
Familia	: Moringaceae
Penanggung Jawab	: Isna Jati Asiyah, M.Sc.

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke B2P2TOOT.

Atas perhatian Saudara, kami sampaikan terima kasih.

Kepala Balai Besar Penelitian
dan Pengembangan Tanaman Obat
dan Obat Tradisional
Tawangmangu,

Akhmad Saikhu, S.K.M., M.Sc.PH.
NIP 196805251992031004

Tembusan :
-

Dokumen ini ditandatangani secara elektronik melalui Aplikasi TNDE menggunakan sertifikat elektronik yang diterbitkan oleh BSrE. (1/1)

Lampiran 2. Proses pembuatan serbuk

Daun segar

Proses pengeringan

Daun kering

Serbuk hasil

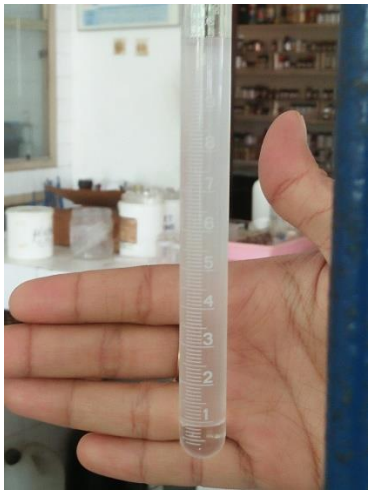
Lampiran 3. Proses pembuatan ekstrak

Proses maserasi (perendaman)

Proses penyaringan

Lampiran 4. Penetapan kadar air serbuk

Gambar alat

Serbuk	Penimbangan	Kandungan air serbuk
Daun kelor	10,018 gram	6,98 %
	10,015 gram	6,99 %
	10,050 gram	7,96 %
Rata – rata ± SD		7,31 % ± 0.56

Perhitungan

- **Kadar air serbuk 1**

  Bobot kertas kosong = 0,658 gram

  Bobot kertas + serbuk = 10,676 gram

  Bobot serbuk = 10,018 gram

  Volume air = 0,7 mL

  = $\frac{0,7}{10,018}$ x 100

  = 6,98 %

- **Kadar air serbuk 2**

  Bobot kertas kosong = 0,708 gram

  Bobot kertas + serbuk = 10,723 gram

  Bobot serbuk = 10,015 gram

  Volume air = 0,7 mL

  = $\frac{0,7}{10,015}$ x 100

  = 6,99 %

- **Kadar air serbuk 3**

  Bobot kertas kosong = 0,682 gram

  Bobot kertas + serbuk = 10,732 gram

  Bobot serbuk = 10,050 gram

  Volume air = 0,8 mL

  = $\frac{0,8}{10,050}$ x 100

  = 7,96 %

  Rata – rata kadar air serbuk daun kelor = $\frac{6,98\%+6,99\%+7,96\%}{3}$

  = 7,31%

Lampiran 5. Perhitungan rendemen

1. **Rendemen serbuk**

Bobot kering (g)	Bobot serbuk (g)	Rendemen (%)
1000 g	800 g	80%

Perhitungan :

% Rendemen serbuk = $\frac{bobot\ sesudah}{bobot\ sebelum}\ x\ 100\%$

= $\frac{800\ g}{1000\ g}\ x\ 100\ \%$

= 80 %

2. **Rendemen kering (simplisia)**

Perhitungan

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

= $\frac{1{,}0\ kg}{10\ kg}\ x\ 100\%$

= 10%

3. **Rendemen ekstrak**

Bobot serbuk (g)	Bobot esktrak (g)	Rendemen (%)
700 g	110 g	15,71%

Perhitungan :

% Rendemen ekstrak = $\frac{bobot\ ekstrak}{bobot\ serbuk}\ x\ 100\ \%$

= $\frac{110\ g}{700\ g}\ x\ 100\%$

= 15,71 %

Lampiran 6. Penetapan susut pengeringan serbuk daun kelor

Gambar alat

Moisture Ballance

Replikasi 1

Replikasi 2

Replikasi 3

Serbuk	Penimbangan	Kandungan lembab serbuk
Daun kelor	2,0 gram	7,6 %
	2,0 gram	7,4 %
	2,0 gram	7,6 %
Rata-rata ± SD		7,5 % ± 0,12

Perhitungan

Susut pengeringan I = 7,6 %

Susut pengeringan II = 7,4 %

Susut pengeringan III = 7,6 %

Rata-rata susut pengeringan $= \frac{7{,}6\,\% + 7{,}4\,\% + 7{,}6\,\%}{3}$

= 7,5 %

Lampiran 7. Hasil ekstraksi daun kelor

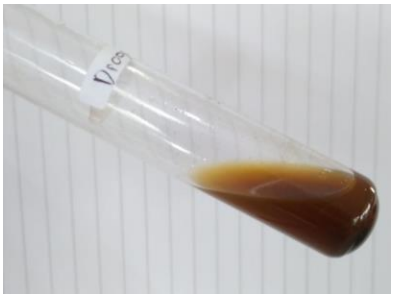
Perhitungan

Bobot ekstrak = (bobot botol + ekstrak) – bobot botol kosong

= 347 gram – 237 gram

= 110 gram

Lampiran 8. Hasil identifikasi senyawa ekstrak daun kelor

Hasil pengujian flavonoid 	**Hasil pengujian saponin** 
Hasil pengujian tanin 	**Hasil pengujian terpenoid** 
Hasil pengujian alkaloid (Dragendorf) 	**Hasil pengujian alkaloid (Mayer)** 

Hasil pengujian alkaloid (Wagner)	Hasil pengujian bebas etanol
	

Lampiran 9. Hasil kadar air ekstrak (Gravimetri)

Gambar alat



Oven suhu 105^{0}C

No	Bobot awal	Bobot akhir	Kadar air (%)
1	1,0807 gram	1,0329 gram	5,41 %
2	1,0520 gram	1,0060 gram	4,37 %
3	1,0365 gram	0,9900 gram	4,48 %
	Rata – rata		4,75 % ± 0,58

Perhitungan

Kadar air ekstrak 1

- **Bobot kurs kosong = 7,7653 g**
- **Bobot kurs + ekstrak awal = 8,846 g**
- **Bobot kurs + ekstrak akhir = 8,7982 g**
- **Bobot ekstrak awal = 8,846 g - 7,7653 g = 1,0807 g**
- **Bobot ekstrak akhir = 8,7982 g - 7,7653 g = 1,0329 g**

$$= \frac{Berat\ awal - berat\ akhir}{Berat\ awal} \text{ x } 100$$

$$= \frac{1{,}0807 - 1{,}0329}{1{,}0807} \text{ x } 100$$

= 5,41 %

Kadar air ekstrak 2

- **Bobot kurs kosong = 7,3521 g**
- **Bobot kurs + ekstrak awal = 8,4041 g**
- **Bobot kurs + ekstrak akhir = 8,3581 g**
- **Bobot ekstrak awal = 8,4041 g - 7,3521 g = 1,052 g**
- **Bobot ekstrak akhir = 8,3581 g - 7,3521 g = 1,006 g**

$$= \frac{Berat\ awal - berat\ akhir}{Berat\ awal} \text{ x } 100$$

$$= \frac{1{,}052 - 1{,}006}{1{,}052} \text{ x } 100$$

= 4,37 %

Kadar air ekstrak 3

- **Bobot kurs kosong = 7,9538 g**
- **Bobot kurs + ekstrak awal = 8,9903 g**
- **Bobot kurs + ekstrak akhir = 8,9023 g**
- **Bobot ekstrak awal = 8,9903 g - 7,9538 g = 1,0365 g**
- **Bobot ekstrak akhir = 8,9438 - 7,9538 g = 0,9900 g**

$$= \frac{Berat\ awal - berat\ akhir}{Berat\ awal} \text{ x } 100$$

$$= \frac{1{,}0365 - 0{,}9900}{1{,}0365} \text{ x } 100$$

= 4,48 %

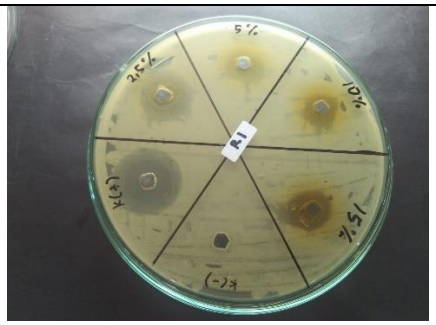
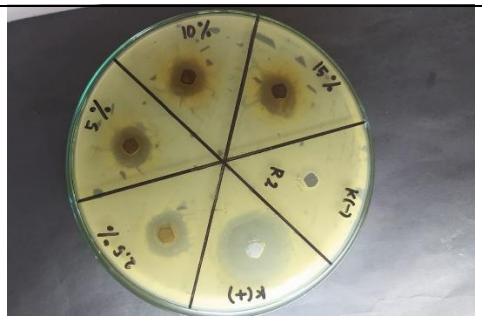
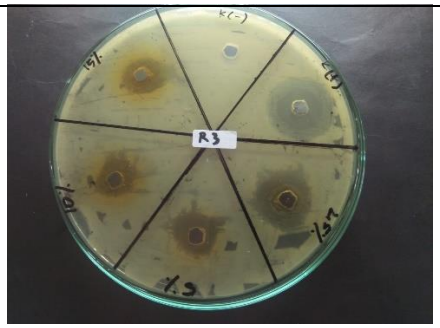
Rata – rata kadar air ekstrak daun kelor $\frac{5{,}41\,\% + 4{,}37\,\% + 4{,}48\,\%}{3}$

= 4,75%

Lampiran 10. Hasil uji antibakteri ekstrak daun kelor

Konsentrasi	Zona hambat (mm)			Rata-rata	SD
	R1	R2	R3		
2.50%	12	12,5	12,8	12,43	0,40
5%	14	13,8	13,65	13,82	0,18
10%	15	15,4	15,3	15,23	0,21
15%	16	16,7	16,5	16,40	0,36
K+	27,3	27	27,5	27,27	0,25
K-	0	0	0	0	0

Gambar hasil :

Replikasi 1	
Replikasi 2	
Replikasi 3	

Analisis Statistik

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Formula	N	Percent	N	Percent	N	Percent
Daya Hambat Ekstrak	2.5%	3	100.0%	0	0.0%	3	100.0%
	5%	3	100.0%	0	0.0%	3	100.0%
	10%	3	100.0%	0	0.0%	3	100.0%
	15%	3	100.0%	0	0.0%	3	100.0%
	K+	3	100.0%	0	0.0%	3	100.0%
	K-	3	100.0%	0	0.0%	3	100.0%

Descriptives

	Formula			Statistic	Std. Error
Daya Hambat Ekstrak	2.5%	Mean		12.4333	.23333
		95% Confidence Interval for Mean	Lower Bound	11.4294	
			Upper Bound	13.4373	
		5% Trimmed Mean		.	
		Median		12.5000	
		Variance		.163	
		Std. Deviation		.40415	
		Minimum		12.00	
		Maximum		12.80	
		Range		.80	
		Interquartile Range		.	
		Skewness		-.722	1.225
		Kurtosis		.	.
	5%	Mean		13.8167	.10138
		95% Confidence Interval for Mean	Lower Bound	13.3805	
			Upper Bound	14.2529	
		5% Trimmed Mean		.	
		Median		13.8000	
		Variance		.031	
		Std. Deviation		.17559	
		Minimum		13.65	
		Maximum		14.00	
		Range		.35	
		Interquartile Range		.	

		Skewness		.423	1.225
		Kurtosis		.	.
	10%	Mean		15.2333	.12019
		95% Confidence Interval for Mean	Lower Bound	14.7162	
			Upper Bound	15.7504	
		5% Trimmed Mean		.	
		Median		15.3000	
		Variance		.043	
		Std. Deviation		.20817	
		Minimum		15.00	
		Maximum		15.40	
		Range		.40	
		Interquartile Range		.	
		Skewness		-1.293	1.225
		Kurtosis		.	.
	15%	Mean		16.4000	.20817
		95% Confidence Interval for Mean	Lower Bound	15.5043	
			Upper Bound	17.2957	
		5% Trimmed Mean		.	
		Median		16.5000	
		Variance		.130	
		Std. Deviation		.36056	
		Minimum		16.00	
		Maximum		16.70	
		Range		.70	
		Interquartile Range		.	
		Skewness		-1.152	1.225
		Kurtosis		.	.
	K+	Mean		27.2667	.14530
		95% Confidence Interval for Mean	Lower Bound	26.6415	
			Upper Bound	27.8918	
		5% Trimmed Mean		.	
		Median		27.3000	
		Variance		.063	
		Std. Deviation		.25166	
		Minimum		27.00	
		Maximum		27.50	

		Range	.50	
		Interquartile Range	.	
		Skewness	-.586	1.225
		Kurtosis	.	.
	K-	Mean	.0000	.00000
		95% Confidence Interval for Mean Lower Bound	.0000	
		95% Confidence Interval for Mean Upper Bound	.0000	
		5% Trimmed Mean	.0000	
		Median	.0000	
		Variance	.000	
		Std. Deviation	.00000	
		Minimum	.00	
		Maximum	.00	
		Range	.00	
		Interquartile Range	.00	
		Skewness	.	.
		Kurtosis	.	.

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Daya Hambat Ekstrak	2.5%	.232	3	.	.980	3	.726
	5%	.204	3	.	.993	3	.843
	10%	.292	3	.	.923	3	.463
	15%	.276	3	.	.942	3	.537
	K+	.219	3	.	.987	3	.780
	K-	.	3	.	.	3	.

a. Lilliefors Significance Correction

Oneway

Descriptives

Daya Hambat Ekstrak

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
2.5%	3	12.4333	.40415	.23333	11.4294	13.4373	12.00	12.80
5%	3	13.8167	.17559	.10138	13.3805	14.2529	13.65	14.00
10%	3	15.2333	.20817	.12019	14.7162	15.7504	15.00	15.40
15%	3	16.4000	.36056	.20817	15.5043	17.2957	16.00	16.70
K+	3	27.2667	.25166	.14530	26.6415	27.8918	27.00	27.50
K-	3	.0000	.00000	.00000	.0000	.0000	.00	.00
Total	18	14.1917	8.20875	1.93482	10.1096	18.2738	.00	27.50

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Daya Hambat Ekstrak	Based on Mean	2.129	5	12	.132
	Based on Median	.873	5	12	.527
	Based on Median and with adjusted df	.873	5	7.351	.542
	Based on trimmed mean	2.026	5	12	.147

ANOVA

Daya Hambat Ekstrak

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1144.660	5	228.932	3188.220	.000
Within Groups	.862	12	.072		
Total	1145.521	17			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Daya Hambat Ekstrak

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
2.5%	5%	-1.38333*	.21879	.000	-2.1182	-.6484
	10%	-2.80000*	.21879	.000	-3.5349	-2.0651
	15%	-3.96667*	.21879	.000	-4.7016	-3.2318
	K+	-14.83333*	.21879	.000	-15.5682	-14.0984
	K-	12.43333*	.21879	.000	11.6984	13.1682
5%	2.5%	1.38333*	.21879	.000	.6484	2.1182
	10%	-1.41667*	.21879	.000	-2.1516	-.6818
	15%	-2.58333*	.21879	.000	-3.3182	-1.8484
	K+	-13.45000*	.21879	.000	-14.1849	-12.7151
	K-	13.81667*	.21879	.000	13.0818	14.5516
10%	2.5%	2.80000*	.21879	.000	2.0651	3.5349
	5%	1.41667*	.21879	.000	.6818	2.1516
	15%	-1.16667*	.21879	.002	-1.9016	-.4318
	K+	-12.03333*	.21879	.000	-12.7682	-11.2984
	K-	15.23333*	.21879	.000	14.4984	15.9682
15%	2.5%	3.96667*	.21879	.000	3.2318	4.7016
	5%	2.58333*	.21879	.000	1.8484	3.3182
	10%	1.16667*	.21879	.002	.4318	1.9016
	K+	-10.86667*	.21879	.000	-11.6016	-10.1318
	K-	16.40000*	.21879	.000	15.6651	17.1349
K+	2.5%	14.83333*	.21879	.000	14.0984	15.5682
	5%	13.45000*	.21879	.000	12.7151	14.1849
	10%	12.03333*	.21879	.000	11.2984	12.7682
	15%	10.86667*	.21879	.000	10.1318	11.6016
	K-	27.26667*	.21879	.000	26.5318	28.0016
K-	2.5%	-12.43333*	.21879	.000	-13.1682	-11.6984
	5%	-13.81667*	.21879	.000	-14.5516	-13.0818
	10%	-15.23333*	.21879	.000	-15.9682	-14.4984
	15%	-16.40000*	.21879	.000	-17.1349	-15.6651
	K+	-27.26667*	.21879	.000	-28.0016	-26.5318

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

Homogeneous Subsets

Daya Hambat Ekstrak

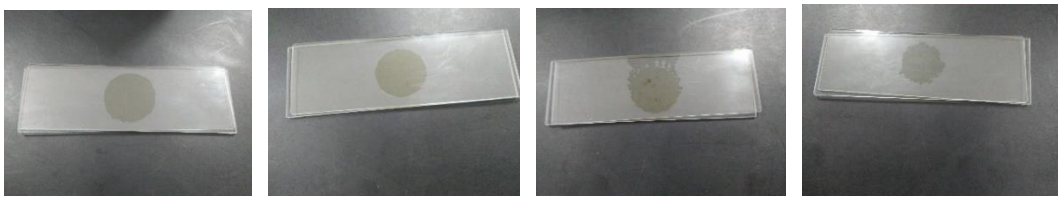
Tukey HSD[a]

Formula	N	Subset for alpha = 0.05					
		1	2	3	4	5	6
K-	3	.0000					
2.5%	3		12.4333				
5%	3			13.8167			
10%	3				15.2333		
15%	3					16.4000	
K+	3						27.2667
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.

Lampiran 11. Uji organoleptis

Lampiran 12. Uji homogenitas



F1	F2	F3	F4

Lampiran 13. Hasil uji pH serum ekstrak daun kelor

Gambar alat

Alat pH meter

Waktu	Formula	Uji pH			Rata-rata	SD
		R1	R2	R3		
Hari ke-1	1	5,65	5,6	5,63	5,63	0,03
	2	5,48	5,49	5,47	5,48	0,01
	3	5,25	5,3	5,35	5,30	0,05
	4	5,6	5,7	5,6	5,66	0,05
Hari ke-21	1	5,62	5,59	5,63	5,61	0,02
	2	5,47	5,45	5,46	5,46	0,01
	3	5,28	5,24	5,33	5,28	0,15
	4	5,58	5,7	5,67	5,65	0,07

Analisis SPSS

Statistik *one way anova* pH hari ke-1

ONE WAY

Descriptives

pH hari ke-1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
F1	3	5.6267	.02517	.01453	5.5642	5.6892	5.60	5.65
F2	3	5.4800	.01000	.00577	5.4552	5.5048	5.47	5.49
F3	3	5.3000	.05000	.02887	5.1758	5.4242	5.25	5.35
Basis	3	5.6567	.05132	.02963	5.5292	5.7841	5.60	5.70
Total	12	5.5158	.15126	.04367	5.4197	5.6119	5.25	5.70

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
pH hari ke-1	Based on Mean	1.623	3	8	.259
	Based on Median	.890	3	8	.486
	Based on Median and with adjusted df	.890	3	4.795	.509
	Based on trimmed mean	1.574	3	8	.270

ANOVA

pH hari ke-1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.240	3	.080	54.536	.000
Within Groups	.012	8	.001		
Total	.252	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: pH hari ke-1

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
F1	F2	.14667*	.03127	.007	.0465	.2468
	F3	.32667*	.03127	.000	.2265	.4268
	Basis	-.03000	.03127	.775	-.1301	.0701
F2	F1	-.14667*	.03127	.007	-.2468	-.0465
	F3	.18000*	.03127	.002	.0799	.2801
	Basis	-.17667*	.03127	.002	-.2768	-.0765
F3	F1	-.32667*	.03127	.000	-.4268	-.2265
	F2	-.18000*	.03127	.002	-.2801	-.0799
	Basis	-.35667*	.03127	.000	-.4568	-.2565
Basis	F1	.03000	.03127	.775	-.0701	.1301
	F2	.17667*	.03127	.002	.0765	.2768
	F3	.35667*	.03127	.000	.2565	.4568

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

Homogeneous Subsets

pH hari ke-1

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05 1	2	3
F3	3	5.3000		
F2	3		5.4800	
F1	3			5.6267
Basis	3			5.6567
Sig.		1.000	1.000	.775

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Statistik *one way anova* pH hari ke-21

ONE WAY

Descriptives

pH hari ke-21

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
F1	3	5.6133	.02082	.01202	5.5616	5.6650	5.59	5.63
F2	3	5.4600	.01000	.00577	5.4352	5.4848	5.45	5.47
F3	3	5.2833	.04509	.02603	5.1713	5.3953	5.24	5.33
Basis	3	5.6500	.06245	.03606	5.4949	5.8051	5.58	5.70
Total	12	5.5017	.15509	.04477	5.4031	5.6002	5.24	5.70

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
pH hari ke-21	Based on Mean	2.828	3	8	.107
	Based on Median	.909	3	8	.478
	Based on Median and with adjusted df	.909	3	3.796	.515
	Based on trimmed mean	2.653	3	8	.120

ANOVA

pH hari ke-21

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.252	3	.084	51.883	.000
Within Groups	.013	8	.002		
Total	.265	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: pH hari ke-21

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
F1	F2	.15333*	.03283	.007	.0482	.2585
	F3	.33000*	.03283	.000	.2249	.4351
	Basis	-.03667	.03283	.690	-.1418	.0685
F2	F1	-.15333*	.03283	.007	-.2585	-.0482
	F3	.17667*	.03283	.003	.0715	.2818
	Basis	-.19000*	.03283	.002	-.2951	-.0849
F3	F1	-.33000*	.03283	.000	-.4351	-.2249
	F2	-.17667*	.03283	.003	-.2818	-.0715
	Basis	-.36667*	.03283	.000	-.4718	-.2615
Basis	F1	.03667	.03283	.690	-.0685	.1418
	F2	.19000*	.03283	.002	.0849	.2951
	F3	.36667*	.03283	.000	.2615	.4718

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

Homogeneous Subsets

pH hari ke-21

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05 1	2	3
F3	3	5.2833		
F2	3		5.4600	
F1	3			5.6133
Basis	3			5.6500
Sig.		1.000	1.000	.690

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

SPSS *Paired t test* pH hari 1 dan 21

Descriptives

			Statistic	Std. Error
pH hari ke-1	Mean		5.5158	.04367
	95% Confidence Interval for Mean	Lower Bound	5.4197	
		Upper Bound	5.6119	
	5% Trimmed Mean		5.5204	
	Median		5.5450	
	Variance		.023	
	Std. Deviation		.15126	
	Minimum		5.25	
	Maximum		5.70	
	Range		.45	
	Interquartile Range		.27	
	Skewness		-.585	.637
	Kurtosis		-.952	1.232
pH hari ke-21	Mean		5.5017	.04477
	95% Confidence Interval for Mean	Lower Bound	5.4031	
		Upper Bound	5.6002	
	5% Trimmed Mean		5.5052	
	Median		5.5250	
	Variance		.024	
	Std. Deviation		.15509	
	Minimum		5.24	
	Maximum		5.70	
	Range		.46	
	Interquartile Range		.27	
	Skewness		-.485	.637
	Kurtosis		-1.065	1.232

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pH hari ke-1	.211	12	.146	.914	12	.239
pH hari ke-21	.193	12	.200*	.923	12	.315

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pH hari ke-1	5.5158	12	.15126	.04367
	pH hari ke-21	5.5017	12	.15509	.04477

Paired Samples Correlations

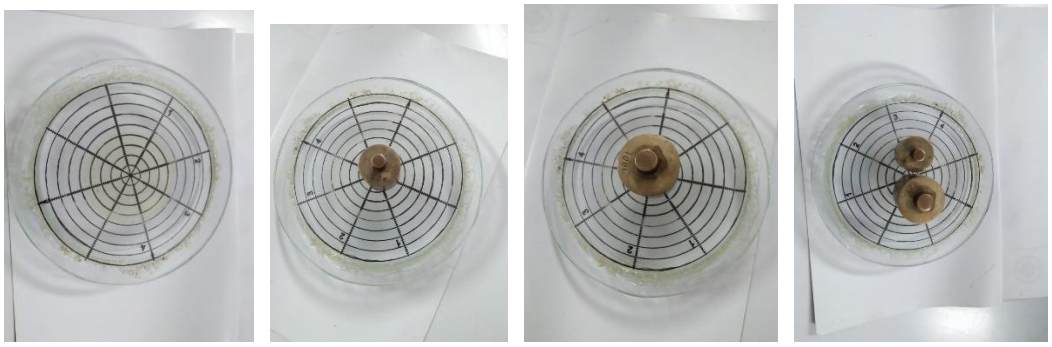
		N	Correlation	Sig.
Pair 1	pH hari ke-1 & pH hari ke-21	12	.989	.000

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	pH hari ke-1 - pH hari ke-21	.01417	.02275	.00657	-.00029	.02862	2.157	11	.054

Lampiran 14. Uji Daya Sebar

Gambar alat



0 gram **50 gram** **100 gram** **150 gram**

- **Formula 1**

Waktu	Formula 1	Daya sebar			Rata-rata	SD
		R1	R2	R3		
Hari ke-1	0	5,1	5,12	5,11	5,11	0,01
	50	5,18	5,2	5,2	5,19	0,01
	100	5,33	5,32	5,3	5,32	0,02
	150	5,38	5,43	5,50	5,44	0,06
Hari ke-21	0	5,18	5,2	5,15	5,18	0,03
	50	5,23	5,28	5,3	5,27	0,04
	100	5,33	5,38	5,35	5,35	0,03
	150	5,43	5,45	5,50	5,46	0,04

- **Formula 2**

Waktu	Formula 2	Daya sebar			Rata-rata	SD
		R1	R2	R3		
Hari ke-1	0	5,2	5,26	5,33	5,26	0,07
	50	5,33	5,37	5,4	5,37	0,04
	100	5,43	5,48	5,42	5,44	0,03
	150	5,56	5,6	5,53	5,56	0,04
Hari ke-21	0	5,25	5,3	5,36	5,30	0,06
	50	5,38	5,4	5,4	5,39	0,01
	100	5,48	5,5	5,48	5,49	0,01
	150	5,59	5,61	5,59	5,60	0,01

- **Formula 3**

Waktu	**Formula 3**	**Daya sebar**			**Rata-rata**	**SD**
		R1	**R2**	**R3**		
Hari ke-1	**0**	5,23	5,24	5,24	5,24	0,01
	50	5,38	5,38	5,32	5,36	0,03
	100	5,49	5,51	5,49	5,50	0,01
	150	5,6	5,65	5,6	5,62	0,03
Hari ke-21	**0**	5,25	5,26	5,29	5,27	0,02
	50	5,38	5,4	5,38	5,39	0,01
	100	5,5	5,5	5,48	5,49	0,01
	150	5,67	5,65	5,62	5,65	0,03

- **Formula 4**

Waktu	**Formula 4**	**Daya sebar**			**Rata-rata**	**SD**
		R1	**R2**	**R3**		
Hari ke-1	0	5,22	5,2	5,22	5,21	0,01
	50	5,3	5,33	5,35	5,33	0,03
	100	5,43	5,43	5,4	5,42	0,02
	150	5,50	5,30	5,30	5,37	0,11
Hari ke-21	0	5,26	5,25	5,25	5,25	0,01
	50	5,33	5,3	5,32	5,32	0,02
	100	5,45	5,32	5,4	5,39	0,07
	150	5,40	5,38	5,35	5,38	0,02

Analisis SPSS

Statistik *one way anova* daya sebar hari ke-1

ONE WAY

Descriptives

Daya Sebar hari ke 1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
F1	3	5.4367	.06028	.03480	5.2869	5.5864	5.38	5.50
F2	3	5.5633	.03512	.02028	5.4761	5.6506	5.53	5.60
F3	3	5.6167	.02887	.01667	5.5450	5.6884	5.60	5.65
Basis	3	5.3667	.11547	.06667	5.0798	5.6535	5.30	5.50
Total	12	5.4958	.11912	.03439	5.4201	5.5715	5.30	5.65

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Daya Sebar hari ke 1	Based on Mean	4.005	3	8	.052
	Based on Median	.375	3	8	.774
	Based on Median and with adjusted df	.375	3	2.804	.780
	Based on trimmed mean	3.413	3	8	.073

ANOVA

Daya Sebar hari ke 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.118	3	.039	8.268	.008
Within Groups	.038	8	.005		
Total	.156	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Daya Sebar hari ke 1

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
F1	F2	-.12667	.05632	.190	-.3070	.0537
	F3	-.18000	.05632	.050	-.3604	.0004
	Basis	.07000	.05632	.620	-.1104	.2504
F2	F1	.12667	.05632	.190	-.0537	.3070
	F3	-.05333	.05632	.782	-.2337	.1270
	Basis	.19667*	.05632	.033	.0163	.3770
F3	F1	.18000	.05632	.050	-.0004	.3604
	F2	.05333	.05632	.782	-.1270	.2337
	Basis	.25000*	.05632	.009	.0696	.4304
Basis	F1	-.07000	.05632	.620	-.2504	.1104
	F2	-.19667*	.05632	.033	-.3770	-.0163
	F3	-.25000*	.05632	.009	-.4304	-.0696

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

Homogeneous Subsets

Daya Sebar hari ke 1

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05: 1	2
Basis	3	5.3667	
F1	3	5.4367	5.4367
F2	3		5.5633
F3	3		5.6167
Sig.		.620	.050

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Statistik *one way anova* daya sebar hari ke-21

ONE WAY

Descriptives

Daya Sebar hari ke 21

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
F1	3	5.4600	.03606	.02082	5.3704	5.5496	5.43	5.50
F2	3	5.5967	.01155	.00667	5.5680	5.6254	5.59	5.61
F3	3	5.6467	.02517	.01453	5.5842	5.7092	5.62	5.67
Basis	3	5.3767	.02517	.01453	5.3142	5.4392	5.35	5.40
Total	12	5.5200	.11426	.03298	5.4474	5.5926	5.35	5.67

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Daya Sebar hari ke 21	Based on Mean	1.115	3	8	.398
	Based on Median	.459	3	8	.718
	Based on Median and with adjusted df	.459	3	5.764	.721
	Based on trimmed mean	1.060	3	8	.418

ANOVA

Daya Sebar hari ke 21

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.138	3	.046	68.247	.000
Within Groups	.005	8	.001		
Total	.144	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Daya Sebar hari ke 21

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
F1	F2	-.13667*	.02121	.001	-.2046	-.0687
	F3	-.18667*	.02121	.000	-.2546	-.1187
	Basis	.08333*	.02121	.018	.0154	.1513
F2	F1	.13667*	.02121	.001	.0687	.2046
	F3	-.05000	.02121	.164	-.1179	.0179
	Basis	.22000*	.02121	.000	.1521	.2879
F3	F1	.18667*	.02121	.000	.1187	.2546
	F2	.05000	.02121	.164	-.0179	.1179
	Basis	.27000*	.02121	.000	.2021	.3379
Basis	F1	-.08333*	.02121	.018	-.1513	-.0154
	F2	-.22000*	.02121	.000	-.2879	-.1521
	F3	-.27000*	.02121	.000	-.3379	-.2021

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

Homogeneous Subsets

Daya Sebar hari ke 21

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05 1	2	3
Basis	3	5.3767		
F1	3		5.4600	
F2	3			5.5967
F3	3			5.6467
Sig.		1.000	1.000	.164

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

SPSS *Paired t test* daya sebar hari 1 dan 21

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Daya Sebar hari ke 1	12	100.0%	0	0.0%	12	100.0%
Daya Sebar hari ke 21	12	100.0%	0	0.0%	12	100.0%

Descriptives

			Statistic	Std. Error
Daya Sebar hari ke 1	Mean		5.4958	.03439
	95% Confidence Interval for Mean	Lower Bound	5.4201	
		Upper Bound	5.5715	
	5% Trimmed Mean		5.4981	
	Median		5.5150	
	Variance		.014	
	Std. Deviation		.11912	
	Minimum		5.30	
	Maximum		5.65	
	Range		.35	
	Interquartile Range		.21	
	Skewness		-.613	.637
	Kurtosis		-.843	1.232
Daya Sebar hari ke 21	Mean		5.5200	.03298
	95% Confidence Interval for Mean	Lower Bound	5.4474	
		Upper Bound	5.5926	
	5% Trimmed Mean		5.5211	
	Median		5.5450	
	Variance		.013	
	Std. Deviation		.11426	
	Minimum		5.35	
	Maximum		5.67	
	Range		.32	
	Interquartile Range		.21	
	Skewness		-.181	.637
	Kurtosis		-1.701	1.232

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Daya Sebar hari ke 1	.181	12	.200*	.908	12	.200
Daya Sebar hari ke 21	.230	12	.079	.907	12	.194

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Daya Sebar hari ke 1	5.4958	12	.11912	.03439
	Daya Sebar hari ke 21	5.5200	12	.11426	.03298

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Daya Sebar hari ke 1 & Daya Sebar hari ke 21	12	.918	.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	Daya Sebar hari ke 1 - Daya Sebar hari ke 21	-.02417	.04738	.01368	-.05427	.00594	-1.767	11	.105

Lampiran 15. Uji Viskositas

Gambar alat

Waktu	Formula	Viskositas			Rata-rata	SD
		R1	R2	R3		
Hari ke-1	1	7,00	7,20	7,30	7,17	0,15
	2	7,20	7,10	7,10	7,13	0,06
	3	6,90	6,80	6,90	6,87	0,06
	4	7,35	7,30	7,25	7,30	0,05
Hari ke-21	1	7,10	7,10	7,20	7,13	0,06
	2	7,10	7,05	7,10	7,10	0
	3	6,80	6,80	6,85	6,83	0,03
	4	7,30	7,30	7,25	7,30	0,03

Analisis SPSS

Statistik *one way anova* viskositas hari ke-1

Oneway

Descriptives

Viskositas Hari ke 1

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
F1	3	7.1667	.15275	.08819	6.7872	7.5461	7.00	7.30
F2	3	7.1333	.05774	.03333	6.9899	7.2768	7.10	7.20
F3	3	6.8667	.05774	.03333	6.7232	7.0101	6.80	6.90
Basis	3	7.3000	.05000	.02887	7.1758	7.4242	7.25	7.35
Total	12	7.1167	.18133	.05234	7.0015	7.2319	6.80	7.35

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Viskositas Hari ke 1	Based on Mean	2.377	3	8	.146
	Based on Median	.762	3	8	.546
	Based on Median and with adjusted df	.762	3	4.983	.562
	Based on trimmed mean	2.224	3	8	.163

ANOVA

Viskositas Hari ke 1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.297	3	.099	12.171	.002
Within Groups	.065	8	.008		
Total	.362	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Viskositas Hari ke 1

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
F1	F2	.03333	.07360	.967	-.2024	.2690
	F3	.30000*	.07360	.015	.0643	.5357
	Basis	-.13333	.07360	.335	-.3690	.1024
F2	F1	-.03333	.07360	.967	-.2690	.2024
	F3	.26667*	.07360	.028	.0310	.5024
	Basis	-.16667	.07360	.186	-.4024	.0690
F3	F1	-.30000*	.07360	.015	-.5357	-.0643
	F2	-.26667*	.07360	.028	-.5024	-.0310
	Basis	-.43333*	.07360	.002	-.6690	-.1976
Basis	F1	.13333	.07360	.335	-.1024	.3690
	F2	.16667	.07360	.186	-.0690	.4024
	F3	.43333*	.07360	.002	.1976	.6690

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

Homogeneous Subsets

Viskositas Hari ke 1

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05 1	Subset for alpha = 0.05 2
F3	3	6.8667	
F2	3		7.1333
F1	3		7.1667
Basis	3		7.3000
Sig.		1.000	.186

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Statistik *one way anova* viskositas hari ke-21

Oneway

Descriptives

Viskositas Hari ke 21

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
F1	3	7.1333	.05774	.03333	6.9899	7.2768	7.10	7.20
F2	3	7.1000	.00000	.00000	7.1000	7.1000	7.10	7.10
F3	3	6.8333	.02887	.01667	6.7616	6.9050	6.80	6.85
Basis	3	7.2833	.02887	.01667	7.2116	7.3550	7.25	7.30
Total	12	7.0875	.17205	.04967	6.9782	7.1968	6.80	7.30

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Viskositas Hari ke 21	Based on Mean	7.111	3	8	.012
	Based on Median	.444	3	8	.728
	Based on Median and with adjusted df	.444	3	4.000	.734
	Based on trimmed mean	5.601	3	8	.023

ANOVA

Viskositas Hari ke 21

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.316	3	.105	84.167	.000
Within Groups	.010	8	.001		
Total	.326	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Viskositas Hari ke 21

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
F1	F2	.03333	.02887	.669	-.0591	.1258
	F3	.30000*	.02887	.000	.2076	.3924
	Basis	-.15000*	.02887	.004	-.2424	-.0576
F2	F1	-.03333	.02887	.669	-.1258	.0591
	F3	.26667*	.02887	.000	.1742	.3591
	Basis	-.18333*	.02887	.001	-.2758	-.0909
F3	F1	-.30000*	.02887	.000	-.3924	-.2076
	F2	-.26667*	.02887	.000	-.3591	-.1742
	Basis	-.45000*	.02887	.000	-.5424	-.3576
Basis	F1	.15000*	.02887	.004	.0576	.2424
	F2	.18333*	.02887	.001	.0909	.2758
	F3	.45000*	.02887	.000	.3576	.5424

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

Homogeneous Subsets

Viskositas Hari ke 21

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05 1	2	3
F3	3	6.8333		
F2	3		7.1000	
F1	3		7.1333	
Basis	3			7.2833
Sig.		1.000	.669	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

SPSS *Paired t test* viskositas hari 1 dan 21

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sebelum	12	100.0%	0	0.0%	12	100.0%
Sesudah	12	100.0%	0	0.0%	12	100.0%

Descriptives

Viskositas Hari ke 21

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
F1	3	7.1333	.05774	.03333	6.9899	7.2768	7.10	7.20
F2	3	7.1000	.00000	.00000	7.1000	7.1000	7.10	7.10
F3	3	6.8333	.02887	.01667	6.7616	6.9050	6.80	6.85
Basis	3	7.2833	.02887	.01667	7.2116	7.3550	7.25	7.30
Total	12	7.0875	.17205	.04967	6.9782	7.1968	6.80	7.30

Descriptives

			Statistic	Std. Error
Viskositas Hari ke 1	Mean		7.1167	.05234
	95% Confidence Interval for Mean	Lower Bound	7.0015	
		Upper Bound	7.2319	
	5% Trimmed Mean		7.1213	
	Median		7.1500	
	Variance		.033	
	Std. Deviation		.18133	
	Minimum		6.80	
	Maximum		7.35	
	Range		.55	
	Interquartile Range		.36	
	Skewness		-.460	.637
	Kurtosis		-1.076	1.232
Viskositas Hari ke 21	Mean		7.0875	.04967
	95% Confidence Interval for Mean	Lower Bound	6.9782	
		Upper Bound	7.1968	
	5% Trimmed Mean		7.0917	
	Median		7.1000	
	Variance		.030	

	Std. Deviation	.17205	
	Minimum	6.80	
	Maximum	7.30	
	Range	.50	
	Interquartile Range	.33	
	Skewness	-.549	.637
	Kurtosis	-.773	1.232

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Viskositas Hari ke 1	.177	12	.200*	.930	12	.379
Viskositas Hari ke 21	.279	12	.011	.873	12	.071

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Viskositas Hari ke 1	7.1167	12	.18133	.05234
	Viskositas Hari ke 21	7.0875	12	.17205	.04967

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Viskositas Hari ke 1 & Viskositas Hari ke 21	12	.947	.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	Viskositas Hari ke 1 - Viskositas Hari ke 21	.02917	.05823	.01681	-.00783	.06616	1.735	11	.111

Lampiran 16. Uji Stabilitas

Gambar alat

Lemari pendingin

Oven suhu 40^{0}C

- **UJI VISKOSITAS**

Waktu	Formula	Viskositas			Rata-rata	SD
		R1	R2	R3		
Sebelum	1	7	7,2	7,3	7,17	0,15
	2	7,2	7,1	7,1	7,13	0,06
	3	6,9	6,8	6,9	6,87	0,06
	4	7,35	7,3	7,25	7,30	0,05
Sesudah	1	7,1	7,1	7,2	7,13	0,06
	2	7,1	7,05	7,1	7,08	0,03
	3	6,8	6,8	6,85	6,82	0,03
	4	7,3	7,3	7,25	7,28	0,03

Analisis SPSS

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sebelum	12	100.0%	0	0.0%	12	100.0%

Sesudah	12	100.0%	0	0.0%	12	100.0%

Descriptives

			Statistic	Std. Error
Sebelum	Mean		7.1167	.05234
	95% Confidence Interval for Mean	Lower Bound	7.0015	
		Upper Bound	7.2319	
	5% Trimmed Mean		7.1213	
	Median		7.1500	
	Variance		.033	
	Std. Deviation		.18133	
	Minimum		6.80	
	Maximum		7.35	
	Range		.55	
	Interquartile Range		.36	
	Skewness		-.460	.637
	Kurtosis		-1.076	1.232
Sesudah	Mean		7.0792	.05166
	95% Confidence Interval for Mean	Lower Bound	6.9655	
		Upper Bound	7.1929	
	5% Trimmed Mean		7.0824	
	Median		7.1000	
	Variance		.032	
	Std. Deviation		.17896	
	Minimum		6.80	
	Maximum		7.30	
	Range		.50	
	Interquartile Range		.34	
	Skewness		-.519	.637
	Kurtosis		-.849	1.232

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sebelum	.177	12	.200*	.930	12	.379
Sesudah	.213	12	.139	.883	12	.095

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Sebelum	7.1167	12	.18133	.05234
	Sesudah	7.0792	12	.17896	.05166

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Sebelum & Sesudah	12	.943	.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	Sebelum - Sesudah	.03750	.06077	.01754	-.00111	.07611	2.138	11	.056

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Sebelum	Between Groups	.297	3	.099	12.171	.002
	Within Groups	.065	8	.008		
	Total	.362	11			
Sesudah	Between Groups	.341	3	.114	77.857	.000
	Within Groups	.012	8	.001		
	Total	.352	11			

Post Hoc Tests

Sebelum

Tukey B[a]

Formula	N	Subset for alpha = 0.05	
		1	2
F3	3	6.8667	
F2	3		7.1333
F1	3		7.1667
Basis	3		7.3000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Sesudah

Tukey B[a]

Formula	N	Subset for alpha = 0.05		
		1	2	3
F3	3	6.8167		
F2	3		7.0833	
F1	3		7.1333	
Basis	3			7.2833

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

- **UJI PH**

Waktu	**Formula**	**Uji pH**			**Rata-rata**	**SD**
		R1	**R2**	**R3**		
Sebelum	1	5,65	5,6	5,63	5,63	0,03
	2	5,48	5,49	5,47	5,48	0,01
	3	5,25	5,3	5,35	5,30	0,05
	4	5,6	5,7	5,6	5,66	0,05
Sesudah	1	5,62	5,61	5,63	5,62	0,01

	2	5,46	5,47	5,45	5,46	0,01
	3	5,28	5,22	5,32	5,27	0,05
	4	5,58	5,69	5,67	5,65	0,06

Analisis SPSS

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Sesudah	12	100.0%	0	0.0%	12	100.0%
Sebelum	12	100.0%	0	0.0%	12	100.0%

Descriptives

			Statistic	Std. Error
Sesudah	Mean		5.5000	.04597
	95% Confidence Interval for Mean	Lower Bound	5.3988	
		Upper Bound	5.6012	
	5% Trimmed Mean		5.5050	
	Median		5.5250	
	Variance		.025	
	Std. Deviation		.15926	
	Minimum		5.22	
	Maximum		5.69	
	Range		.47	
	Interquartile Range		.27	
	Skewness		-.570	.637
	Kurtosis		-1.004	1.232
Sebelum	Mean		5.5158	.04367
	95% Confidence Interval for Mean	Lower Bound	5.4197	
		Upper Bound	5.6119	
	5% Trimmed Mean		5.5204	
	Median		5.5450	
	Variance		.023	
	Std. Deviation		.15126	
	Minimum		5.25	
	Maximum		5.70	

	Range	.45	
	Interquartile Range	.27	
	Skewness	-.585	.637
	Kurtosis	-.952	1.232

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sesudah	.192	12	.200*	.910	12	.214
Sebelum	.211	12	.146	.914	12	.239

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Sebelum	5.5158	12	.15126	.04367
	Sesudah	5.5000	12	.15926	.04597

Paired Samples Correlations

			N	Correlation	Sig.
Pair 1	Sebelum & Sesudah		12	.986	.000

Paired Samples Test

		Paired Differences					t	df	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Sebelum - Sesudah	.01583	.02678	.00773	-.00118	.03285	2.048	11	.065

Homogeneous Subsets

Sebelum

Tukey HSD[a]

		Subset for alpha = 0.05		
Formula	N	1	2	3

F3	3	5.3000		
F2	3		5.4800	
F1	3			5.6267
F4	3			5.6333
Sig.		1.000	1.000	.997

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Sesudah

Tukey HSD[a]

		Subset for alpha = 0.05		
Formula	N	1	2	3
F3	3	5.2733		
F2	3		5.4600	
F1	3			5.6200
F4	3			5.6467
Sig.		1.000	1.000	.838

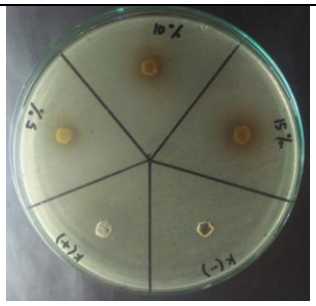
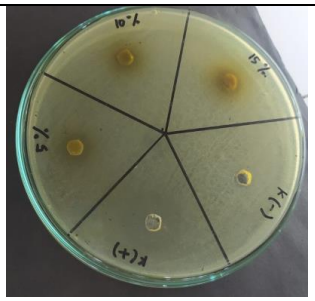
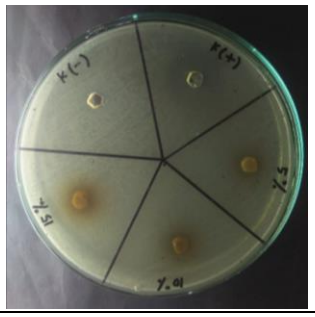
Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 17. Hasil uji antibakteri sediaan serum ekstrak daun kelor

Formula	Zona hambat (mm)			Rata-rata	SD
	R1	R2	R3		
F1	14,5	14,3	14	14,27	0,25
F2	16,2	15,6	16	15,93	0,31
F3	18	17,6	17,5	17,70	0,26
K-	0,00	0,00	0,00	0,00	0,00
K+	27,6	27.8	27	27,47	0,42

Gambar hasil :

Replikasi 1	
Replikasi 2	
Replikasi 3	

Analisis SPSS

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Formula	N	Percent	N	Percent	N	Percent
Daya Hambat Sediaan	F1	3	100.0%	0	0.0%	3	100.0%
	F2	3	100.0%	0	0.0%	3	100.0%
	F3	3	100.0%	0	0.0%	3	100.0%
	F4	3	100.0%	0	0.0%	3	100.0%
	K+	3	100.0%	0	0.0%	3	100.0%

Descriptives

	Formula			Statistic	Std. Error
Daya Hambat Sediaan	F1	Mean		13.8167	.10138
		95% Confidence Interval for Mean	Lower Bound	13.3805	
			Upper Bound	14.2529	
		5% Trimmed Mean		.	
		Median		13.8000	
		Variance		.031	
		Std. Deviation		.17559	
		Minimum		13.65	
		Maximum		14.00	
		Range		.35	
		Interquartile Range		.	
		Skewness		.423	1.225
		Kurtosis		.	.
	F2	Mean		15.2333	.12019
		95% Confidence Interval for Mean	Lower Bound	14.7162	
			Upper Bound	15.7504	
		5% Trimmed Mean		.	
		Median		15.3000	
		Variance		.043	
		Std. Deviation		.20817	
		Minimum		15.00	
		Maximum		15.40	

		Range		.40	
		Interquartile Range		.	
		Skewness		-1.293	1.225
		Kurtosis		.	.
	F3	Mean		16.4000	.20817
		95% Confidence Interval for Mean	Lower Bound	15.5043	
			Upper Bound	17.2957	
		5% Trimmed Mean		.	
		Median		16.5000	
		Variance		.130	
		Std. Deviation		.36056	
		Minimum		16.00	
		Maximum		16.70	
		Range		.70	
		Interquartile Range		.	
		Skewness		-1.152	1.225
		Kurtosis		.	.
	F4	Mean		27.2667	.14530
		95% Confidence Interval for Mean	Lower Bound	26.6415	
			Upper Bound	27.8918	
		5% Trimmed Mean		.	
		Median		27.3000	
		Variance		.063	
		Std. Deviation		.25166	
		Minimum		27.00	
		Maximum		27.50	
		Range		.50	
		Interquartile Range		.	
		Skewness		-.586	1.225
		Kurtosis		.	.
	K+	Mean		.0000	.00000
		95% Confidence Interval for Mean	Lower Bound	.0000	
			Upper Bound	.0000	
		5% Trimmed Mean		.0000	
		Median		.0000	
		Variance		.000	
		Std. Deviation		.00000	

	Minimum	.00	
	Maximum	.00	
	Range	.00	
	Interquartile Range	.00	
	Skewness	.	.
	Kurtosis	.	.

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Daya Hambat Sediaan	F1	.204	3	.	.993	3	.843
	F2	.292	3	.	.923	3	.463
	F3	.276	3	.	.942	3	.537
	F4	.219	3	.	.987	3	.780
	K+	.	3	.	.	3	.

a. Lilliefors Significance Correction

Oneway

Descriptives

Daya Hambat Sediaan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	13.8167	.17559	.10138	13.3805	14.2529	13.65	14.00
F2	3	15.2333	.20817	.12019	14.7162	15.7504	15.00	15.40
F3	3	16.4000	.36056	.20817	15.5043	17.2957	16.00	16.70
F4	3	27.2667	.25166	.14530	26.6415	27.8918	27.00	27.50
K+	3	.0000	.00000	.00000	.0000	.0000	.00	.00
Total	15	14.5433	9.00026	2.32386	9.5592	19.5275	.00	27.50

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Daya Hambat Sediaan	Based on Mean	2.572	4	10	.103
	Based on Median	.903	4	10	.498
	Based on Median and with adjusted df	.903	4	5.597	.520

	Based on trimmed mean	2.424	4	10	.117

Test of Homogeneity of Variances

			Levene Statistic	df1	df2	Sig.
Daya Hambat Serum		Based on Mean	2.523	4	10	.107
		Based on Median	.686	4	10	.618
		Based on Median and with adjusted df	.686	4	6.285	.626
		Based on trimmed mean	2.334	4	10	.126

ANOVA

Daya Hambat Sediaan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1133.529	4	283.382	5296.866	.000
Within Groups	.535	10	.054		
Total	1134.064	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Daya Hambat Sediaan

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
F1	F2	-1.41667*	.18886	.000	-2.0382	-.7951
	F3	-2.58333*	.18886	.000	-3.2049	-1.9618
	F4	-13.45000*	.18886	.000	-14.0715	-12.8285
	K+	13.81667*	.18886	.000	13.1951	14.4382
F2	F1	1.41667*	.18886	.000	.7951	2.0382
	F3	-1.16667*	.18886	.001	-1.7882	-.5451
	F4	-12.03333*	.18886	.000	-12.6549	-11.4118
	K+	15.23333*	.18886	.000	14.6118	15.8549
F3	F1	2.58333*	.18886	.000	1.9618	3.2049
	F2	1.16667*	.18886	.001	.5451	1.7882
	F4	-10.86667*	.18886	.000	-11.4882	-10.2451

	K+	16.40000*	.18886	.000	15.7785	17.0215
F4	F1	13.45000*	.18886	.000	12.8285	14.0715
	F2	12.03333*	.18886	.000	11.4118	12.6549
	F3	10.86667*	.18886	.000	10.2451	11.4882
	K+	27.26667*	.18886	.000	26.6451	27.8882
K+	F1	-13.81667*	.18886	.000	-14.4382	-13.1951
	F2	-15.23333*	.18886	.000	-15.8549	-14.6118
	F3	-16.40000*	.18886	.000	-17.0215	-15.7785
	F4	-27.26667*	.18886	.000	-27.8882	-26.6451

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

Homogeneous Subsets

Daya Hambat Sediaan

Tukey HSD[a]

		Subset for alpha = 0.05				
Formula	N	1	2	3	4	5
K+	3	.0000				
F1	3		13.8167			
F2	3			15.2333		
F3	3				16.4000	
F4	3					27.2667
Sig.		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.

Lampiran 18. Hasil Anslisis SPSS uji antibakteri sediaan ekstrak dan serum

ANOVA

Daya Hambat Ekstrak dan Sediaan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2302.905	9	255.878	3833.384	.000
Within Groups	1.335	20	.067		
Total	2304.240	29			

Homogeneous Subsets

Daya Hambat Ekstrak dan Sediaan

Tukey HSD[a]

		Subset for alpha = 0.05					
Formula	N	1	2	3	4	5	6
Ekstrak K-	3	.0000					
Serum K-	3	.0000					
Ekstrak 5%	3		13.8167				
Serum 5%	3		14.2667				
Ekstrak 10%	3			15.2333			
Serum 10%	3			15.9333	15.9333		
Ekstrak 15%	3				16.4000		
Serum 15%	3					17.7000	
Ekstrak K+	3						27.2667
Serum K+	3						27.4667
Sig.		1.000	.527	.078	.480	1.000	.992

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.