

## **BAB V**

### **KESIMPULAN DAN SARAN**

#### **A. Kesimpulan**

Berdasarkan hasil pengamatan dapat disimpulkan bahwa :

Pertama, proporsi optimum gel lendir bekicot yang sesuai dengan kriteria yang dikehendaki yaitu Carbopol 940 sebesar 0,807 % dan propilenglikol sebesar 18,193 %. Hasil prediksi menggunakan program *Design Expert* 8.0.6.1 didapatkan viskositas 326,57 dPas, daya sebar 3,71 cm, daya lekat 1,44 detik, dan pergeseran viskositas 6,75%.

Kedua, formula optimum gel lendir bekicot mempunyai aktivitas sebagai antibakteri terhadap *Stapylococcus aureus* ATCC 25923. Rata-rata diameter hambatnya yaitu 1,92 cm.

#### **B. Saran**

Perlu dilakukan penelitian lebih lanjut, pertama perlu dilakukan penelitian dengan menggunakan basis yang lain.

Kedua, perlu dilakukan optimasi penelitian dengan menggunakan bentuk sediaan yang lainnya.

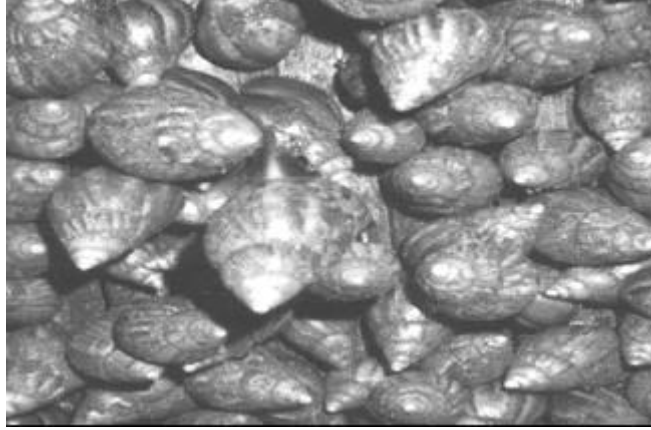
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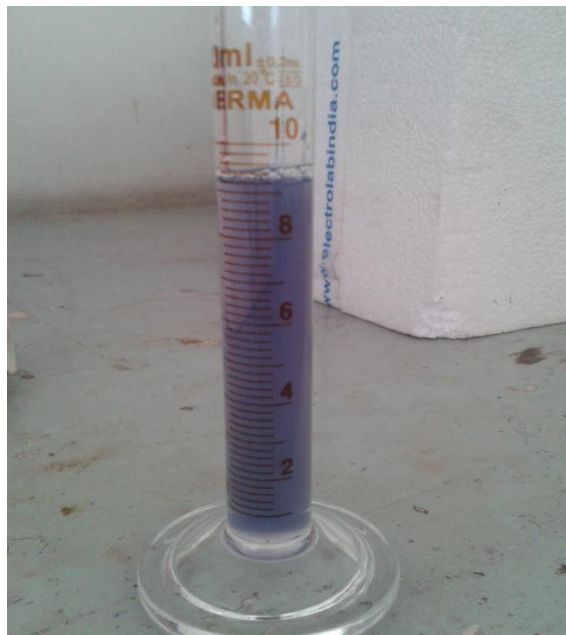
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**Lampiran 1. Gambar bekicot dan lendir**



**Gambar 1. Bekicot (*Achatina fulica* Ferr)**

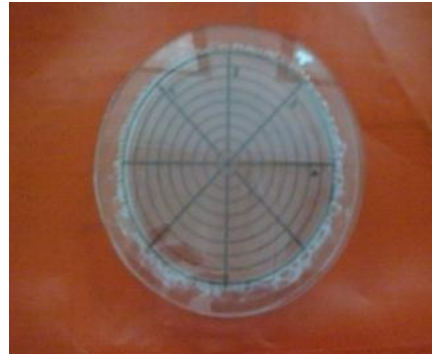


**Gambar 2. Lendir bekicot**

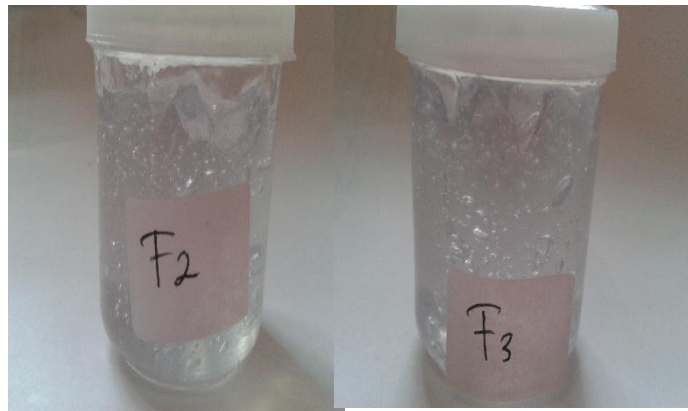
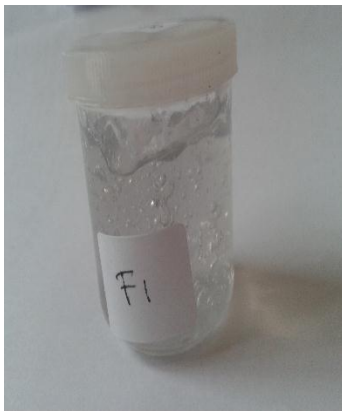
**Lampiran 2. Gambar alat uji dan hasil gel lendir bekicot**



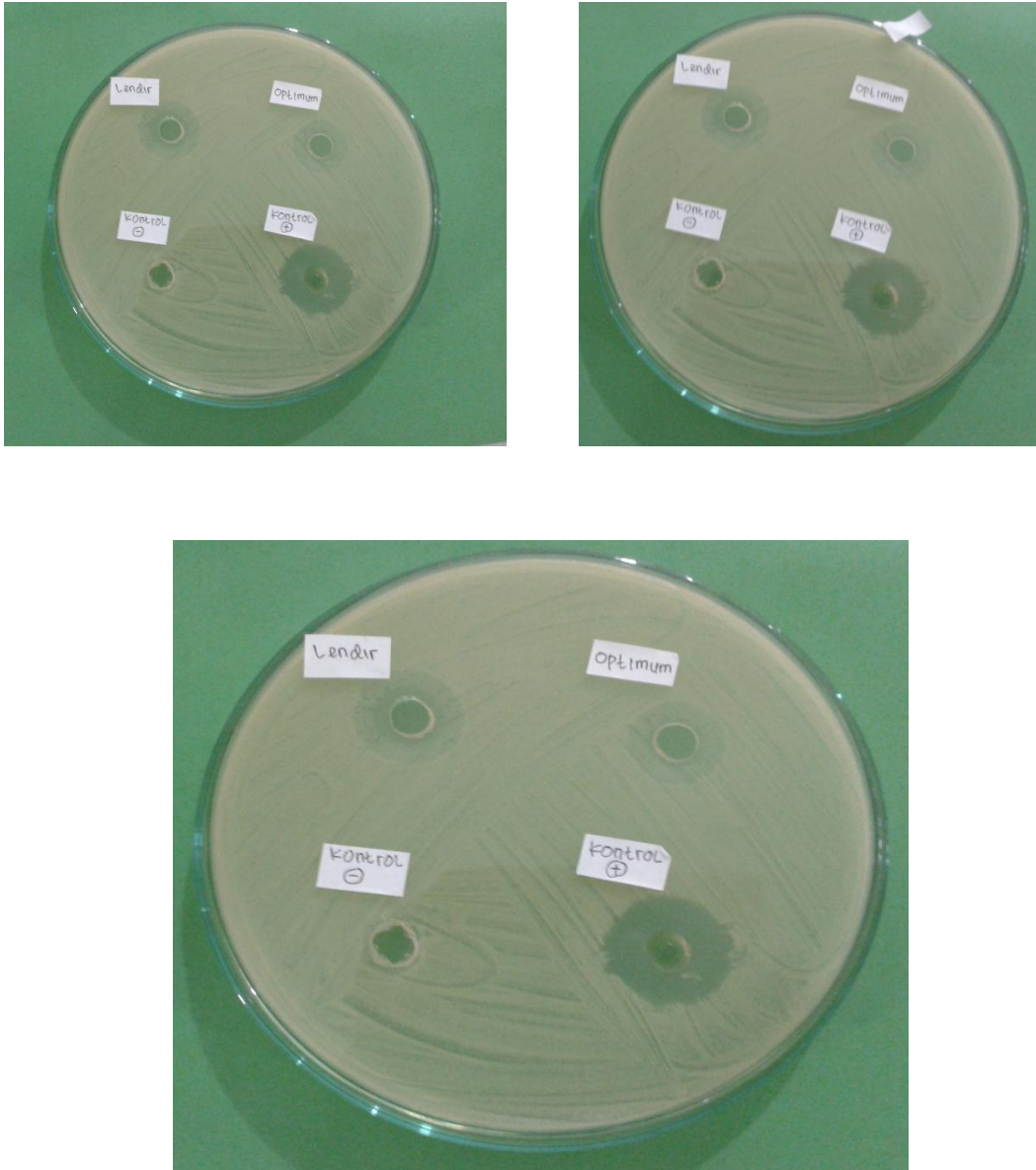
**Gambar 3. Alat uji viskositas**



**Gambar 4. Alat uji daya sebar**



**Gambar 5. Hasil gel lendir bekicot**

**Lampiran 3. Hasil uji daya hambat antibakteri gel lendir bekicot****Gambar 6. Hasil uji daya hambat antibakteri gel lendir bekicot**

**Lampiran 4. Data pengujian viskositas gel lendir bekicot**

Waktu pengamatan	Viskositas (dPas)								
	Formula I			Formula II			Formula III		
	1	2	3	1	2	3	1	2	3
Hari ke 2	180	180	185	400	390	400	500	500	510
Minggu 1	190	185	185	400	400	400	510	515	525
Minggu 2	190	200	195	410	420	400	525	525	540
Minggu 3	200	200	190	420	415	420	540	530	530
Minggu 4	200	200	205	425	420	425	580	590	585

**Rata-rata  $\pm$  SD dan uji viskositas**

Pemeriksaan waktu	Viskositas (dPas $\pm$ SD)		
	Formula I	Formula II	Formula III
Hari ke 2	181,67 $\pm$ 2,89	396,67 $\pm$ 5,77	503,33 $\pm$ 5,77
Minggu 1	186,67 $\pm$ 2,89	400 $\pm$ 0	516,67 $\pm$ 7,64
Minggu 2	195 $\pm$ 5	410 $\pm$ 10	530 $\pm$ 8,66
Minggu 3	196,67 $\pm$ 5,77	418,33 $\pm$ 2,89	533,33 $\pm$ 5,77
Minggu 4	201,67 $\pm$ 2,89	423,33 $\pm$ 2,89	585 $\pm$ 5

**Lampiran 5. Data pengujian daya sebar gel lendir bekicot****5.1. Pengujian daya sebar hari kedua**

Formula	Bobot	Daya sebar (cm)											
		Replikasi 1				Replikasi 2				Replikasi 3			
		1	2	3	4	1	2	3	4	1	2	3	4
Formula I	54,85	3,9	3,8	4,0	3,9	3,7	4,0	3,9	3,8	3,8	3,9	3,8	3,8
	154,85	4,2	4,3	4,5	4,2	4,4	4,2	4,1	4,3	4,4	4,1	4,2	4,3
Formula II	54,85	2,5	2,7	2,6	2,6	2,6	2,6	2,7	2,7	2,6	2,6	2,6	2,7
	154,85	3,5	3,3	3,3	3,5	3,4	3,3	3,4	3,4	3,5	3,4	3,4	3,5
Formula III	54,85	2,4	2,2	2,3	2,3	2,4	2,3	2,4	2,4	2,2	2,4	2,3	2,3
	154,85	2,9	2,8	2,8	2,9	2,8	2,7	2,7	2,8	2,9	2,7	2,8	2,8

**5.2. Pengujian daya sebar minggu 1**

Formula	Bobot	Daya sebar (cm)											
		Replikasi 1				Replikasi 2				Replikasi 3			
		1	2	3	4	1	2	3	4	1	2	3	4
Formula I	54,85	3,5	4,0	3,5	3,8	3,9	3,6	3,6	3,9	3,7	3,6	3,6	3,8
	154,85	4,2	4,4	4,1	4,1	4,3	4,2	4,2	4,3	4,2	4,2	4,3	4,1
Formula II	54,85	2,5	2,6	2,4	2,6	2,6	2,5	2,4	2,4	2,5	2,5	2,6	2,7
	154,85	3,1	3,2	3,3	3,3	3,4	3,4	3,2	3,2	3,2	3,3	3,2	3,3
Formula III	54,85	2,3	2,1	2,2	2,2	2,2	2,3	2,2	2,4	2,3	2,2	2,2	2,3
	154,85	2,7	2,6	2,6	2,5	2,5	2,6	2,5	2,7	2,6	2,5	2,5	2,6



### 5.3. Pengujian daya sebar minggu 2

Formula	Bobot	Daya sebar (cm)											
		Replikasi 1				Replikasi 2				Replikasi 3			
		1	2	3	4	1	2	3	4	1	2	3	4
Formula I	54,85	3,6	3,6	3,7	3,8	3,7	3,7	3,5	3,6	3,7	3,6	3,5	3,5
	154,85	3,9	4,0	4,2	4,3	4,2	4,0	4,3	4,3	4,3	4,2	4,1	4,2
Formula II	54,85	2,5	2,3	2,4	2,4	2,7	2,5	2,4	2,4	2,3	2,5	2,4	2,5
	154,85	3,3	3,1	3,1	3,3	3,3	3,1	3,1	3,3	3,3	3,3	3,2	3,2
Formula III	54,85	2,3	2,1	2,0	2,0	2,2	2,2	2,1	2,3	2,1	2,2	2,3	2,1
	154,85	2,6	2,5	2,4	2,4	2,4	2,5	2,4	2,5	2,4	2,5	2,5	2,4

### 5.4. Pengujian daya sebar minggu 3

Formula	Bobot	Daya sebar (cm)											
		Replikasi 1				Replikasi 2				Replikasi 3			
		1	2	3	4	1	2	3	4	1	2	3	4
Formula I	54,85	3,4	3,6	3,4	3,2	3,5	3,6	3,4	3,5	3,5	3,4	3,6	3,4
	154,85	4,1	4,0	4,2	4,1	4,0	4,1	4,2	4,1	4,2	4,1	4,2	4,1
Formula II	54,85	2,5	2,4	2,4	2,3	2,4	2,5	2,3	2,3	2,4	2,4	2,3	2,3
	154,85	3,1	3,1	3,2	3,3	3,3	3,1	3,1	3,3	3,1	3,3	3,2	3,2
Formula III	54,85	2,0	2,1	2,2	2,1	2,0	2,1	2,2	2,0	2,1	2,0	2,2	2,3
	154,85	2,3	2,4	2,4	2,5	2,4	2,5	2,5	2,4	2,4	2,3	2,4	2,5

### 5.5. Pengujian daya sebar minggu 4

Formul a	Bobot	Daya sebar (cm)											
		Replikasi 1				Replikasi 2				Replikasi 3			
		1	2	3	4	1	2	3	4	1	2	3	4
Formula I	54,94	3,6	3,5	3,4	3,6	3,4	3,5	3,4	3,5	3,5	3,5	3,4	3,4
	104,94	4,0	3,9	3,9	4,2	4,0	4,1	4,0	4,1	3,9	4,1	4,1	3,9
Formula II	54,94	2,6	2,3	2,3	2,4	2,3	2,3	2,4	2,5	2,5	2,3	2,4	2,4
	104,94	3,3	3,1	3,2	3,3	3,0	3,1	3,2	3,3	3,3	3,1	3,1	3,3
Formula III	54,94	2,0	1,9	2,1	2,0	2,1	2,2	2,0	2,0	2,0	1,9	1,9	2,0
	104,94	2,3	2,3	2,5	2,4	2,4	2,4	2,3	2,3	2,4	2,3	2,3	2,4

### Lampiran 6. Data hasil uji daya lekat gel lendir bekicot

Waktu pengamatan	Daya lekat (detik)								
	Formula I			Formula II			Formula III		
	1	2	3	1	2	3	1	2	3
Hari ke 2	1,05	1,07	1,04	1,71	1,68	1,75	2,47	2,51	2,53
Minggu 1	1,15	1,14	1,12	1,75	1,80	1,78	3,07	3,05	3,01
Minggu 2	1,25	1,28	1,26	1,95	2,00	1,85	3,10	3,13	3,18
Minggu 3	1,33	1,30	1,34	2,00	2,05	2,07	3,37	3,45	3,39
Minggu 4	1,39	1,35	1,36	2,07	2,09	2,04	4,33	4,27	4,36

**Rata-rata  $\pm$  SD dan uji viskositas**

Pemeriksaan waktu	Daya lekat (detik)		
	Formula I	Formula II	Formula III
Hari ke 2	1,05 $\pm$ 0,02	1,71 $\pm$ 0,04	2,50 $\pm$ 0,03
Minggu 1	1,14 $\pm$ 0,02	1,78 $\pm$ 0,03	3,04 $\pm$ 0,03
Minggu 2	1,26 $\pm$ 0,02	1,93 $\pm$ 0,08	3,14 $\pm$ 0,04
Minggu 3	1,32 $\pm$ 0,02	2,04 $\pm$ 0,04	3,40 $\pm$ 0,04
Minggu 4	1,37 $\pm$ 0,02	2,07 $\pm$ 0,02	4,32 $\pm$ 0,05

**Lampiran 7. Data hasil uji pergeseran viskositas gel lendir bekicot**

Replikasi	Viskositas (dPas)		
	Formula I	Formula II	Formula III
Replikasi 1	11,11	6,25	16
Replikasi 2	11,11	7,69	18
Replikasi 3	10,81	6,25	14,71

**Lampiran 8. Data pengujian viskositas formula optimum gel lendir bekicot**

Pemeriksaan waktu	Viskositas (dPas)			
	Replikasi 1	Replikasi 2	Replikasi 3	Rata-rata $\pm$ SD
Hari ke 2	320	320	325	321,67 $\pm$ 2,89
Minggu 1	325	325	325	325 $\pm$ 0
Minggu 2	330	325	330	328,33 $\pm$ 2,89
Minggu 3	335	335	340	336,67 $\pm$ 2,89
Minggu 4	340	350	350	346,67 $\pm$ 5,77

**Lampiran 9. Data pengujian daya sebar formula optimum gel lendir bekicot**

Formul a	Bobot	Daya sebar (cm)											
		Replikasi 1				Replikasi 2				Replikasi 3			
		1	2	3	4	1	2	3	4	1	2	3	4
Hari ke 2	54,85	2,8	2,9	2,9	2,8	2,8	2,9	2,7	2,8	2,9	2,8	2,9	2,8
	154,85	3,6	3,9	3,8	3,7	3,9	3,8	3,7	3,8	3,7	3,6	3,7	3,7
Minggu ke 1	54,85	2,7	2,9	2,8	2,8	2,8	2,9	2,7	2,8	2,7	2,8	2,6	2,7
	154,85	3,7	3,8	3,6	3,7	3,5	3,7	3,5	3,7	3,6	3,7	3,5	3,6
Minggu ke 2	54,85	2,5	2,7	2,5	2,7	2,6	2,7	2,5	2,6	2,5	2,5	2,4	2,6
	154,85	3,6	3,7	3,5	3,6	3,4	3,5	3,6	3,5	3,5	3,5	3,6	3,6
Minggu ke 3	54,85	2,5	2,5	2,5	2,5	2,6	2,4	2,4	2,6	2,4	2,6	2,4	2,6
	154,85	3,4	3,3	3,5	3,4	3,5	3,6	3,4	3,5	3,5	3,6	3,5	3,4
Minggu ke 4	54,85	2,4	2,5	2,3	2,4	2,4	2,5	2,4	2,5	2,5	2,4	2,6	2,5
	154,85	3,4	3,3	3,5	3,4	3,3	3,3	3,4	3,2	3,5	3,4	3,3	3,4

**Lampiran 10. Data hasil uji daya lekat formula optimum gel lendir bekicot**

Pemeriksaan waktu	Daya lekat (detik)			Rata-rata ± SD
	Replikasi 1	Replikasi 2	Replikasi 3	
Hari ke 2	1,37	1,42	1,39	1,39 ± 0,03
Minggu 1	1,43	1,45	1,46	1,45 ± 0,02
Minggu 2	1,48	1,46	1,50	1,48 ± 0,02
Minggu 3	1,53	1,48	1,55	1,52 ± 0,04
Minggu 4	1,60	1,59	1,63	1,61 ± 0,02

**Lampiran 11. Data hasil uji pergeseran viskositas formula optimum gel lendir bekicot**

Replikasi	Viskositas (dPas)	Rata-rata ± SD
Replikasi 1	6,25	7,77 ± 1,56
Replikasi 2	9,38	
Replikasi 3	7,69	

**Lampiran 12. Statistik stabilitas gel lendir bekicot****A. Stabilitas gel (Viskositas)****1. Formula 1****NPar Tests****Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
Viskositas (dPas)	15	192.33	8.209	180	205

**One-Sample Kolmogorov-Smirnov Test**

		Viskositas (dPas)
N		15
Normal Parameters <sup>a, b</sup>	Mean	192.33
	Std. Deviation	8.209
Most Extreme Differences	Absolute	.225
	Positive	.148
	Negative	-.225
Kolmogorov-Smirnov Z		.871
Asymp. Sig. (2-tailed)		.434

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Viskositas (dPas)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	181.67	2.887	1.667	174.50	188.84	180	185
Minggu ke 1	3	186.67	2.887	1.667	179.50	193.84	185	190
Minggu ke 2	3	195.00	5.000	2.887	182.58	207.42	190	200
Minggu ke 3	3	196.67	5.774	3.333	182.32	211.01	190	200
Minggu ke 4	3	201.67	2.887	1.667	194.50	208.84	200	205
Total	15	192.33	8.209	2.119	187.79	196.88	180	205

### Test of Homogeneity of Variances

Viskositas (dPas)

Levene Statistic	df1	df2	Sig.
1.000	4	10	.452

### ANOVA

Viskositas (dPas)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	776.667	4	194.167	11.650	.001
Within Groups	166.667	10	16.667		
Total	943.333	14			

### Multiple Comparisons

Viskositas (dPas)

Tukey HSD

(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-5.000*	3.333	.585	-15.97	5.97
	Minggu ke 2	-13.333*	3.333	.017	-24.30	-2.36
	Minggu ke 3	-15.000*	3.333	.008	-25.97	-4.03
	Minggu ke 4	-20.000*	3.333	.001	-30.97	-9.03
Minggu ke 1	Hari ke 2	5.000	3.333	.585	-5.97	15.97
	Minggu ke 2	-8.333	3.333	.166	-19.30	2.64
	Minggu ke 3	-10.000	3.333	.078	-20.97	.97
	Minggu ke 4	-15.000*	3.333	.008	-25.97	-4.03
Minggu ke 2	Hari ke 2	13.333*	3.333	.017	2.36	24.30
	Minggu ke 1	8.333	3.333	.166	-2.64	19.30
	Minggu ke 3	-1.667	3.333	.986	-12.64	9.30
	Minggu ke 4	-6.667	3.333	.332	-17.64	4.30
Minggu ke 3	Hari ke 2	15.000*	3.333	.008	4.03	25.97
	Minggu ke 1	10.000	3.333	.078	-.97	20.97
	Minggu ke 2	1.667	3.333	.986	-9.30	12.64
	Minggu ke 4	-5.000	3.333	.585	-15.97	5.97
Minggu ke 4	Hari ke 2	20.000*	3.333	.001	9.03	30.97
	Minggu ke 1	15.000*	3.333	.008	4.03	25.97
	Minggu ke 2	6.667	3.333	.332	-4.30	17.64
	Minggu ke 3	5.000	3.333	.585	-5.97	15.97

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

## 2. Formula 2 NPar Tests

### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Viskositas (dPas)	15	409.67	11.568	390	425

### One-Sample Kolmogorov-Smirnov Test

		Viskositas (dPas)
N		15
Normal Parameters <sup>a, b</sup>	Mean	409.67
	Std. Deviation	11.568
Most Extreme Differences	Absolute	.265
	Positive	.265
	Negative	-.214
Kolmogorov-Smirnov Z		1.026
Asymp. Sig. (2-tailed)		.243

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Viskositas (dPas)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	396.67	5.774	3.333	382.32	411.01	390	400
Minggu ke 1	3	400.00	.000	.000	400.00	400.00	400	400
Minggu ke 2	3	410.00	10.000	5.774	385.16	434.84	400	420
Minggu ke 3	3	418.33	2.887	1.667	411.16	425.50	415	420
Minggu ke 4	3	423.33	2.887	1.667	416.16	430.50	420	425
Total	15	409.67	11.568	2.987	403.26	416.07	390	425

### Test of Homogeneity of Variances

Viskositas (dPas)

Levene Statistic	df1	df2	Sig.
2.476	4	10	.112

### ANOVA

Viskositas (dPas)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1573.333	4	393.333	13.111	.001
Within Groups	300.000	10	30.000		
Total	1873.333	14			

### Multiple Comparisons

Viskositas (dPas)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-3.333	4.472	.940	-18.05	11.38
	Minggu ke 2	-13.333	4.472	.081	-28.05	1.38
	Minggu ke 3	-21.667*	4.472	.005	-36.38	-6.95
	Minggu ke 4	-26.667*	4.472	.001	-41.38	-11.95
Minggu ke 1	Hari ke 2	3.333	4.472	.940	-11.38	18.05
	Minggu ke 2	-10.000	4.472	.242	-24.72	4.72
	Minggu ke 3	-18.333*	4.472	.014	-33.05	-3.62
	Minggu ke 4	-23.333*	4.472	.003	-38.05	-8.62
Minggu ke 2	Hari ke 2	13.333	4.472	.081	-1.38	28.05
	Minggu ke 1	10.000	4.472	.242	-4.72	24.72
	Minggu ke 3	-8.333	4.472	.393	-23.05	6.38
	Minggu ke 4	-13.333	4.472	.081	-28.05	1.38
Minggu ke 3	Hari ke 2	21.667*	4.472	.005	6.95	36.38
	Minggu ke 1	18.333*	4.472	.014	3.62	33.05
	Minggu ke 2	8.333	4.472	.393	-6.38	23.05
	Minggu ke 4	-5.000	4.472	.794	-19.72	9.72
Minggu ke 4	Hari ke 2	26.667*	4.472	.001	11.95	41.38
	Minggu ke 1	23.333*	4.472	.003	8.62	38.05
	Minggu ke 2	13.333	4.472	.081	-1.38	28.05
	Minggu ke 3	5.000	4.472	.794	-9.72	19.72

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

### 3. Formula 3 NPar Tests

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Viskositas (dPas)	15	533.6667	29.30545	500.00	590.00

		Viskositas (dPas)
N		15
Normal Parameters <sup>a,b</sup>	Mean	533.6667
	Std. Deviation	29.30545
Most Extreme Differences	Absolute	.216
	Positive	.216
	Negative	-.143
Kolmogorov-Smirnov Z		.838
Asymp. Sig. (2-tailed)		.483

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Viskositas (dPas)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	503.3333	5.77350	3.33333	488.9912	517.6755	500.00	510.00
Minggu ke 1	3	516.6667	7.63763	4.40959	497.6938	535.6396	510.00	525.00
Minggu ke 2	3	530.0000	8.66025	5.00000	508.4867	551.5133	525.00	540.00
Minggu ke 3	3	533.3333	5.77350	3.33333	518.9912	547.6755	530.00	540.00
Minggu ke 4	3	585.0000	5.00000	2.88675	572.5793	597.4207	580.00	590.00
Total	15	533.6667	29.30545	7.56664	517.4378	549.8955	500.00	590.00

### Test of Homogeneity of Variances

Viskositas (dPas)

Levene Statistic	df1	df2	Sig.
.667	4	10	.630

### ANOVA

Viskositas (dPas)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11573.333	4	2893.333	64.296	.000
Within Groups	450.000	10	45.000		
Total	12023.333	14			



### Multiple Comparisons

Viskositas (dPas)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-13.33333	5.47723	.183	-31.3593	4.6927
	Minggu ke 2	-26.66667	5.47723	.005	-44.6927	-8.6407
	Minggu ke 3	-30.00000	5.47723	.002	-48.0260	-11.9740
	Minggu ke 4	-81.66667	5.47723	.000	-99.6927	-63.6407
Minggu ke 1	Hari ke 2	13.33333	5.47723	.183	-4.6927	31.3593
	Minggu ke 2	-13.33333	5.47723	.183	-31.3593	4.6927
	Minggu ke 3	-16.66667	5.47723	.073	-34.6927	1.3593
	Minggu ke 4	-68.33333	5.47723	.000	-86.3593	-50.3073
Minggu ke 2	Hari ke 2	26.66667	5.47723	.005	8.6407	44.6927
	Minggu ke 1	13.33333	5.47723	.183	-4.6927	31.3593
	Minggu ke 3	-3.33333	5.47723	.970	-21.3593	14.6927
	Minggu ke 4	-55.00000	5.47723	.000	-73.0260	-36.9740
Minggu ke 3	Hari ke 2	30.00000	5.47723	.002	11.9740	48.0260
	Minggu ke 1	16.66667	5.47723	.073	-1.3593	34.6927
	Minggu ke 2	3.33333	5.47723	.970	-14.6927	21.3593
	Minggu ke 4	-51.66667	5.47723	.000	-69.6927	-33.6407
Minggu ke 4	Hari ke 2	81.66667	5.47723	.000	63.6407	99.6927
	Minggu ke 1	68.33333	5.47723	.000	50.3073	86.3593
	Minggu ke 2	55.00000	5.47723	.000	36.9740	73.0260
	Minggu ke 3	51.66667	5.47723	.000	33.6407	69.6927

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

#### 4. Formula optimum NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Viskositas (dPas)	15	331.67	9.759	320	350

		Viskositas (dPas)
N		15
Normal Parameters <sup>a,b</sup>	Mean	331.67
	Std. Deviation	9.759
Most Extreme Differences	Absolute	.219
	Positive	.219
	Negative	-.116
Kolmogorov-Smirnov Z		.850
Asymp. Sig. (2-tailed)		.466

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Viskositas (dPas)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	321.67	2.887	1.667	314.50	328.84	320	325
Minggu ke 1	3	325.00	.000	.000	325.00	325.00	325	325
Minggu ke 2	3	328.33	2.887	1.667	321.16	335.50	325	330
Minggu ke 3	3	336.67	2.887	1.667	329.50	343.84	335	340
Minggu ke 4	3	346.67	5.774	3.333	332.32	361.01	340	350
Total	15	331.67	9.759	2.520	326.26	337.07	320	350

### Test of Homogeneity of Variances

Viskositas (dPas)

Levene Statistic	df1	df2	Sig.
5.714	4	10	.012

### ANOVA

Viskositas (dPas)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1216.667	4	304.167	26.071	.000
Within Groups	116.667	10	11.667		
Total	1333.333	14			

### Multiple Comparisons

Viskositas (dPas)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-3.333	2.789	.754	-12.51	5.85
	Minggu ke 2	-6.667	2.789	.195	-15.85	2.51
	Minggu ke 3	-15.000*	2.789	.002	-24.18	-5.82
	Minggu ke 4	-25.000*	2.789	.000	-34.18	-15.82
Minggu ke 1	Hari ke 2	3.333	2.789	.754	-5.85	12.51
	Minggu ke 2	-3.333	2.789	.754	-12.51	5.85
	Minggu ke 3	-11.667*	2.789	.013	-20.85	-2.49
	Minggu ke 4	-21.667*	2.789	.000	-30.85	-12.49
Minggu ke 2	Hari ke 2	6.667	2.789	.195	-2.51	15.85
	Minggu ke 1	3.333	2.789	.754	-5.85	12.51
	Minggu ke 3	-8.333	2.789	.080	-17.51	.85
	Minggu ke 4	-18.333*	2.789	.000	-27.51	-9.15
Minggu ke 3	Hari ke 2	15.000*	2.789	.002	5.82	24.18
	Minggu ke 1	11.667*	2.789	.013	2.49	20.85
	Minggu ke 2	8.333	2.789	.080	-.85	17.51
	Minggu ke 4	-10.000*	2.789	.032	-19.18	-.82
Minggu ke 4	Hari ke 2	25.000*	2.789	.000	15.82	34.18
	Minggu ke 1	21.667*	2.789	.000	12.49	30.85
	Minggu ke 2	18.333*	2.789	.000	9.15	27.51
	Minggu ke 3	10.000*	2.789	.032	.82	19.18

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

## B. Stabilitas fisik (Daya sebar)

### 1. Formula 1

#### NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya sebar (cm)	15	4.1567	.09424	4.00	4.30

### One-Sample Kolmogorov-Smirnov Test

		Daya sebar (cm)
N		15
Normal Parameters <sup>a, b</sup>	Mean	4.1567
	Std. Deviation	.09424
Most Extreme Differences	Absolute	.211
	Positive	.126
	Negative	-.211
Kolmogorov-Smirnov Z		.815
Asymp. Sig. (2-tailed)		.519

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya sebar (cm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	4.2667	.02887	.01667	4.1950	4.3384	4.25	4.30
Minggu ke 1	3	4.2167	.02887	.01667	4.1450	4.2884	4.20	4.25
Minggu ke 2	3	4.1667	.05774	.03333	4.0232	4.3101	4.10	4.20
Minggu ke 3	3	4.1167	.02887	.01667	4.0450	4.1884	4.10	4.15
Minggu ke 4	3	4.0167	.02887	.01667	3.9450	4.0884	4.00	4.05
Total	15	4.1567	.09424	.02433	4.1045	4.2089	4.00	4.30

### Test of Homogeneity of Variances

Daya sebar (cm)

Levene Statistic	df1	df2	Sig.
2.000	4	10	.171

### ANOVA

Daya sebar (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.111	4	.028	20.812	.000
Within Groups	.013	10	.001		
Total	.124	14			

### Multiple Comparisons

Daya sebar (cm)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	.05000	.02981	.487	-.0481	.1481
	Minggu ke 2	.10000	.02981	.045	.0019	.1981
	Minggu ke 3	.15000	.02981	.004	.0519	.2481
	Minggu ke 4	.25000	.02981	.000	.1519	.3481
Minggu ke 1	Hari ke 2	-.05000	.02981	.487	-.1481	.0481
	Minggu ke 2	.05000	.02981	.487	-.0481	.1481
	Minggu ke 3	.10000	.02981	.045	.0019	.1981
	Minggu ke 4	.20000	.02981	.000	.1019	.2981
Minggu ke 2	Hari ke 2	-.10000	.02981	.045	-.1981	-.0019
	Minggu ke 1	-.05000	.02981	.487	-.1481	.0481
	Minggu ke 3	.05000	.02981	.487	-.0481	.1481
	Minggu ke 4	.15000	.02981	.004	.0519	.2481
Minggu ke 3	Hari ke 2	-.15000	.02981	.004	-.2481	-.0519
	Minggu ke 1	-.10000	.02981	.045	-.1981	-.0019
	Minggu ke 2	-.05000	.02981	.487	-.1481	.0481
	Minggu ke 4	.10000	.02981	.045	.0019	.1981
Minggu ke 4	Hari ke 2	-.25000	.02981	.000	-.3481	-.1519
	Minggu ke 1	-.20000	.02981	.000	-.2981	-.1019
	Minggu ke 2	-.15000	.02981	.004	-.2481	-.0519
	Minggu ke 3	-.10000	.02981	.045	-.1981	-.0019

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

## 2. Formula 2 NPar Tests

### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya sebar (cm)	15	3.2533	.08857	3.15	3.45

		Daya sebar (cm)
N		15
Normal Parameters <sup>a,b</sup>	Mean	3.2533
	Std. Deviation	.08857
Most Extreme Differences	Absolute	.248
	Positive	.248
	Negative	-.140
Kolmogorov-Smirnov Z		.962
Asymp. Sig. (2-tailed)		.313

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya sebar (cm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	3.4083	.03819	.02205	3.3135	3.5032	3.38	3.45
Minggu ke 1	3	3.2583	.03819	.02205	3.1635	3.3532	3.23	3.30
Minggu ke 2	3	3.2167	.02887	.01667	3.1450	3.2884	3.20	3.25
Minggu ke 3	3	3.1917	.01443	.00833	3.1558	3.2275	3.18	3.20
Minggu ke 4	3	3.1917	.03819	.02205	3.0968	3.2865	3.15	3.23
Total	15	3.2533	.08857	.02287	3.2043	3.3024	3.15	3.45

### Test of Homogeneity of Variances

Daya sebar (cm)

Levene Statistic	df1	df2	Sig.
.773	4	10	.567

### ANOVA

Daya sebar (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.099	4	.025	22.846	.000
Within Groups	.011	10	.001		
Total	.110	14			

### Multiple Comparisons

Daya sebar (cm)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	.15000*	.02687	.002	.0616	.2384
	Minggu ke 2	.19167*	.02687	.000	.1032	.2801
	Minggu ke 3	.21667*	.02687	.000	.1282	.3051
	Minggu ke 4	.21667*	.02687	.000	.1282	.3051
Minggu ke 1	Hari ke 2	-.15000*	.02687	.002	-.2384	-.0616
	Minggu ke 2	.04167	.02687	.556	-.0468	.1301
	Minggu ke 3	.06667	.02687	.171	-.0218	.1551
	Minggu ke 4	.06667	.02687	.171	-.0218	.1551
Minggu ke 2	Hari ke 2	-.19167*	.02687	.000	-.2801	-.1032
	Minggu ke 1	-.04167	.02687	.556	-.1301	.0468
	Minggu ke 3	.02500	.02687	.879	-.0634	.1134
	Minggu ke 4	.02500	.02687	.879	-.0634	.1134
Minggu ke 3	Hari ke 2	-.21667*	.02687	.000	-.3051	-.1282
	Minggu ke 1	-.06667	.02687	.171	-.1551	.0218
	Minggu ke 2	-.02500	.02687	.879	-.1134	.0634
	Minggu ke 4	.00000	.02687	1.000	-.0884	.0884
Minggu ke 4	Hari ke 2	-.21667*	.02687	.000	-.3051	-.1282
	Minggu ke 1	-.06667	.02687	.171	-.1551	.0218
	Minggu ke 2	-.02500	.02687	.879	-.1134	.0634
	Minggu ke 3	.00000	.02687	1.000	-.0884	.0884

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

### 3. Formula 3 NPar Tests

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya sebar (cm)	15	2.5217	.16363	2.35	2.85

		Daya sebar (cm)
N		15
Normal Parameters <sup>a,b</sup>	Mean	2.5217
	Std. Deviation	.16363
Most Extreme Differences	Absolute	.212
	Positive	.212
	Negative	-.147
Kolmogorov-Smirnov Z		.822
Asymp. Sig. (2-tailed)		.509

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya sebar (cm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	2.8000	.05000	.02887	2.6758	2.9242	2.75	2.85
Minggu ke 1	3	2.5750	.02500	.01443	2.5129	2.6371	2.55	2.60
Minggu ke 2	3	2.4583	.01443	.00833	2.4225	2.4942	2.45	2.48
Minggu ke 3	3	2.4167	.02887	.01667	2.3450	2.4884	2.40	2.45
Minggu ke 4	3	2.3583	.01443	.00833	2.3225	2.3942	2.35	2.38
Total	15	2.5217	.16363	.04225	2.4311	2.6123	2.35	2.85

### Test of Homogeneity of Variances

Daya sebar (cm)

Levene Statistic	df1	df2	Sig.
1.098	4	10	.409

### ANOVA

Daya sebar (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.366	4	.092	104.595	.000
Within Groups	.009	10	.001		
Total	.375	14			



### Multiple Comparisons

Daya sebar (cm)

Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	.22500*	.02415	.000	.1455	.3045
	Minggu ke 2	.34167*	.02415	.000	.2622	.4212
	Minggu ke 3	.38333*	.02415	.000	.3038	.4628
	Minggu ke 4	.44167*	.02415	.000	.3622	.5212
Minggu ke 1	Hari ke 2	-.22500*	.02415	.000	-.3045	-.1455
	Minggu ke 2	.11667	.02415	.005	.0372	.1962
	Minggu ke 3	.15833	.02415	.000	.0788	.2378
	Minggu ke 4	.21667*	.02415	.000	.1372	.2962
Minggu ke 2	Hari ke 2	-.34167*	.02415	.000	-.4212	-.2622
	Minggu ke 1	-.11667	.02415	.005	-.1962	-.0372
	Minggu ke 3	.04167	.02415	.462	-.0378	.1212
	Minggu ke 4	.10000	.02415	.013	.0205	.1795
Minggu ke 3	Hari ke 2	-.38333*	.02415	.000	-.4628	-.3038
	Minggu ke 1	-.15833	.02415	.000	-.2378	-.0788
	Minggu ke 2	-.04167	.02415	.462	-.1212	.0378
	Minggu ke 4	.05833	.02415	.188	-.0212	.1378
Minggu ke 4	Hari ke 2	-.44167*	.02415	.000	-.5212	-.3622
	Minggu ke 1	-.21667*	.02415	.000	-.2962	-.1372
	Minggu ke 2	-.10000	.02415	.013	-.1795	-.0205
	Minggu ke 3	-.05833	.02415	.188	-.1378	.0212

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

#### 4. Formula optimum NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya sebar (cm)	15	3.5517	.14282	3.30	3.80

		Daya sebar (cm)
N		15
Normal Parameters <sup>a,b</sup>	Mean	3.5517
	Std. Deviation	.14282
Most Extreme Differences	Absolute	.123
	Positive	.123
	Negative	-.099
Kolmogorov-Smirnov Z		.475
Asymp. Sig. (2-tailed)		.978

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya sebar (cm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
					Hari ke 2	3		
Minggu ke 1	3	3.6333	.05774	.03333	3.4899	3.7768	3.60	3.70
Minggu ke 2	3	3.5500	.05000	.02887	3.4258	3.6742	3.50	3.60
Minggu ke 3	3	3.4667	.05774	.03333	3.3232	3.6101	3.40	3.50
Minggu ke 4	3	3.3667	.05774	.03333	3.2232	3.5101	3.30	3.40
Total	15	3.5517	.14282	.03688	3.4726	3.6308	3.30	3.80

### Test of Homogeneity of Variances

Daya sebar (cm)

Levene Statistic	df1	df2	Sig.
.126	4	10	.970

### ANOVA

Daya sebar (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.253	4	.063	19.190	.000
Within Groups	.033	10	.003		
Total	.286	14			

### Multiple Comparisons

Daya sebar (cm)  
Tukey HSD

(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	.10833	.04684	.218	-.0458	.2625
	Minggu ke 2	.19167 <sup>*</sup>	.04684	.015	.0375	.3458
	Minggu ke 3	.27500 <sup>*</sup>	.04684	.001	.1208	.4292
	Minggu ke 4	.37500 <sup>*</sup>	.04684	.000	.2208	.5292
Minggu ke 1	Hari ke 2	-.10833	.04684	.218	-.2625	.0458
	Minggu ke 2	.08333	.04684	.434	-.0708	.2375
	Minggu ke 3	.16667 <sup>*</sup>	.04684	.033	.0125	.3208
	Minggu ke 4	.26667 <sup>*</sup>	.04684	.001	.1125	.4208
Minggu ke 2	Hari ke 2	-.19167 <sup>*</sup>	.04684	.015	-.3458	-.0375
	Minggu ke 1	-.08333	.04684	.434	-.2375	.0708
	Minggu ke 3	.08333	.04684	.434	-.0708	.2375
	Minggu ke 4	.18333 <sup>*</sup>	.04684	.019	.0292	.3375
Minggu ke 3	Hari ke 2	-.27500 <sup>*</sup>	.04684	.001	-.4292	-.1208
	Minggu ke 1	-.16667 <sup>*</sup>	.04684	.033	-.3208	-.0125
	Minggu ke 2	-.08333	.04684	.434	-.2375	.0708
	Minggu ke 4	.10000	.04684	.278	-.0542	.2542
Minggu ke 4	Hari ke 2	-.37500 <sup>*</sup>	.04684	.000	-.5292	-.2208
	Minggu ke 1	-.26667 <sup>*</sup>	.04684	.001	-.4208	-.1125
	Minggu ke 2	-.18333 <sup>*</sup>	.04684	.019	-.3375	-.0292
	Minggu ke 3	-.10000	.04684	.278	-.2542	.0542

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

## C. Stabilitas fisik (Daya lekat)

### 1. Formula 1

#### NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya lekat (detik)	15	1.2287	.12200	1.04	1.39

		Daya lekat (detik)
N		15
Normal Parameters <sup>a,b</sup>	Mean	1.2287
	Std. Deviation	.12200
Most Extreme Differences	Absolute	.169
	Positive	.140
	Negative	-.169
Kolmogorov-Smirnov Z		.656
Asymp. Sig. (2-tailed)		.782

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya lekat (detik)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	1.0533	.01528	.00882	1.0154	1.0913	1.04	1.07
Minggu ke 1	3	1.1367	.01528	.00882	1.0987	1.1746	1.12	1.15
Minggu ke 2	3	1.2633	.01528	.00882	1.2254	1.3013	1.25	1.28
Minggu ke 3	3	1.3233	.02082	.01202	1.2716	1.3750	1.30	1.34
Minggu ke 4	3	1.3667	.02082	.01202	1.3150	1.4184	1.35	1.39
Total	15	1.2287	.12200	.03150	1.1611	1.2962	1.04	1.39

### Test of Homogeneity of Variances

Daya lekat (detik)

Levene Statistic	df1	df2	Sig.
.312	4	10	.864

### ANOVA

Daya lekat (detik)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.205	4	.051	163.755	.000
Within Groups	.003	10	.000		
Total	.208	14			

### Multiple Comparisons

Daya lekat (detik)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-.08333*	.01445	.001	-.1309	-.0358
	Minggu ke 2	-.21000*	.01445	.000	-.2576	-.1624
	Minggu ke 3	-.27000*	.01445	.000	-.3176	-.2224
	Minggu ke 4	-.31333*	.01445	.000	-.3609	-.2658
Minggu ke 1	Hari ke 2	.08333*	.01445	.001	.0358	.1309
	Minggu ke 2	-.12667*	.01445	.000	-.1742	-.0791
	Minggu ke 3	-.18667*	.01445	.000	-.2342	-.1391
	Minggu ke 4	-.23000*	.01445	.000	-.2776	-.1824
Minggu ke 2	Hari ke 2	.21000*	.01445	.000	.1624	.2576
	Minggu ke 1	.12667*	.01445	.000	.0791	.1742
	Minggu ke 3	-.06000*	.01445	.013	-.1076	-.0124
	Minggu ke 4	-.10333*	.01445	.000	-.1509	-.0558
Minggu ke 3	Hari ke 2	.27000*	.01445	.000	.2224	.3176
	Minggu ke 1	.18667*	.01445	.000	.1391	.2342
	Minggu ke 2	.06000*	.01445	.013	.0124	.1076
	Minggu ke 4	-.04333*	.01445	.079	-.0909	.0042
Minggu ke 4	Hari ke 2	.31333*	.01445	.000	.2658	.3609
	Minggu ke 1	.23000*	.01445	.000	.1824	.2776
	Minggu ke 2	.10333*	.01445	.000	.0558	.1509
	Minggu ke 3	.04333*	.01445	.079	-.0042	.0909

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

## 2. Formula 2 NPar Tests

### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya lekat (detik)	15	1.9073	.15121	1.68	2.09

		Daya lekat (detik)
N		15
Normal Parameters <sup>a,b</sup>	Mean	1.9073
	Std. Deviation	.15121
Most Extreme Differences	Absolute	.197
	Positive	.161
	Negative	-.197
Kolmogorov-Smirnov Z		.762
Asymp. Sig. (2-tailed)		.607

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya lekat (detik)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	1.7133	.03512	.02028	1.6261	1.8006	1.68	1.75
Minggu ke 1	3	1.7767	.02517	.01453	1.7142	1.8392	1.75	1.80
Mingguke 2	3	1.9333	.07638	.04410	1.7436	2.1231	1.85	2.00
Minggu ke 3	3	2.0400	.03606	.02082	1.9504	2.1296	2.00	2.07
Minggu ke 4	3	2.0733	.01528	.00882	2.0354	2.1113	2.06	2.09
Total	15	1.9073	.15121	.03904	1.8236	1.9911	1.68	2.09

### Test of Homogeneity of Variances

Daya lekat (detik)

Levene Statistic	df1	df2	Sig.
2.194	4	10	.143

### ANOVA

Daya lekat (detik)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.302	4	.075	40.834	.000
Within Groups	.018	10	.002		
Total	.320	14			

### Multiple Comparisons

Daya lekat (detik)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-.06333	.03509	.421	-.1788	.0521
	Mingguke 2	-.22000*	.03509	.001	-.3355	-.1045
	Minggu ke 3	-.32667*	.03509	.000	-.4421	-.2112
	Minggu ke 4	-.36000*	.03509	.000	-.4755	-.2445
Minggu ke 1	Hari ke 2	.06333	.03509	.421	-.0521	.1788
	Mingguke 2	-.15667*	.03509	.008	-.2721	-.0412
	Minggu ke 3	-.26333*	.03509	.000	-.3788	-.1479
	Minggu ke 4	-.29667*	.03509	.000	-.4121	-.1812
Mingguke 2	Hari ke 2	.22000*	.03509	.001	.1045	.3355
	Minggu ke 1	.15667*	.03509	.008	.0412	.2721
	Minggu ke 3	-.10667	.03509	.074	-.2221	.0088
	Minggu ke 4	-.14000*	.03509	.017	-.2555	-.0245
Minggu ke 3	Hari ke 2	.32667*	.03509	.000	.2112	.4421
	Minggu ke 1	.26333*	.03509	.000	.1479	.3788
	Mingguke 2	.10667	.03509	.074	-.0088	.2221
	Minggu ke 4	-.03333	.03509	.871	-.1488	.0821
Minggu ke 4	Hari ke 2	.36000*	.03509	.000	.2445	.4755
	Minggu ke 1	.29667*	.03509	.000	.1812	.4121
	Mingguke 2	.14000*	.03509	.017	.0245	.2555
	Minggu ke 3	.03333	.03509	.871	-.0821	.1488

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

### 3. Formula 3 NPar Tests

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya lekat (detik)	15	3.2813	.61785	2.47	4.36

		Daya lekat (detik)
N		15
Normal Parameters <sup>a,b</sup>	Mean	3.2813
	Std. Deviation	.61785
Most Extreme Differences	Absolute	.192
	Positive	.192
	Negative	-.145
Kolmogorov-Smirnov Z		.745
Asymp. Sig. (2-tailed)		.635

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya lekat (detik)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	2.5033	.03055	.01764	2.4274	2.5792	2.47	2.53
Minggu ke 1	3	3.0433	.03055	.01764	2.9674	3.1192	3.01	3.07
Minggu ke 2	3	3.1367	.04041	.02333	3.0363	3.2371	3.10	3.18
Minggu ke 3	3	3.4033	.04163	.02404	3.2999	3.5068	3.37	3.45
Minggu ke 4	3	4.3200	.04583	.02646	4.2062	4.4338	4.27	4.36
Total	15	3.2813	.61785	.15953	2.9392	3.6235	2.47	4.36

### Test of Homogeneity of Variances

Daya lekat (detik)

Levene Statistic	df1	df2	Sig.
.265	4	10	.894

### ANOVA

Daya lekat (detik)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.330	4	1.332	908.473	.000
Within Groups	.015	10	.001		
Total	5.344	14			



### Multiple Comparisons

Daya lekat (detik)  
Tukey HSD

(I) kelompok	(J) kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-.54000*	.03127	.000	-.6429	-.4371
	Minggu ke 2	-.63333*	.03127	.000	-.7362	-.5304
	Minggu ke 3	-.90000*	.03127	.000	-1.0029	-.7971
	Minggu ke 4	-1.81667*	.03127	.000	-1.9196	-1.7138
Minggu ke 1	Hari ke 2	.54000*	.03127	.000	.4371	.6429
	Minggu ke 2	-.09333	.03127	.080	-.1962	.0096
	Minggu ke 3	-.36000*	.03127	.000	-.4629	-.2571
	Minggu ke 4	-1.27667*	.03127	.000	-1.3796	-1.1738
Minggu ke 2	Hari ke 2	.63333*	.03127	.000	.5304	.7362
	Minggu ke 1	.09333	.03127	.080	-.0096	.1962
	Minggu ke 3	-.26667*	.03127	.000	-.3696	-.1638
	Minggu ke 4	-1.18333*	.03127	.000	-1.2862	-1.0804
Minggu ke 3	Hari ke 2	.90000*	.03127	.000	.7971	1.0029
	Minggu ke 1	.36000*	.03127	.000	.2571	.4629
	Minggu ke 2	.26667*	.03127	.000	.1638	.3696
	Minggu ke 4	-.91667*	.03127	.000	-1.0196	-.8138
Minggu ke 4	Hari ke 2	1.81667*	.03127	.000	1.7138	1.9196
	Minggu ke 1	1.27667*	.03127	.000	1.1738	1.3796
	Minggu ke 2	1.18333*	.03127	.000	1.0804	1.2862
	Minggu ke 3	.91667*	.03127	.000	.8138	1.0196

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

#### 4. Formula optimum NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya lekat (detik)	15	1.4893	.07723	1.37	1.63

		Daya lekat (detik)
N		15
Normal Parameters <sup>a,b</sup>	Mean	1.4893
	Std. Deviation	.07723
Most Extreme Differences	Absolute	.148
	Positive	.148
	Negative	-.104
Kolmogorov-Smirnov Z		.574
Asymp. Sig. (2-tailed)		.897

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya lekat (detik)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Hari ke 2	3	1.3933	.02517	.01453	1.3308	1.4558	1.37	1.42
Minggu ke 1	3	1.4467	.01528	.00882	1.4087	1.4846	1.43	1.46
Minggu ke 2	3	1.4800	.02000	.01155	1.4303	1.5297	1.46	1.50
Minggu ke 3	3	1.5200	.03606	.02082	1.4304	1.6096	1.48	1.55
Minggu ke 4	3	1.6067	.02082	.01202	1.5550	1.6584	1.59	1.63
Total	15	1.4893	.07723	.01994	1.4466	1.5321	1.37	1.63

### Test of Homogeneity of Variances

Daya lekat (detik)

Levene Statistic	df1	df2	Sig.
.839	4	10	.531

### ANOVA

Daya lekat (detik)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.077	4	.019	32.289	.000
Within Groups	.006	10	.001		
Total	.083	14			

### Multiple Comparisons

Daya lekat (detik)  
Tukey HSD

(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Hari ke 2	Minggu ke 1	-.05333	.02000	.130	-.1192	.0125
	Minggu ke 2	-.08667	.02000	.010	-.1525	-.0208
	Minggu ke 3	-.12667*	.02000	.001	-.1925	-.0608
	Minggu ke 4	-.21333	.02000	.000	-.2792	-.1475
Minggu ke 1	Hari ke 2	.05333	.02000	.130	-.0125	.1192
	Minggu ke 2	-.03333	.02000	.493	-.0992	.0325
	Minggu ke 3	-.07333	.02000	.028	-.1392	-.0075
	Minggu ke 4	-.16000	.02000	.000	-.2258	-.0942
Minggu ke 2	Hari ke 2	.08667*	.02000	.010	.0208	.1525
	Minggu ke 1	.03333	.02000	.493	-.0325	.0992
	Minggu ke 3	-.04000	.02000	.332	-.1058	.0258
	Minggu ke 4	-.12667*	.02000	.001	-.1925	-.0608
Minggu ke 3	Hari ke 2	.12667*	.02000	.001	.0608	.1925
	Minggu ke 1	.07333	.02000	.028	.0075	.1392
	Minggu ke 2	.04000	.02000	.332	-.0258	.1058
	Minggu ke 4	-.08667*	.02000	.010	-.1525	-.0208
Minggu ke 4	Hari ke 2	.21333	.02000	.000	.1475	.2792
	Minggu ke 1	.16000	.02000	.000	.0942	.2258
	Minggu ke 2	.12667*	.02000	.001	.0608	.1925
	Minggu ke 3	.08667*	.02000	.010	.0208	.1525

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

### Lampiran 13. Statistik percobaan vs prediksi formula optimum

#### 1. Viskositas

##### NPar Tests

###### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Viskositas (dPas)	3	321.6667	2.88675	320.00	325.00

###### One-Sample Kolmogorov-Smirnov Test

		Viskositas (dPas)
N		3
Normal Parameters <sup>a,b</sup>	Mean	321.6667
	Std. Deviation	2.88675
Most Extreme Differences	Absolute	.385
	Positive	.385
	Negative	-.282
Kolmogorov-Smirnov Z		.667
Asymp. Sig. (2-tailed)		.766

a. Test distribution is Normal.

b. Calculated from data.

##### T-Test

###### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Viskositas (dPas)	3	321.6667	2.88675	1.66667

###### One-Sample Test

	Test Value = 326.57					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Viskositas (dPas)	-2.942	2	.099	-4.90333	-12.0744	2.2678

## 2. Daya sebar

### NPar Tests

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya sebar (cm)	3	3.7433	.06028	3.68	3.80

#### One-Sample Kolmogorov-Smirnov Test

		Daya sebar (cm)
N		3
Normal Parameters <sup>a, b</sup>	Mean	3.7433
	Std. Deviation	.06028
Most Extreme Differences	Absolute	.211
	Positive	.187
	Negative	-.211
Kolmogorov-Smirnov Z		.365
Asymp. Sig. (2-tailed)		.999

a. Test distribution is Normal.

b. Calculated from data.

### T-Test

#### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Daya sebar (cm)	3	3.7433	.06028	.03480

#### One-Sample Test

	Test Value = 3.71					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Daya sebar (cm)	.958	2	.439	.03333	-.1164	.1831

### 3. Daya lekat

#### NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya lekat (detik)	3	1.3933	.02517	1.37	1.42

##### One-Sample Kolmogorov-Smirnov Test

		Daya lekat (detik)
N		3
Normal Parameters <sup>a,b</sup>	Mean	1.3933
	Std. Deviation	.02517
Most Extreme Differences	Absolute	.219
	Positive	.219
	Negative	-.189
Kolmogorov-Smirnov Z		.380
Asymp. Sig. (2-tailed)		.999

a. Test distribution is Normal.

b. Calculated from data.

#### T-Test

##### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Daya lekat (detik)	3	1.3933	.02517	.01453

##### One-Sample Test

	Test Value = 1.44					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Daya lekat (detik)	-3.212	2	.085	-.04667	-.1092	.0158

#### 4. Pergeseran Viskositas

##### NPar Tests

###### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Pergeseran viskositas (%)	3	7.7733	1.56666	6.25	9.38

###### One-Sample Kolmogorov-Smirnov Test

		Pergeseran viskositas (%)
N		3
Normal Parameters <sup>a,b</sup>	Mean	7.7733
	Std. Deviation	1.56666
	Most Extreme Differences	
	Absolute	.188
	Positive	.188
	Negative	-.181
Kolmogorov-Smirnov Z		.325
Asymp. Sig. (2-tailed)		1.000

a. Test distribution is Normal.

b. Calculated from data.

##### T-Test

###### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Pergeseran viskositas (%)	3	7.7733	1.56666	.90451

###### One-Sample Test

	Test Value = 6.75					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pergeseran viskositas (%)	1.131	2	.375	1.02333	-2.8685	4.9151

## Lampiran 14. Uji statistik kolmogorov-Smirnov dan analisis anova satu jalan formula gel lendir bekicot

### 1. Viskositas NPar Tests

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Viskositas (dPas)	9	360.56	141.960	180	510

#### One-Sample Kolmogorov-Smirnov Test

		Viskositas (dPas)
N		9
Normal Parameters <sup>a,b</sup>	Mean	360.56
	Std. Deviation	141.960
Most Extreme Differences	Absolute	.249
	Positive	.225
	Negative	-.249
Kolmogorov-Smirnov Z		.746
Asymp. Sig. (2-tailed)		.633

a. Test distribution is Normal.

b. Calculated from data.

### Oneway

#### Descriptives

Viskositas (dPas)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	181.67	2.887	1.667	174.50	188.84	180	185
Formula 2	3	396.67	5.774	3.333	382.32	411.01	390	400
Formula 3	3	503.33	5.774	3.333	488.99	517.68	500	510
Total	9	360.56	141.960	47.320	251.44	469.68	180	510

#### Test of Homogeneity of Variances

Viskositas (dPas)

Levene Statistic	df1	df2	Sig.
1.778	2	6	.248

#### ANOVA

Viskositas (dPas)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	161072.222	2	80536.111	3221.444	.000
Within Groups	150.000	6	25.000		
Total	161222.222	8			



### Multiple Comparisons

Viskositas (dPas)  
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-215.000*	4.082	.000	-227.53	-202.47
	Formula 3	-321.667*	4.082	.000	-334.19	-309.14
Formula 2	Formula 1	215.000*	4.082	.000	202.47	227.53
	Formula 3	-106.667*	4.082	.000	-119.19	-94.14
Formula 3	Formula 1	321.667*	4.082	.000	309.14	334.19
	Formula 2	106.667*	4.082	.000	94.14	119.19

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

## 2. Daya sebar NPar Test

### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya sebar (cm)	9	3.4917	.63909	2.75	4.30

### One-Sample Kolmogorov-Smirnov Test

		Daya sebar (cm)
N		9
Normal Parameters <sup>a, b</sup>	Mean	3.4917
	Std. Deviation	.63909
Most Extreme Differences	Absolute	.216
	Positive	.193
	Negative	-.216
Kolmogorov-Smirnov Z		.647
Asymp. Sig. (2-tailed)		.797

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Daya sebar (cm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	4.2667	.02887	.01667	4.1950	4.3384	4.25	4.30
Formula 2	3	3.4083	.03819	.02205	3.3135	3.5032	3.38	3.45
Formula 3	3	2.8000	.05000	.02887	2.6758	2.9242	2.75	2.85
Total	9	3.4917	.63909	.21303	3.0004	3.9829	2.75	4.30

### Test of Homogeneity of Variances

Daya sebar (cm)

Levene Statistic	df1	df2	Sig.
.226	2	6	.804

### ANOVA

Daya sebar (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.258	2	1.629	1019.870	.000
Within Groups	.010	6	.002		
Total	3.268	8			

### Multiple Comparisons

Daya sebar (cm)

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	.85833*	.03263	.000	.7582	.9585
	Formula 3	1.46667*	.03263	.000	1.3665	1.5668
Formula 2	Formula 1	-.85833*	.03263	.000	-.9585	-.7582
	Formula 3	.60833*	.03263	.000	.5082	.7085
Formula 3	Formula 1	-1.46667*	.03263	.000	-1.5668	-1.3665
	Formula 2	-.60833*	.03263	.000	-.7085	-.5082

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

### 3. Daya lekat NPar Tests

#### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Daya lekat (detik)	9	1.7567	.62919	1.04	2.53

#### One-Sample Kolmogorov-Smirnov Test

		Daya lekat (detik)
N		9
Normal Parameters <sup>a,b</sup>	Mean	1.7567
	Std. Deviation	.62919
Most Extreme Differences	Absolute	.205
	Positive	.196
	Negative	-.205
Kolmogorov-Smirnov Z		.615
Asymp. Sig. (2-tailed)		.844

a. Test distribution is Normal.

b. Calculated from data.

### Oneway

#### Descriptives

Daya lekat (detik)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	1.0533	.01528	.00882	1.0154	1.0913	1.04	1.07
Formula 2	3	1.7133	.03512	.02028	1.6261	1.8006	1.68	1.75
Formula 3	3	2.5033	.03055	.01764	2.4274	2.5792	2.47	2.53
Total	9	1.7567	.62919	.20973	1.2730	2.2403	1.04	2.53

#### Test of Homogeneity of Variances

Daya lekat (detik)

Levene Statistic	df1	df2	Sig.
.795	2	6	.494

#### ANOVA

Daya lekat (detik)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.162	2	1.581	1976.375	.000
Within Groups	.005	6	.001		
Total	3.167	8			

### Multiple Comparisons

Daya lekat (detik)  
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.66000*	.02309	.000	-.7309	-.5891
	Formula 3	-1.45000*	.02309	.000	-1.5209	-1.3791
Formula 2	Formula 1	.66000*	.02309	.000	.5891	.7309
	Formula 3	-.79000*	.02309	.000	-.8609	-.7191
Formula 3	Formula 1	1.45000*	.02309	.000	1.3791	1.5209
	Formula 2	.79000*	.02309	.000	.7191	.8609

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

## 4. Pergeseran viskositas

### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Pergeseran viskositas (%)	9	11.3256	4.22717	6.25	18.00

### One-Sample Kolmogorov-Smirnov Test

		Pergeseran viskositas (%)
N		9
Normal Parameters <sup>a,b</sup>	Mean	11.3256
	Std. Deviation	4.22717
Most Extreme Differences	Absolute	.187
	Positive	.187
	Negative	-.122
Kolmogorov-Smirnov Z		.561
Asymp. Sig. (2-tailed)		.911

a. Test distribution is Normal.

b. Calculated from data.

## Oneway

### Descriptives

Pergeseran viskositas (%)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	11.0100	.17321	.10000	10.5797	11.4403	10.81	11.11
Formula 2	3	6.7300	.83138	.48000	4.6647	8.7953	6.25	7.69
Formula 3	3	16.2367	1.65772	.95708	12.1187	20.3547	14.71	18.00
Total	9	11.3256	4.22717	1.40906	8.0763	14.5748	6.25	18.00

### Test of Homogeneity of Variances

Pergeseran viskositas (%)

Levene Statistic	df1	df2	Sig.
3.237	2	6	.111

### ANOVA

Pergeseran viskositas (%)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	136.013	2	68.007	58.808	.000
Within Groups	6.938	6	1.156		
Total	142.952	8			

### Multiple Comparisons

Pergeseran viskositas (%)

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	4.28000*	.87803	.007	1.5860	6.9740
	Formula 3	-5.22667*	.87803	.002	-7.9207	-2.5326
Formula 2	Formula 1	-4.28000*	.87803	.007	-6.9740	-1.5860
	Formula 3	-9.50667*	.87803	.000	-12.2007	-6.8126
Formula 3	Formula 1	5.22667*	.87803	.002	2.5326	7.9207
	Formula 2	9.50667*	.87803	.000	6.8126	12.2007

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

### Lampiran 15. Uji statistik kolmogorov-Smirnov dan analisis anova satu jalan aktivitas antibakteri gel lendir bekicot

#### NPar Tests

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Diameter hambat (cm)	9	2.3389	.40449	1.85	3.10

##### One-Sample Kolmogorov-Smirnov Test

		Diameter hambat (cm)
N		9
Normal Parameters <sup>a,b</sup>	Mean	2.3389
	Std. Deviation	.40449
Most Extreme Differences	Absolute	.148
	Positive	.148
	Negative	-.113
Kolmogorov-Smirnov Z		.445
Asymp. Sig. (2-tailed)		.989

a. Test distribution is Normal.

b. Calculated from data.

#### Oneway

##### Descriptives

Diameter hambat (cm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Kontrol positif	3	2.7667	.28868	.16667	2.0496	3.4838	2.60	3.10
Lendir bekicot	3	2.3333	.15275	.08819	1.9539	2.7128	2.20	2.50
Formula optimum	3	1.9167	.07638	.04410	1.7269	2.1064	1.85	2.00
Total	9	2.3389	.40449	.13483	2.0280	2.6498	1.85	3.10

##### Test of Homogeneity of Variances

Diameter hambat (cm)

Levene Statistic	df1	df2	Sig.
4.242	2	6	.071

## ANOVA

Diameter hambat (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.084	2	.542	14.452	.005
Within Groups	.225	6	.037		
Total	1.309	8			

## Multiple Comparisons

Diameter hambat (cm)

Tukey HSD

(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol positif	Lendir bekicot	.43333	.15811	.075	-.0518	.9185
	Formula optimum	.85000*	.15811	.004	.3649	1.3351
Lendir bekicot	Kontrol positif	-.43333	.15811	.075	-.9185	.0518
	Formula optimum	.41667	.15811	.086	-.0685	.9018
Formula optimum	Kontrol positif	-.85000*	.15811	.004	-1.3351	-.3649
	Lendir bekicot	-.41667	.15811	.086	-.9018	.0685

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