. **BAB V**

KESIMPULAN DAN SARAN

A. Kesimpulan

Dari hasil penelitian formulasi dan uji mutu fisik *lipbalm* minyak zaitun (*Olive oil*) dengan ekstrak bunga rosella (*Hibiscus sabdariffa* L.) sebagai pewarna menggunakan variasi setil alkohol dapat disimpulkan sebagai berikut:

1. Minyak zaitun (*Olive oil*) dengan ekstrak bunga rosella (*Hibiscus sabdariffa* L.) dapat dibuat menjadi sediaan *lipbalm*.

2. Perbedaan konsentrasi setil alkohol sebagai pengeras pada formula 1, 2, dan 3 akan menghasilkan mutu fisik *lipbalm* yang berbeda.

B. Saran

Perlu dilakukan pengembangan formulasi yang berbeda, dengan variasi basis dan konsentrasi basis lain, hingga didapat hasil sediaan *lipbalm* yang baik dalam mutu dan stabilitasnya.

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LAMPIRAN

Lampiran 1. Hasil Perhitugan Rendemen Ekstrak Bunga Rosella

$$\text{Rendemen} = \frac{\text{Berat Ekstrak (g)}}{\text{Berat Serbuk (g)}} \times 100\%$$

$$= \frac{38,21}{250} \times 100\%$$

$$= 15,28\%$$

Rendemen ekstrak bunga rosella adalah 15,28%

Lampiran 2. Hasil Perhitungan Susut Pengeringan Serbuk Rosella

Bobot awal (g)	Bobot serbuk (g)	Persentase (%)
2,0	1,89	8
2,0	1,89	7,5
2,0	1,90	8,5
Rata-rata		8

Hasil kadar air serbuk rosella adalah 8 %

Lampiran 3. Perhitungan Formula Lipbalm

1. Formula 1

- Gliserin $= \frac{5}{100} \times 15 \text{ g} = 0,75 \text{ g}$

- Setil Alkohol $= \frac{15}{100} \times 15 \text{ g} = 2,25 \text{ g}$

- Nipasol $= \frac{0,20}{100} \times 15 \text{ g} = 0,03 \text{ g}$

- Vaselin Album $= \frac{15}{100} \times 15 \text{ g} = 2,25 \text{ g}$

- Ekstrak Rosella $= \frac{2}{100} \times 15 \text{ g} = 0,3 \text{ g}$

- Asam sitrat $= \frac{0,75}{100} \times 15 \text{ g} = 0,11 \text{ g}$

- Minyak Zaitun $= \frac{100}{100} \times 15 \text{ g}$

  $= 15 \text{ g} - (0,75\text{g}+2,25\text{g}+0,03\text{g}+2,25\text{g}+0,3\text{g}+0,11\text{g})$

  $= 15 \text{ g} - 5,69 \text{ g} = 9,31\text{g}$

2. Formula 2

- Gliserin $= \frac{5}{100} \times 15 \text{ g} = 0,75 \text{ g}$

- Setil Alkohol $= \frac{18}{100} \times 15 \text{ g} = 2,7 \text{ g}$

- Nipasol $= \frac{0,20}{100} \times 15 \text{ g} = 0,03 \text{ g}$

- Vaselin Album $= \frac{15}{100} \times 15 \text{ g} = 2,25 \text{ g}$

- Ekstrak Rosella $= \frac{2}{100} \times 15 \text{ g} = 0,3 \text{ g}$

- Asam sitrat $= \frac{0,75}{100} \times 15 \text{ g} = 0,11 \text{ g}$

- Minyak Zaitun $= \frac{100}{100} \times 15 \text{ g}$

  $= 15 \text{ g} - (0,75\text{g}+2,7\text{g}+0,03\text{g}+2,25\text{g}+0,3\text{g}+0,11\text{g})$

$$= 15 \text{ g} - 6{,}14\text{g} = 8{,}86 \text{ g}$$

3. Formula 3

- Gliserin $\qquad = \dfrac{5}{100} \times 15 \text{ g} = 0{,}75 \text{ g}$

- Setil Alkohol $\qquad = \dfrac{21}{100} \times 15 \text{ g} = 3{,}15 \text{ g}$

- Nipasol $\qquad = \dfrac{0{,}20}{100} \times 15 \text{ g} = 0{,}03 \text{ g}$

- Vaselin Album $\quad = \dfrac{15}{100} \times 15 \text{ g} = 2{,}25 \text{ g}$

- Ekstrak Rosella $\; = \dfrac{2}{100} \times 15 \text{ g} = 0{,}3 \text{ g}$

- Asam sitrat $\qquad = \dfrac{0{,}75}{100} \times 15 \text{ g} = 0{,}11 \text{ g}$

- Minyak Zaitun $\quad = \dfrac{100}{100} \times 15 \text{ g}$

$$= 15 \text{ g} - (0{,}75\text{g}+3{,}15\text{g}+0{,}03\text{g}+2{,}25\text{g}+0{,}3\text{g}+0{,}11\text{g})$$

$$= 15 \text{ g} - 6{,}59 \text{ g} = 8{,}41\text{g}$$

Lampiran 4. Gambar alat uji yang digunakan

Alat uji daya lekat
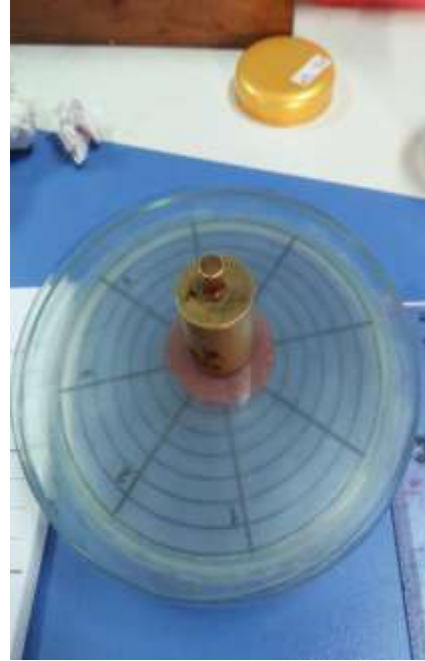
Alat uji daya sebar

pH stik

Viskometer

Lampiran 5.Gambar stabilitas warna lipbalm
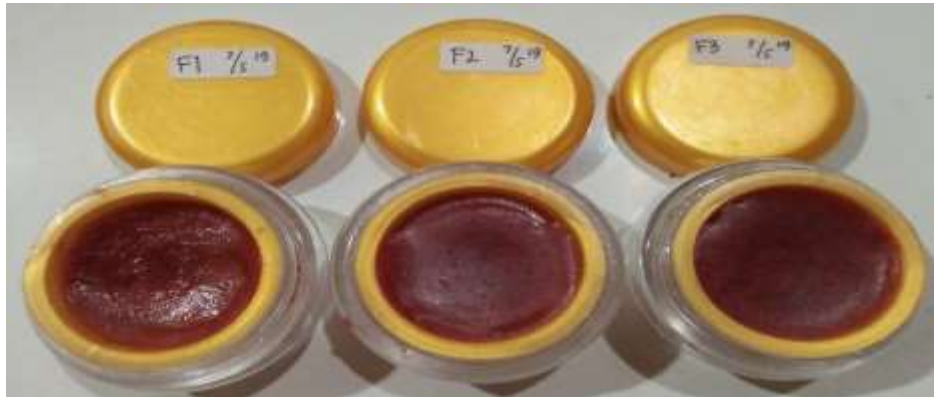
Hari ke-0
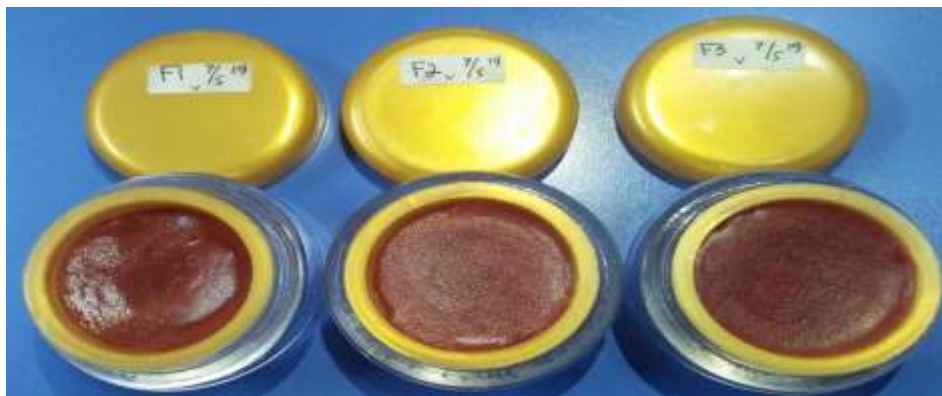
Hari ke-7

Hari ke-14

Lampiran 6. Gambar hasil pengujian pH lipbalm
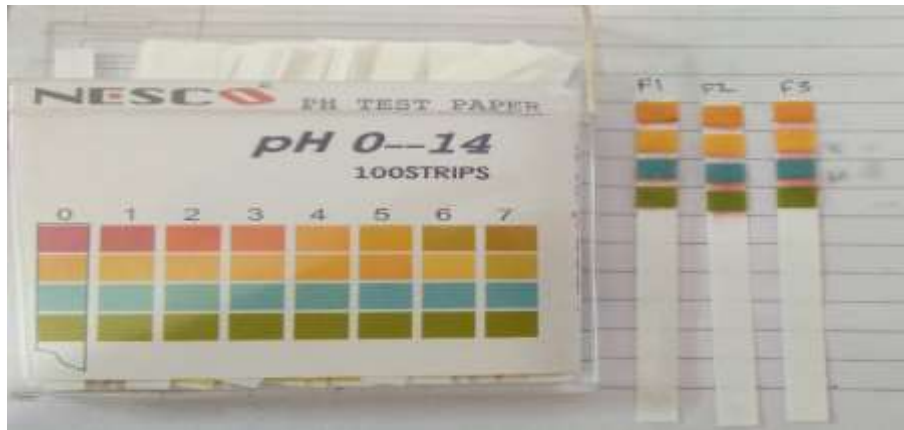
Hari ke-0
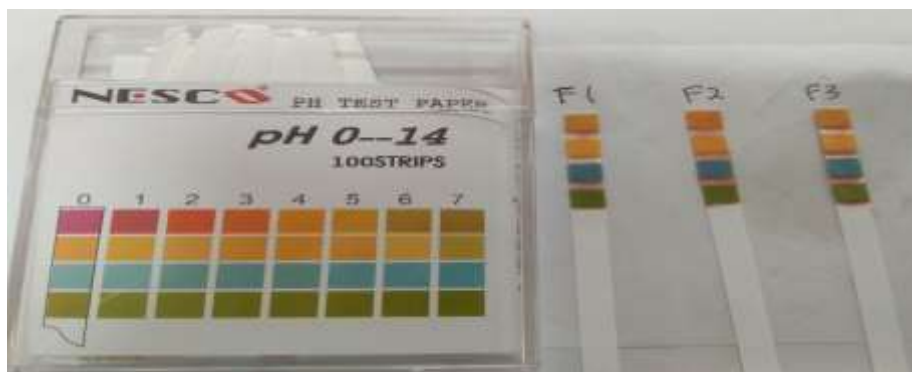
Hari ke-7

Hari ke-14

Lampiran 7. Gambar hasil uji homogenitas lipbalm
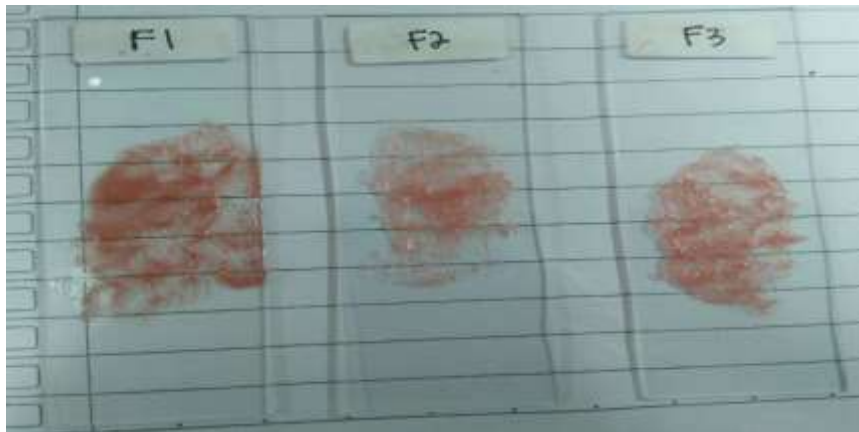
Hari ke-0
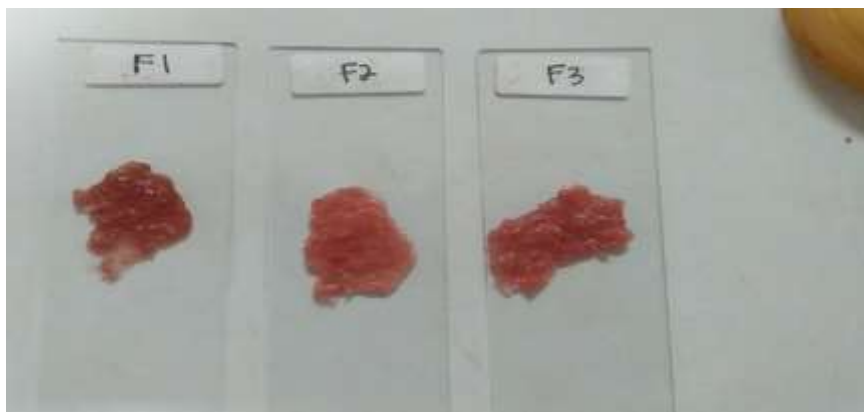
Hari ke-7
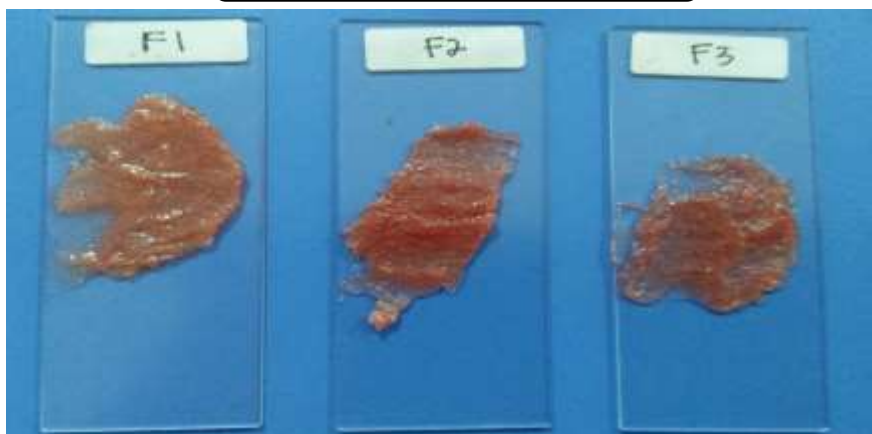
Hari ke-14

Lampiran 8. Data hasil pengujian daya lekat lipbalm

Formulasi	Hari ke-	Replikasi			Rata - Rata (detik)
		1	2	3	
F1	0	3	2	2	2,33
	7	2	2	3	2,33
	14	2	2	3	2,33
F2	0	3	3	2	2,67
	7	4	3	3	3,33
	14	3	4	4	3,66
F3	0	2	3	3	2,67
	7	3	3	4	3,33
	14	4	3	4	3,66

Lampiran 9. Data hasil pengujian daya sebar lipbalm

Pengujian hari ke-0

Formulasi	Berat beban (gram)	Replikasi			Rata - Rata (cm)
		1	**2**	**3**	
F1	**50**	2,47	2,4	2,5	2,45
	100	2,67	2,6	2,62	2,63
	150	2,9	2,95	2,92	2,92
	200	2,95	3,1	3,12	3,05
	250	3,1	3,35	3,37	3,27
F2	**50**	2,2	2,52	3,02	2,58
	100	2,4	2,8	3,25	2,81
	150	2,8	2,95	3,45	3,06
	200	3	3,07	3,6	3,22
	250	3,27	3,22	3,82	3,43
F3	**50**	2,57	2,82	2,47	2,62
	100	2,85	3,07	2,72	2,88
	150	3,05	3,32	2,95	3,10
	200	3,2	3,55	3,12	3,29
	250	3,27	3,65	3,65	3,52

Pengujian hari ke-7

Formulasi	Berat beban (gram)	Replikasi			Rata - Rata (cm)
		1	**2**	**3**	
F1	**50**	2,4	2,6	2,35	2,45
	100	2,72	2,77	2,67	2,72
	150	2,95	2,92	2,92	2,93
	200	3,12	3,1	3,17	3,13
	250	3,32	3,27	3,32	3,30
F2	**50**	2,55	2,57	2,42	2,51
	100	2,95	2,92	2,82	2,89
	150	3,17	3,1	3,1	3,12
	200	3,4	3,32	3,3	3,34
	250	3,52	3,55	3,52	3,53
F3	**50**	2,47	2,4	2,32	2,39
	100	2,87	2,67	2,6	2,71
	150	3,05	3	2,97	3,0
	200	3,25	3,15	3,2	3,2
	250	3,42	3,45	3,37	3,41

Pengujian hari ke-14

Formulasi	Berat beban (gram)	Replikasi			Rata - Rata (cm)
		1	2	3	
F1	50	2,17	2,65	2,32	2,38
	100	2,45	3,07	2,45	2,65
	150	2,67	3,27	2,67	2,87
	200	2,82	3,47	2,92	3,07
	250	3,07	3,57	3,22	3,28
F2	50	1,62	1,95	2,02	1,86
	100	2,22	2,2	2,22	2,21
	150	2,55	2,5	2,47	2,50
	200	2,82	2,75	2,7	2,75
	250	2,9	2,95	2,92	2,92
F3	50	1,57	2,05	2,2	1,94
	100	1,8	2,17	2,32	2,09
	150	2,07	2,22	2,4	2,23
	200	2,22	2,37	2,55	2,38
	250	2,35	2,57	2,67	2,53

Lampiran 10. Uji statistik kolmogorov-Smirnov dan analisis anova satu jalan formulasi lipbalm minyak zaitun

1. **Viskositas**

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji viskositas	9	126,67	20,767	110	175

One-Sample Kolmogorov-Smirnov Test

		Uji viskositas
N		9
Normal Parameters[a,b]	Mean	126,67
	Std. Deviation	20,767
Most Extreme Differences	Absolute	,214
	Positive	,214
	Negative	-,211
Kolmogorov-Smirnov Z		,642
Asymp. Sig. (2-tailed)		,804

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji viskositas

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	110,00	,000	,000	110,00	110,00	110	110
Formula 2	3	121,67	2,887	1,667	114,50	128,84	120	125
Formula 3	3	148,33	23,629	13,642	89,64	207,03	130	175
Total	9	126,67	20,767	6,922	110,70	142,63	110	175

Test of Homogeneity of Variances

Uji viskositas

Levene Statistic	df1	df2	Sig.
9,913	2	6	,013

ANOVA

Uji viskositas

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2316,667	2	1158,333	6,132	,035
Within Groups	1133,333	6	188,889		
Total	3450,000	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji viskositas

Tukey HSD

(I) Formula lipbalm	(J) Formula lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-11,667	11,222	,581	-46,10	22,76
	Formula 3	-38,333*	11,222	,033	-72,76	-3,90
Formula 2	Formula 1	11,667	11,222	,581	-22,76	46,10
	Formula 3	-26,667	11,222	,120	-61,10	7,76
Formula 3	Formula 1	38,333*	11,222	,033	3,90	72,76
	Formula 2	26,667	11,222	,120	-7,76	61,10

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

Homogeneous Subsets

Uji viskositas

Tukey HSD[a]

Formula lipbalm	N	Subset for alpha = 0.05	
		1	2
Formula 1	3	110,00	
Formula 2	3	121,67	121,67
Formula 3	3		148,33
Sig.		,581	,120

Means for groups in homogeneous subsets are displayed.

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

2. Daya lekat

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji Daya lekat	9	2,9233	,57015	2,33	3,66

One-Sample Kolmogorov-Smirnov Test

		Uji Daya lekat
N		9
Normal Parameters[a,b]	Mean	2,9233
	Std. Deviation	,57015
Most Extreme Differences	Absolute	,227
	Positive	,227
	Negative	-,207
Kolmogorov-Smirnov Z		,681
Asymp. Sig. (2-tailed)		,742

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji Daya lekat

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	2,3300	,00000	,00000	2,3300	2,3300	2,33	2,33
Formula 2	3	3,2200	,50408	,29103	1,9678	4,4722	2,67	3,66
Foemula 3	3	3,2200	,50408	,29103	1,9678	4,4722	2,67	3,66
Total	9	2,9233	,57015	,19005	2,4851	3,3616	2,33	3,66

Test of Homogeneity of Variances

Uji Daya lekat

Levene Statistic	df1	df2	Sig.
3,846	2	6	,084

ANOVA

Uji Daya lekat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,584	2	,792	4,676	,060
Within Groups	1,016	6	,169		
Total	2,601	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji Daya lekat

Tukey HSD

(I) Formulasi Lipbalm	(J) Formulasi Lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-,89000	,33606	,085	-1,9211	,1411
	Foemula 3	-,89000	,33606	,085	-1,9211	,1411
Formula 2	Formula 1	,89000	,33606	,085	-,1411	1,9211
	Foemula 3	,00000	,33606	1,000	-1,0311	1,0311
Foemula 3	Formula 1	,89000	,33606	,085	-,1411	1,9211
	Formula 2	,00000	,33606	1,000	-1,0311	1,0311

Homogeneous Subsets

Uji Daya lekat

Tukey HSDa

Formulasi Lipbalm	N	Subset for alpha = 0.05
		1
Formula 1	3	2,3300
Formula 2	3	3,2200
Foemula 3	3	3,2200
Sig.		,085

Means for groups in homogeneous subsets are displayed.

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

3. Daya sebar

- Uji Daya Sebar Beban 50 gram

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji Daya Sebar Beban 50 gram	9	2,3533	,26972	1,86	2,62

One-Sample Kolmogorov-Smirnov Test

		Uji Daya Sebar Beban 50 gram
N		9
Normal Parameters[a,b]	Mean	2,3533
	Std. Deviation	,26972
Most Extreme Differences	Absolute	,317
	Positive	,161
	Negative	-,317
Kolmogorov-Smirnov Z		,951
Asymp. Sig. (2-tailed)		,326

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji Daya Sebar Beban 50 gram

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	2,4267	,04041	,02333	2,3263	2,5271	2,38	2,45
Formula 2	3	2,3167	,39703	,22923	1,3304	3,3029	1,86	2,58
Formula 3	3	2,3167	,34588	,19969	1,4575	3,1759	1,94	2,62
Total	9	2,3533	,26972	,08991	2,1460	2,5607	1,86	2,62

Test of Homogeneity of Variances

Uji Daya Sebar Beban 50 gram

Levene Statistic	df1	df2	Sig.
4,310	2	6	,069

ANOVA

Uji Daya Sebar Beban 50 gram

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,024	2	,012	,130	,880
Within Groups	,558	6	,093		
Total	,582	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji Daya Sebar Beban 50 gram

Tukey HSD

(I) Formulasi Lipbalm	(J) Formulasi Lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	,11000	,24895	,900	-,6539	,8739
	Formula 3	,11000	,24895	,900	-,6539	,8739
Formula 2	Formula 1	-,11000	,24895	,900	-,8739	,6539
	Formula 3	,00000	,24895	1,000	-,7639	,7639
Formula 3	Formula 1	-,11000	,24895	,900	-,8739	,6539
	Formula 2	,00000	,24895	1,000	-,7639	,7639

Homogeneous Subsets

Uji Daya Sebar Beban 50 gram

Tukey HSD[a]

Formulasi Lipbalm	N	Subset for alpha = 0.05
		1
Formula 3	3	2,3167
Formula 2	3	2,3167
Formula 1	3	2,4267
Sig.		,900

Means for groups in homogeneous subsets are displayed.

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

- Uji Daya Sebar Beban 100 gram

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji Daya Sebar Beban 100gram	9	2,6211	,28388	2,09	2,89

One-Sample Kolmogorov-Smirnov Test

		Uji Daya Sebar Beban 100gram
N		9
Normal Parameters[a,b]	Mean	2,6211
	Std. Deviation	,28388
Most Extreme Differences	Absolute	,290
	Positive	,172
	Negative	-,290
Kolmogorov-Smirnov Z		,871
Asymp. Sig. (2-tailed)		,434

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji Daya Sebar Beban 100gram

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	2,6667	,04726	,02728	2,5493	2,7841	2,63	2,72
Formula 2	3	2,6367	,37166	,21458	1,7134	3,5599	2,21	2,89
Formula 3	3	2,5600	,41581	,24007	1,5271	3,5929	2,09	2,88
Total	9	2,6211	,28388	,09463	2,4029	2,8393	2,09	2,89

Test of Homogeneity of Variances

Uji Daya Sebar Beban 100gram

Levene Statistic	df1	df2	Sig.
4,911	2	6	,055

ANOVA

Uji Daya Sebar Beban 100gram

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,018	2	,009	,087	,918
Within Groups	,627	6	,104		
Total	,645	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji Daya Sebar Beban 100gram

Tukey HSD

(I) Formulasi Lipbalm	(J) Formulasi Lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	,03000	,26385	,993	-,7796	,8396
	Formula 3	,10667	,26385	,915	-,7029	,9162
Formula 2	Formula 1	-,03000	,26385	,993	-,8396	,7796
	Formula 3	,07667	,26385	,955	-,7329	,8862
Formula 3	Formula 1	-,10667	,26385	,915	-,9162	,7029
	Formula 2	-,07667	,26385	,955	-,8862	,7329

Homogeneous Subsets

Uji Daya Sebar Beban 100gram

Tukey HSD[a]

Formulasi Lipbalm	N	Subset for alpha = 0.05
		1
Formula 3	3	2,5600
Formula 2	3	2,6367
Formula 1	3	2,6667
Sig.		,915

Means for groups in homogeneous subsets are displayed.

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

- Uji Daya Sebar Beban 150 gram

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji Daya Sebar Beban 150gram	9	2,8589	,29998	2,23	3,12

One-Sample Kolmogorov-Smirnov Test

		Uji Daya Sebar Beban 150gram
N		9
Normal Parameters[a,b]	Mean	2,8589
	Std. Deviation	,29998
Most Extreme Differences	Absolute	,293
	Positive	,192
	Negative	-,293
Kolmogorov-Smirnov Z		,878
Asymp. Sig. (2-tailed)		,424

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji Daya Sebar Beban 150gram

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	2,9067	,03215	,01856	2,8268	2,9865	2,87	2,93
Formula 2	3	2,8933	,34196	,19743	2,0439	3,7428	2,50	3,12
Formula 3	3	2,7767	,47606	,27485	1,5941	3,9593	2,23	3,10
Total	9	2,8589	,29998	,09999	2,6283	3,0895	2,23	3,12

Test of Homogeneity of Variances

Uji Daya Sebar Beban 150gram

Levene Statistic	df1	df2	Sig.
6,626	2	6	,030

ANOVA

Uji Daya Sebar Beban 150gram

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,031	2	,015	,134	,877
Within Groups	,689	6	,115		
Total	,720	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji Daya Sebar Beban 150gram

Tukey HSD

(I) Formulasi Lipbalm	(J) Formulasi Lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	,01333	,27673	,999	-,8357	,8624
	Formula 3	,13000	,27673	,888	-,7191	,9791
Formula 2	Formula 1	-,01333	,27673	,999	-,8624	,8357
	Formula 3	,11667	,27673	,908	-,7324	,9657
Formula 3	Formula 1	-,13000	,27673	,888	-,9791	,7191
	Formula 2	-,11667	,27673	,908	-,9657	,7324

Homogeneous Subsets

Uji Daya Sebar Beban 150gram

Tukey HSD[a]

Formulasi Lipbalm	N	Subset for alpha = 0.05
		1
Formula 3	3	2,7767
Formula 2	3	2,8933
Formula 1	3	2,9067
Sig.		,888

Means for groups in homogeneous subsets are displayed.

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

- Uji Daya Sebar Beban 200 gram

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji Daya Sebar Beban 200gram	9	3,0478	,30388	2,38	3,34

One-Sample Kolmogorov-Smirnov Test

		Uji Daya Sebar Beban 200gram
N		9
Normal Parameters[a,b]	Mean	3,0478
	Std. Deviation	,30388
Most Extreme Differences	Absolute	,281
	Positive	,168
	Negative	-,281
Kolmogorov-Smirnov Z		,842
Asymp. Sig. (2-tailed)		,477

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji Daya Sebar Beban 200gram

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	3,0833	,04163	,02404	2,9799	3,1868	3,05	3,13
Formula 2	3	3,1033	,31182	,18003	2,3287	3,8779	2,75	3,34
Formula 3	3	2,9567	,50143	,28950	1,7110	4,2023	2,38	3,29
Total	9	3,0478	,30388	,10129	2,8142	3,2814	2,38	3,34

Test of Homogeneity of Variances

Uji Daya Sebar Beban 200gram

Levene Statistic	df1	df2	Sig.
6,433	2	6	,032

ANOVA

Uji Daya Sebar Beban 200gram

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,038	2	,019	,162	,854
Within Groups	,701	6	,117		
Total	,739	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji Daya Sebar Beban 200gram

Tukey HSD

(I) Formulasi Lipbalm	(J) Formulasi Lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-,02000	,27905	,997	-,8762	,8362
	Formula 3	,12667	,27905	,895	-,7295	,9829
Formula 2	Formula 1	,02000	,27905	,997	-,8362	,8762
	Formula 3	,14667	,27905	,862	-,7095	1,0029
Formula 3	Formula 1	-,12667	,27905	,895	-,9829	,7295
	Formula 2	-,14667	,27905	,862	-1,0029	,7095

Homogeneous Subsets

Uji Daya Sebar Beban 200gram

Tukey HSD[a]

Formulasi Lipbalm	N	Subset for alpha = 0.05
		1
Formula 3	3	2,9567
Formula 1	3	3,0833
Formula 2	3	3,1033
Sig.		,862

Means for groups in homogeneous subsets are
displayed.

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

- Uji Daya Sebar Beban 250 gram

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji Daya Sebar Beban 250gram	9	3,2433	,32404	2,53	3,53

One-Sample Kolmogorov-Smirnov Test

		Uji Daya Sebar Beban 250gram
N		9
Normal Parameters[a,b]	Mean	3,2433
	Std. Deviation	,32404
Most Extreme Differences	Absolute	,311
	Positive	,188
	Negative	-,311
Kolmogorov-Smirnov Z		,932
Asymp. Sig. (2-tailed)		,350

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Uji Daya Sebar Beban 250gram

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Formula 1	3	3,2833	,01528	,00882	3,2454	3,3213	3,27	3,30
Formula 2	3	3,2933	,32716	,18889	2,4806	4,1060	2,92	3,53
Formula 3	3	3,1533	,54262	,31328	1,8054	4,5013	2,53	3,52
Total	9	3,2433	,32404	,10801	2,9943	3,4924	2,53	3,53

Test of Homogeneity of Variances

Uji Daya Sebar Beban 250gram

Levene Statistic	df1	df2	Sig.
7,502	2	6	,023

ANOVA

Uji Daya Sebar Beban 250gram

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,037	2	,018	,137	,875
Within Groups	,803	6	,134		
Total	,840	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Uji Daya Sebar Beban 250gram

Tukey HSD

(I) Formulasi Lipbalm	(J) Formulasi Lipbalm	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-,01000	,29878	,999	-,9267	,9067
	Formula 3	,13000	,29878	,903	-,7867	1,0467
Formula 2	Formula 1	,01000	,29878	,999	-,9067	,9267
	Formula 3	,14000	,29878	,888	-,7767	1,0567
Formula 3	Formula 1	-,13000	,29878	,903	-1,0467	,7867
	Formula 2	-,14000	,29878	,888	-1,0567	,7767

Homogeneous Subsets

Uji Daya Sebar Beban 250gram

Tukey HSD[a]

Formulasi Lipbalm	N	Subset for alpha = 0.05
		1
Formula 3	3	3,1533
Formula 1	3	3,2833
Formula 2	3	3,2933
Sig.		,888

Means for groups in homogeneous subsets are displayed.

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