BAB V
KESIMPULAN DAN SARAN

A. Kesimpulan

Kesimpulan yang didapat dari hasil penelitian terhadap uji mutu fisik lip gloss minyak zaitun :

1. Sediaan lip gloss minyak zaitun *(Olive oil)* dengan pewarna alami sari buah naga merah dengan variasi konsentrasi cera alba pada F1= 1%, F2=3% dan F3=5% memberikan pengaruh terhadap hasil uji mutu fisik untuk setiap formula. Semakin tinggi konsentrasi cera alba akan berpengaruh terhadap peningkatan viskositas, daya lekat dan penurunan daya sebar lip gloss minyak zaitun (*Olive oil*) dengan pewarna alami sari buah naga merah (*Hylocereus costaricensis).*

2. Sediaan lip gloss minyak zaitun *(Olive oil)* dengan pewarna alami sari buah naga merah pada formula 1 yaitu dengan konsentrasi cera alba 1% merupakan formula yang paling baik berdasarkan hasil uji mutu fisiknya yaitu mempunyai susunan yang homogen, pH yang sesuai, serta konsistensi dan daya sebar yang baik sehingga mudah dan nyaman untuk penggunaannya pada bibir.

B. Saran

Berdasarkan penelitian yang sudah dilakukan, dapat ditarik saran yaitu:

1. Perlu dilakukan penelitian lebih lanjut untuk mendapatkan hasil sediaan lip gloss yang terbaik dalam hal mutu dan stabilitasnya.

2. Perlu dilakukan penelitian lebih lanjut untuk formulasi sediaan lip gloss dengan pewarna alami sari buah naga merah menggunakan variasi konsentrasi cera alba yaitu kurang dari 1% untuk menghasilkan sediaan dalam bentuk cair.

3. Perlu dilakukan penelitian lebih lanjut untuk mengetahui efek terapi dari lip gloss minyak zaitun.

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LAMPIRAN

Lampiran 1. Perhitungan Formula

A. Formula I

Cera Alba	$= 1 \times \frac{50}{100} = 0,5$ g
Parafin Liquid	$= 10 \times \frac{50}{100} = 5$ g
Vaselin Album	$= 13 \times \frac{50}{100} = 6,5$ g
BHT	$= 0,5 \times \frac{50}{100} = 0,25$ g
Emulsyifing wax	$= 30 \times \frac{50}{100} = 15$ g
Nipagin	$= 0,5 \times \frac{50}{100} = 0,25$ g
Gliserin	$= 3 \times \frac{50}{100} = 1,5$ g
Sari Buah Naga	$= 6,8 \times \frac{50}{100} = 3,4$ g
Minyak Zaitun ad 100	(50-32,4= 17, 6 g)

B. Formula II

Cera Alba	$= 3 \times \frac{50}{100} = 1,5$ g
Parafin Liquid	$= 10 \times \frac{50}{100} = 5$ g
Vaselin Album	$= 13 \times \frac{50}{100} = 6,5$ g
BHT	$= 0,5 \times \frac{50}{100} = 0,25$ g
Emulsyifing wax	$= 30 \times \frac{50}{100} = 15$ g
Nipagin	$= 0,5 \times \frac{50}{100} = 0,25$ g
Gliserin	$= 3 \times \frac{50}{100} = 1,5$ g
Sari Buah Naga	$= 6,8 \times \frac{50}{100} = 3,4$ g
Minyak Zaitun ad 100	(50-33,4= 16, 6 g)

C. Formula III

Cera Alba	$= 5 \times \frac{50}{100} = 2,5$ g
Parafin Liquid	$= 10 \times \frac{50}{100} = 5$ g
Vaselin Album	$= 13 \times \frac{50}{100} = 6,5$ g
BHT	$= 0,5 \times \frac{50}{100} = 0,25$ g
Emulsyifing wax	$= 30 \times \frac{50}{100} = 15$ g
Nipagin	$= 0,5 \times \frac{50}{100} = 0,25$ g
Gliserin	$= 3 \times \frac{50}{100} = 1,5$ g
Sari Buah Naga	$= 6,8 \times \frac{50}{100} = 3,4$ g
Minyak Zaitun ad 100	(50-34,4= 15, 6 g)

Lampiran 2. Hasil determinasi buah naga merah

UNIVERSITAS SETIA BUDI

UPT-LABORATORIUM

Nomor   : 40/DET/UPT-LAB/4.03.2020

Hal   : Hasil determinasi tumbuhan

Lamp.   : -

Nama Pemesan   : Maria F.N. Aravura Iwa

NIM   : 20171303B

Alamat   : Program Studi D-3 Farmasi, Universitas Setia Budi, Surakarta.

Nama sampel   : Naga Merah (*Hylocereus costaricensis* (F.A.C. Weber) Britton & Ros

HASIL DETERMINASI TUMBUHAN

Klasifikasi

Kingdom   : Plantae

Super Divisi   : Spermatophyta

Divisi   : Magnoliophyta

Kelas   : Magnoliopsida/Dicotyledoneae

Ordo   : Cactales

Famili   : Cactaceae

Genus   : Hylocereus

Species   : *Hylocereus costaricensis* (F.A.C. Weber) Britton & Ros

Hasil Determinasi menurut C.A. Backer & R.C. Bakhuizen van den Brink Jr. (1963) :

1b – 2b – 3b – 4b – 12b – 13b – 14b – 17b – 18b – 19b – 20b – 21b – 22b – 23b – 24b – 25b – 26b – 27b – 799b – 800b – 801b – 802a – 803b – 804b – 805c – 806b – 807c -808c – 809b – 810b – 811b – 812b – 815b – 816b – 818b – 820b – 821a – 822b – 824b – 825b – 826b – 829b - 830b - 831b – 832b – 833a – 834a – 835a – 836a – 837c – 851a – 852b – 853b – 854b – 855c – 856b – 857a – 858a – 859c – 860b – 872b – 873b – 874b – 875b – 876b – 877a - 886a – 887b – 888b – 890b – 892b – 983b – 984b – 986b – 991b – 992b – 993b – 994a – 995d – 1036b – Famili 78. Cactaceae. 1a – 2b – 4b – 6a. Genus Hylocereus – 1. Hylocereus costaricensis (F.A.C. Weber) Britton & Ros.

Deskripsi:

Habitus : Tanaman yang tidak lengkap, tidak memiliki daun, merupakan tanaman yang memanjat.

Akar : akar serabut, tumbuh di sepanjang batang pada bagian punggung sirip di sudut batang.

Batang : Batang berwarna hijau, bentuk segitiga atau menyiku, mengandung air berbentuk lendir dengan lapisan lilin.

Bunga : Bunga berbentuk terompet, bunga yang tidak rontok membentuk buah.

Buah : Buah berbentuk bulat agak lonjong, kulit buahnya berwarna merah menyala, di sekujur kulit dipenuhi jumbai-jumbai yang dianalogikan sebagai sisik naga, dalam daging buah terdapat biji yang ukurannya kecil seperti biji selasih berwarna hitam.

Kepala UPT-LAB
Universitas Setia Budi

Surakarta, 4 Maret 2020
Penanggung jawab
Determinasi Tumbuhan

Asik Gunawan, Amdk

Dra. Dewi Sulistyawati. M.Sc.

Lampiran 3. Hasil uji daya sebar lip gloss minyak zaitun

Formulasi	Beban (gram)	Replikasi ke-			Mean ± SD
		1	2	3	
F1	Tanpa Beban	3,6	3,43	3,76	3,60 ± 0,17
	50	3,9	4	4,2	4,03 ± 0,15
	150	4,26	4,53	4,46	4,42 ± 0,14
	250	4,4	4,76	4,73	4,63 ± 0,20
F2	Tanpa Beban	2,96	2,93	3,03	2,97 ± 0,05
	50	3,2	3,13	3,2	3,18 ± 0,04
	150	3,6	3,53	3,5	3,54 ± 0,05
	250	4,23	3,86	3,86	3,98 ± 0,21
F3	Tanpa Beban	2,76	2,7	2,86	2,77 ± 0,08
	50	3,1	3	3,2	3,10 ± 0,10
	150	3,46	3,5	3,73	3,56 ± 0,15
	250	3,76	3,73	4,06	3,85 ± 0,18

Lampiran 4. Hasil uji daya lekat lip gloss minyak zaitun

Replikasi	Daya lekat Hari ke 0		
	F1	F2	F3
1	01,23	15,1	19,45
2	01,52	14,54	12,5
3	01,23	15,04	22,24
Mean ± SD	1,33± 0,17	1,38± 0,10	1,98± 0,36

Lampiran 5. Hasil uji visositas lip gloss minyak zaitun

Replikasi	Viskositas		
	F1	F2	F3
1	100	150	300
2	100	160	310
3	110	150	300
Mean ± SD	103,33± 5,77	153,33± 5,77	303, 33±5,77

Lampiran 6. Hasil uji pH lip gloss minyak zaitun

Formulasi	Minggu	pH
1	Hari ke 0	6
	Hari ke 7	6
	Hari ke 14	6
2	Hari ke 0	6
	Hari ke 7	6
	Hari ke 14	6
3	Hari ke 0	6
	Hari ke 7	6
	Hari ke 14	6

Lampiran 7. Gambar lip gloss minyak zaitun

Hari ke 0

Hari ke 7

Hari ke 14

Lampiran 8. Gambar uji pH sediaan lip gloss minyak zaitun

<div style="text-align: center;">

Hari ke-1

</div>

Formula 1
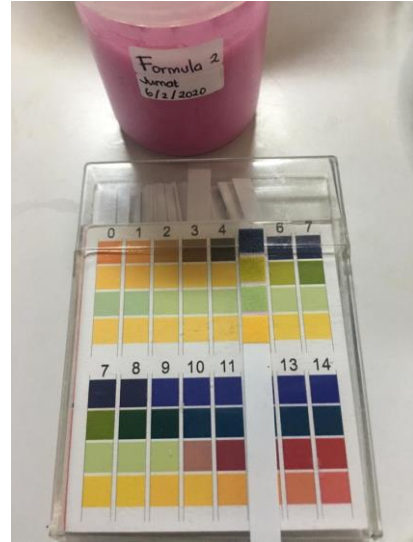
Formula 2

Formula 3

Hari ke-7
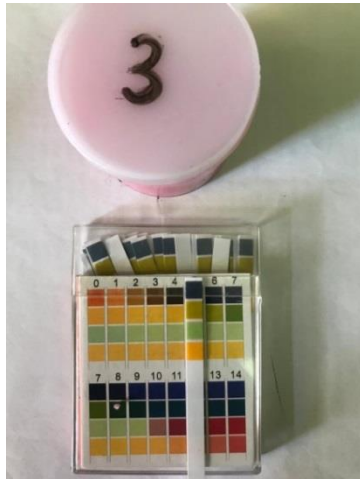
Hari ke-14

Lampiran 9.   Gambar Hasil Uji Homogenitas lip gloss minyak zaitun
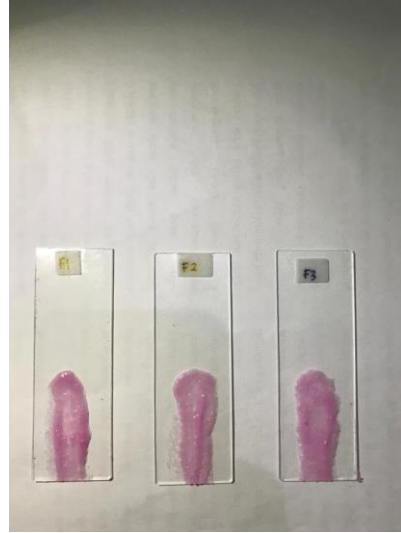
Hari ke-1   Hari ke-7
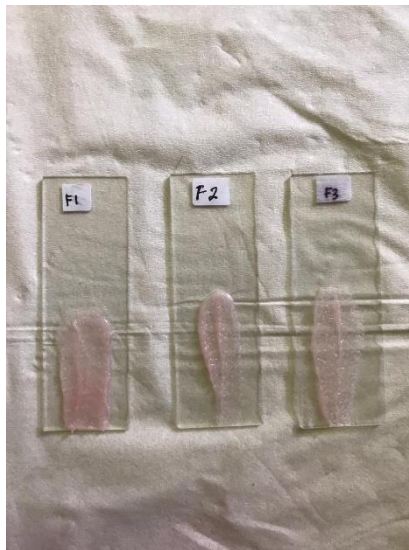
Hari ke-14

Lampiran 10. Gambar alat uji yang digunakan

Alat uji daya sebar

Alat uji daya lekat
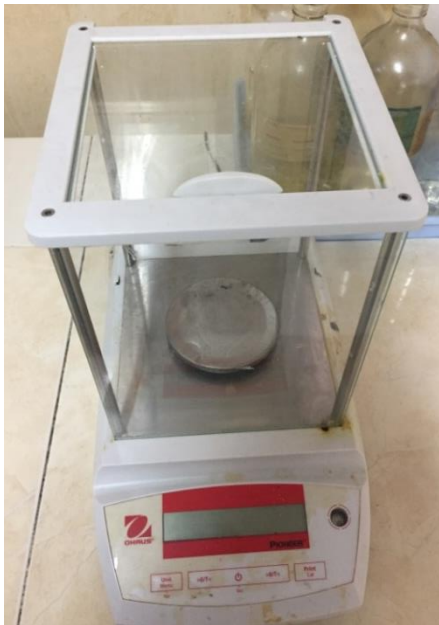
Timbangan digital

Alat Viskometer

Lampiran 11. Hasil daya lekat menggunakan uji one way Anova dan Kruskal Wallis

Explore

Notes

Output Created		16-JUL-2020 15:47:20
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	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=y BY x /PLOT BOXPLOT STEMLEAF NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:01,50
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Formula

Case Processing Summary

	Formula	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Daya Lekat	Formula 1	3	100.0%	0	0.0%	3	100.0%
	Formula 2	3	100.0%	0	0.0%	3	100.0%
	Formula 3	3	100.0%	0	0.0%	3	100.0%

Descriptives

Formula			Statistic	Std. Error
Daya Lekat	Formula 1	Mean	1.327	.0967
		95% Confidence Interval for Mean — Lower Bound	.911	
		95% Confidence Interval for Mean — Upper Bound	1.743	
		5% Trimmed Mean	.	
		Median	1.230	
		Variance	.028	
		Std. Deviation	.1674	
		Minimum	1.2	
		Maximum	1.5	
		Range	.3	
		Interquartile Range	.	
		Skewness	1.732	1.225
		Kurtosis	.	.
	Formula 2	Mean	1.383	.0584
		95% Confidence Interval for Mean — Lower Bound	1.132	
		95% Confidence Interval for Mean — Upper Bound	1.635	
		5% Trimmed Mean	.	
		Median	1.330	
		Variance	.010	
		Std. Deviation	.1012	
		Minimum	1.3	
		Maximum	1.5	
		Range	.2	
		Interquartile Range	.	
		Skewness	1.713	1.225
		Kurtosis	.	.
	Formula 3	Mean	1.980	.2066
		95% Confidence Interval for Mean — Lower Bound	1.091	
		95% Confidence Interval for Mean — Upper Bound	2.869	
		5% Trimmed Mean	.	
		Median	1.820	
		Variance	.128	
		Std. Deviation	.3579	
		Minimum	1.7	
		Maximum	2.4	
		Range	.7	
		Interquartile Range	.	
		Skewness	1.610	1.225
		Kurtosis	.	.

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Daya Lekat	Formula 1	.385	3	.	.750	3	.000
	Formula 2	.368	3	.	.792	3	.094
	Formula 3	.339	3	.	.850	3	.241

a. Lilliefors Significance Correction

Oneway

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax		ONEWAY y BY x /STATISTICS HOMOGENEITY /MISSING ANALYSIS /POSTHOC=TUKEY ALPHA(0.05).
Resources	Processor Time	00:00:00,02
	Elapsed Time	00:00:00,06

Test of Homogeneity of Variances

Daya Lekat

Levene Statistic	df1	df2	Sig.
4.559	2	6	.063

ANOVA

Daya Lekat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.786	2	.393	7.087	.026
Within Groups	.333	6	.055		
Total	1.119	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Daya Lekat

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Formula 1	Formula 2	-.0567	.1923	.954	-.647	.533
	Formula 3	-.6533[*]	.1923	.034	-1.243	-.063
Formula 2	Formula 1	.0567	.1923	.954	-.533	.647
	Formula 3	-.5967[*]	.1923	.048	-1.187	-.007
Formula 3	Formula 1	.6533[*]	.1923	.034	.063	1.243
	Formula 2	.5967[*]	.1923	.048	.007	1.187

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

Homogeneous Subsets

Daya Lekat

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05	
		1	2
Formula 1	3	1.327	
Formula 2	3	1.383	
Formula 3	3		1.980
Sig.		.954	1.000

Means for groups in homogeneous subsets are displayed.

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

Kruskal-Wallis Test

Ranks

	Formula	N	Mean Rank
Daya Lekat	Formula 1	3	3.00
	Formula 2	3	4.00
	Formula 3	3	8.00
	Total	9	

Test Statistics[a,b]

	Daya Lekat
Chi-Square	5.647
Df	2
Asymp. Sig.	.059

a. Kruskal Wallis Test

b. Grouping Variable: Formula

Lampiran 12. Hasil Uji Daya Sebar dengan one way ANOVA

Notes

Output Created		16-JUL-2020 15:59:41
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Input	Active Dataset	DataSet0
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	N of Rows in Working Data File	9
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=y BY x /PLOT BOXPLOT STEMLEAF NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:01,39
	Elapsed Time	00:00:01,48

Formula

Case Processing Summary

	Formula	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Daya sebar	Formula 1	3	100.0%	0	0.0%	3	100.0%
	Formula 2	3	100.0%	0	0.0%	3	100.0%
	Formula 3	3	100.0%	0	0.0%	3	100.0%

Descriptives

Formula				Statistic	Std. Error
Daya sebar	Formula 1	Mean		3.597	.0953
		95% Confidence Interval for Mean	Lower Bound	3.187	
			Upper Bound	4.007	
		5% Trimmed Mean		.	
		Median		3.600	
		Variance		.027	
		Std. Deviation		.1650	
		Minimum		3.4	
		Maximum		3.8	
		Range		.3	
		Interquartile Range		.	
		Skewness		-.091	1.225
		Kurtosis		.	.
	Formula 2	Mean		2.973	.0296
		95% Confidence Interval for Mean	Lower Bound	2.846	
			Upper Bound	3.101	
		5% Trimmed Mean		.	
		Median		2.960	
		Variance		.003	
		Std. Deviation		.0513	
		Minimum		2.9	
		Maximum		3.0	
		Range		.1	
		Interquartile Range		.	
		Skewness		1.090	1.225
		Kurtosis		.	.
	Formula 3	Mean		2.773	.0467
		95% Confidence Interval for Mean	Lower Bound	2.573	
			Upper Bound	2.974	
		5% Trimmed Mean		.	
		Median		2.760	
		Variance		.007	
		Std. Deviation		.0808	
		Minimum		2.7	
		Maximum		2.9	
		Range		.2	
		Interquartile Range		.	
		Skewness		.722	1.225
		Kurtosis		.	.

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Daya sebar	Formula 1	.177	3	.	1.000	3	.967
	Formula 2	.269	3	.	.949	3	.567
	Formula 3	.232	3	.	.980	3	.726

a. Lilliefors Significance Correction

NPar Tests

Notes

Output Created		16-JUL-2020 16:02:13
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	9
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		NPAR TESTS /K-W=y BY x(1 3) /MISSING ANALYSIS.
Resources	Processor Time	00:00:00,00
	Elapsed Time	00:00:00,01
	Number of Cases Allowed[a]	112347

a. Based on availability of workspace memory.

Oneway

Test of Homogeneity of Variances

Daya sebar

Levene Statistic	df1	df2	Sig.
1.205	2	6	.363

ANOVA

Daya sebar

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.106	2	.553	45.594	.000
Within Groups	.073	6	.012		
Total	1.179	8			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Daya sebar

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Formula 1	Formula 2	.6233[*]	.0899	.001	.347	.899
	Formula 3	.8233[*]	.0899	.000	.547	1.099
Formula 2	Formula 1	-.6233[*]	.0899	.001	-.899	-.347
	Formula 3	.2000	.0899	.145	-.076	.476
Formula 3	Formula 1	-.8233[*]	.0899	.000	-1.099	-.547
	Formula 2	-.2000	.0899	.145	-.476	.076

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

Homogeneous Subsets

Daya sebar

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05 1	Subset for alpha = 0.05 2
Formula 3	3	2.773	
Formula 2	3	2.973	
Formula 1	3		3.597
Sig.		.145	1.000

Means for groups in homogeneous subsets are
displayed.

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

Lampiran 13. Hasil Viskositas dengan Kruskal Wallis

Explore

Notes

Output Created		16-JUL-2020 15:38:16
Comments		
Input	Active Dataset	DataSet0
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	9
Missing Value Handling	Definition of Missing	User-defined missing values for dependent variables are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any dependent variable or factor used.
Syntax		EXAMINE VARIABLES=y BY x /PLOT BOXPLOT STEMLEAF NPPLOT /COMPARE GROUPS /STATISTICS DESCRIPTIVES /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL.
Resources	Processor Time	00:00:01,44
	Elapsed Time	00:00:01,49

Formula

Case Processing Summary

	Formula	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Viskositas	Formula 1	3	100.0%	0	0.0%	3	100.0%
	Formula 2	3	100.0%	0	0.0%	3	100.0%
	Formula 3	3	100.0%	0	0.0%	3	100.0%

Descriptives

Formula				Statistic	Std. Error
Viskositas	Formula 1	Mean		103.333	3.3333
		95% Confidence Interval for Mean	Lower Bound	88.991	
			Upper Bound	117.676	
		5% Trimmed Mean		.	
		Median		100.000	
		Variance		33.333	
		Std. Deviation		5.7735	
		Minimum		100.0	
		Maximum		110.0	
		Range		10.0	
		Interquartile Range		.	
		Skewness		1.732	1.225
		Kurtosis		.	.
	Formula 2	Mean		153.333	3.3333
		95% Confidence Interval for Mean	Lower Bound	138.991	
			Upper Bound	167.676	
		5% Trimmed Mean		.	
		Median		150.000	
		Variance		33.333	
		Std. Deviation		5.7735	
		Minimum		150.0	
		Maximum		160.0	
		Range		10.0	
		Interquartile Range		.	
		Skewness		1.732	1.225
		Kurtosis		.	.
	Formula 3	Mean		303.333	3.3333
		95% Confidence Interval for Mean	Lower Bound	288.991	
			Upper Bound	317.676	
		5% Trimmed Mean		.	
		Median		300.000	
		Variance		33.333	
		Std. Deviation		5.7735	
		Minimum		300.0	
		Maximum		310.0	
		Range		10.0	
		Interquartile Range		.	
		Skewness		1.732	1.225
		Kurtosis		.	.

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Viskositas	Formula 1	.385	3	.	.750	3	.000
	Formula 2	.385	3	.	.750	3	.000
	Formula 3	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

NPar Tests

Notes

Output Created		15-JUL-2020 14:43:05
Comments		
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	Weight	<none>
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	N of Rows in Working Data File	9
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each test are based on all cases with valid data for the variable(s) used in that test.
Syntax		NPAR TESTS /K-W=y BY x(1 3) /MISSING ANALYSIS.
Resources	Processor Time	00:00:00,00
	Elapsed Time	00:00:00,01
	Number of Cases Allowed[a]	112347

a. Based on availability of workspace memory.

Kruskal-Wallis Test

Ranks

	Formula	N	Mean Rank
Viskositas	Formula 1	3	2.00
	Formula 2	3	5.00
	Formula 3	3	8.00
	Total	9	

Test Statistics[a,b]

	Viskositas
Chi-Square	8.000
Df	2
Asymp. Sig.	.018

a. Kruskal Wallis Test
b.Grouping Variable: Formula