BAB V
KESIMPULAN DAN SARAN

A. Kesimpulan

Pertama, ekstrak etanol daun kersen (*Muntingia calabura* L.) dapat dibuat sebagai sediaan masker gel *peel-off* dengan variasi konsentrasi PVA yang memiliki sifat fisik dan stabilitas yang baik.

Kedua, variasi konsentrasi PVA dalam sediaan masker gel *peel-off* ekstrak etanol daun kersen berpengaruh terhadap mutu fisik sediaan yang meliputi organoleptis, viskositas, daya sebar, daya lekat dan waktu mengering.

Ketiga, studi deskriptif variasi konsentrasi PVA berpengaruh terhadap aktivitas antioksidan sediaan.

B. Saran

Pertama, perlu dilakukan percobaan penelitian selanjutnya dengan variasi konsentrasi PVA yang berbeda untuk mendapatkan basis yang lebih optimal.

Kedua, perlu dilakukan penelitian lebih lanjut uji aktivitas antioksidan dengan metode DPPH sediaan masker gel *peel-off* ekstrak daun kersen dengan variasi konsentrasi PVA yang berbeda.

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L A M P I R A N

Lampiran 1. Hasil determinasi tanaman

KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS SEBELAS MARET
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM

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Nomor : 234/UN27.9.6.4/Lab/2019
H a l : Hasil Determinasi Tumbuhan
Lampiran : -

Nama Pemesan : Winda Seftiani
NIM : 22164793A
Alamat : Program Studi S1 Farmasi Fakultas Farmasi Universitas Setia Budi Surakarta

HASIL DETERMINASI TUMBUHAN

Nama Sampel : *Muntingia calabura* L.
Familia : Tiliaceae

Hasil Determinasi menurut C.G.G.J. van Steenis (2006) :
1b-2b-3b-4b-6b-7b-9b-10b-11b-12b-13b-14a-15a-109b-119b-120b-128b-129b-135b-136b-139b- 140b-142b-143b-146b-154b-156b-162b-163b-167b-169b-171b-177b-179a-180b-182b-183b-184b-185b-186b ____ **74. Tiliaceae**
1a ____ **1. *Muntingia***
1 ____ ***Muntingia calabura* L.**

Deskripsi Tumbuhan :
Habitus : pohon, menahun, tumbuh tegak, tinggi 2-10 m. Akar : tunggang, bercabang, putih kotor atau putih kekuningan. Batang : bulat, berkayu, tumbuh tegak, bercabang banyak, permukaan ranting muda diselimuti rambut kelenjar yang halus dan rapat. Daun : tunggal, berseling, helaian daun berbentuk bulat telur atau lanset, tidak sama sisi, panjang 4.5- 14 cm, lebar 1.5-4 cm, ujung runcing, tepi bergerigi, pangkal tumpul, permukaan daun berambut halus; tangkai daun bulat, hijau, pendek, permukaannya berambut rapat; daun penumpu (stipula) berbentuk benang, panjang 0.5 cm, dapat rontok dan mengering. Bunga : berjumlah 1-3, berkumpul menjadi 1, muncul di ketiak daun; kelopak bunga berwarna hijau, daun kelopak meruncing, permukaannya berambut halus; daun mahkota bunga berbentuk bulat telur terbalik, panjang 8-11 mm, bertepi rata, permukaan gundul, tipis dan mudah layu, berwarna putih; benang sari berjumlah banyak, 10-100, terletak pada tonjolan dasar bunga yang berbentuk cawan; kepala putik hampir duduk, berlekuk 5-6, bakal buah bertangkai pendek, permukaan gundul, beruang 5-6. Buah : buni, panjang 1 cm, diameter 1-1.5 cm, bertangkai panjang, berwarna hijau ketika muda dan merah ketika masak. Biji : berjumlah banyak, kecil dan halus, berwarna putih kekuningan hingga kuning keputihan, terbenam dalam daging buah dan sari buah yang manis sekali.

Surakarta, 31 Desember 2019

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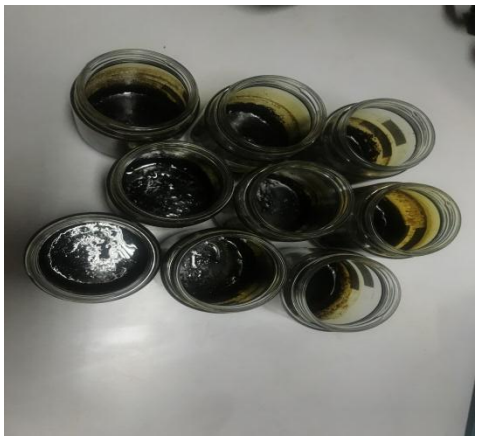
Lampiran 2. Bahan dan alat penelitian

Daun kersen

Serbuk daun kersen

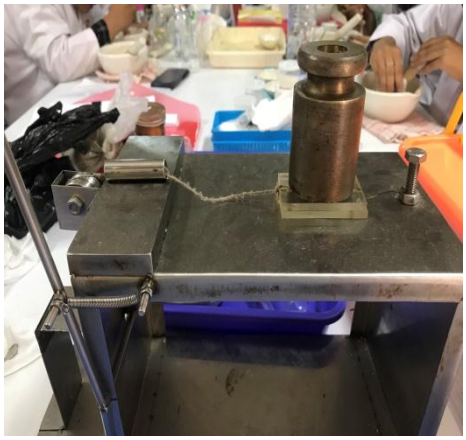
Sokletasi



Ekstrak etanol daun kersen

Moisture balance

Lampiran 3. Alat pengujian mutu fisik sediaan masker gel *peel-off* ekstrak etanol daun kersen

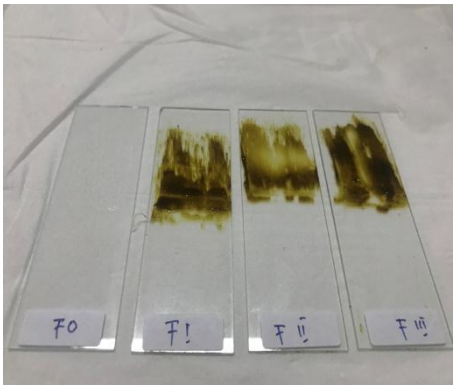


Uji daya lekat

Uji daya sebar

Uji viskositas

Uji *p*H



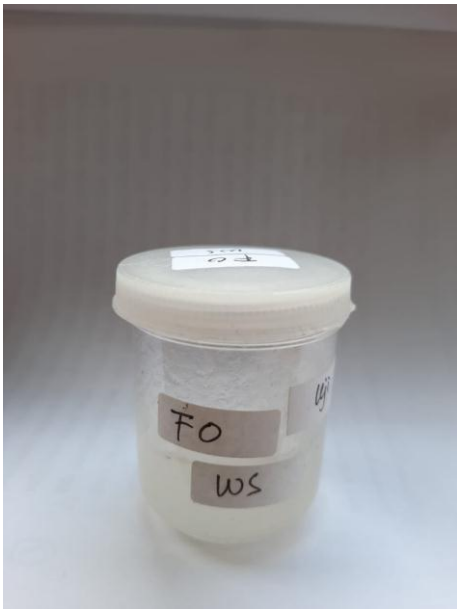
Uji homogenitas

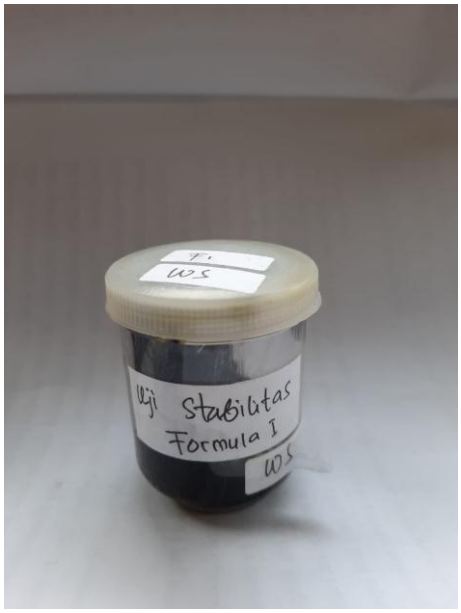
Lampiran 4. Sediaan masker gel *peel-off* ekstrak etanol daun kersen

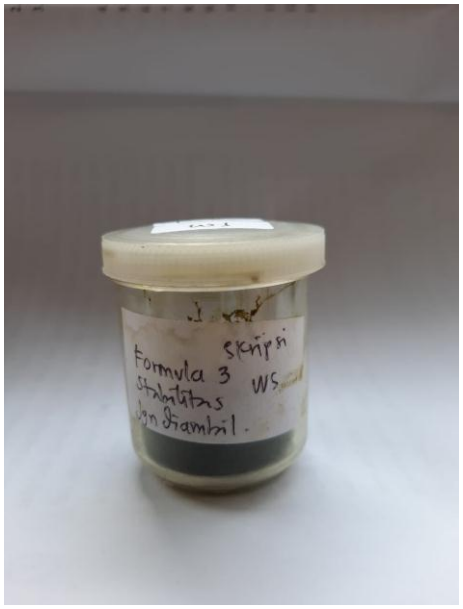
Keterangan :

Formula 0	: masker gel *peel-off* tanpa zat aktif
Formula I	: masker gel *peel-off* dengan konsentrasi PVA 10%
Formula II	: masker gel *peel-off* dengan konsentrasi PVA 12%
Formula III	: masker gel *peel-off* dengan konsentrasi PVA 14%

Lampiran 5. Uji stablitas sediaan menggunakan metode *Freeze thaw*







Keterangan :

Formula 0 : masker gel *peel-off* tanpa zat aktif
Formula I : masker gel *peel-off* dengan konsentrasi PVA 10%
Formula II : masker gel *peel-off* dengan konsentrasi PVA 12%
Formula III : masker gel *peel-off* dengan konsentrasi PVA 14%

Lampiran 6. Persentase rendemen serbuk daun kersen dan ekstrak daun kersen

Hasil persentase rendemen serbuk daun kersen

Bobot daun kersen basah 3500 gram dikeringkan kemudian diserbuk, sehingga diperoleh bobot serbuk 600 gram, rendemen yang didapatkan sebesar :

Rumus $= \frac{Bobot\ serbuk\ (gram)}{Bobot\ basah\ (gram)}\ x\ 100\%$

Persentase rendemen $= \frac{600\ gram}{3500\ gram}\ x\ 100\%$

$= 17{,}14\ \%$

Hasil persentase rendemen ekstrak daun kersen

Serbuk daun kersen 500 gram disokletasi, kemudian hasil sokletasi dikeringkan dan diperoleh ekstrak kental daun kersen dengan bobot ekstrak 167 gram, rendemen yang didapatkan sebesar :

Rumus $= \frac{Bobot\ ekstrak\ (gram)}{Bobot\ serbuk\ (gram)}\ x\ 100\%$

Persentase rendemen $= \frac{167\ gram}{500\ gram}\ x\ 100\%$

$= 33{,}4\ \%$

Lampiran 7. Perhitungan susut pengeringan serbuk dan ekstrak daun kersen

Hasil perhitungan susut pengeringan serbuk daun kersen

Susut pengeringan I = 5,5 %

Susut pengeringan II = 6,1 %

Susut pengeringan III = 5,5 %

Rata-rata $= \frac{5,5+6,1+5,5}{3} = 5,7$ %

Hasil perhitungan susut pengeringan ekstrak daun kersen

Susut pengeringan I = 7,4 %

Susut pengeringan II = 7,9 %

Susut pengeringan III = 8,4 %

Rata-rata $= \frac{7,4+7,9+8,4}{3} = 7,9$ %

Lampiran 8. Hasil identifikasi kandungan kimia ekstrak daun kersen

Senyawa	Gambar	Hasil	Pustaka (Depkes RI 1995).
Flavonoid		Terdapat warna jingga pada lapisan amil alkohol	Terdapat warna merah,kuning atau jingga pada lapisan amil alkohol
Saponin		Busa tidak hilang/tetap konstan	Busa tidak hilang/tetap konstan
Tanin		Terbentuk warna hijau kehitaman	Terbentuk warna hijau kehitaman

Lampiran 9. Data hasil uji statistik *p*H sediaan masker gel *peel-off* ekstrak daun kersen

Waktu	Formula	Uji *p*H			Rata-rata	SD
		R 1	R 2	R 3		
Hari Ke-1	0	6.51	6.54	6.54	6.53	0.02
	I	4.97	4.97	4.95	4.96	0.01
	II	4.99	4.99	4.98	4.99	0.01
	III	4.89	4.9	4.82	4.87	0.04
Hari Ke-21	0	6.5	6.51	6.51	6.51	0.01
	I	4.95	4.95	4.92	4.94	0.02
	II	4.99	4.99	4.95	4.98	0.02
	III	4.85	4.88	4.8	4.84	0.04

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
pH1	.435	12	.000	.616	12	.000
pH21	.425	12	.000	.622	12	.000

a. Lilliefors Significance Correction

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Kruskal-Wallis Test

Ranks

	formula	N	Mean Rank
pH1	formula 0	3	11.00
	formula 1	3	5.00
	formula 2	3	8.00
	formula 3	3	2.00
	Total	12	
pH21	formula 0	3	11.00
	formula 1	3	5.33
	formula 2	3	7.67
	formula 3	3	2.00
	Total	12	

Test Statistics[a,b]

	pH1	pH21
Chi-Square	10.495	10.188
Df	3	3
Asymp. Sig.	.015	.017

a. Kruskal Wallis Test

b. Grouping Variable: formula

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
pH1	formula 0	3	5.00	15.00
	formula 1	3	2.00	6.00
	Total	6		
pH21	formula 0	3	5.00	15.00
	formula 1	3	2.00	6.00
	Total	6		

Test Statistics[a]

	pH1	pH21
Mann-Whitney U	.000	.000
Wilcoxon W	6.000	6.000
Z	-2.023	-2.023
Asymp. Sig. (2-tailed)	.043	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]

a. Grouping Variable: formula

b. Not corrected for ties.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
pH1	formula 0	3	5.00	15.00
	formula 2	3	2.00	6.00
	Total	6		
pH21	formula 0	3	5.00	15.00
	formula 2	3	2.00	6.00
	Total	6		

Test Statistics[a]

	pH1	pH21
Mann-Whitney U	.000	.000
Wilcoxon W	6.000	6.000
Z	-2.023	-2.023
Asymp. Sig. (2-tailed)	.043	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]

a. Grouping Variable: formula
b. Not corrected for ties.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
pH1	formula 0	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		
pH21	formula 0	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		

Test Statistics[a]

	pH1	pH21
Mann-Whitney U	.000	.000
Wilcoxon W	6.000	6.000
Z	-1.993	-1.993
Asymp. Sig. (2-tailed)	.046	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]

a. Grouping Variable: formula

b. Not corrected for ties.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
pH1	formula 1	3	2.00	6.00
	formula 2	3	5.00	15.00
	Total	6		
pH21	formula 1	3	2.33	7.00
	formula 2	3	4.67	14.00
	Total	6		

Test Statistics[a]

	pH1	pH21
Mann-Whitney U	.000	1.000
Wilcoxon W	6.000	7.000
Z	-2.023	-1.650
Asymp. Sig. (2-tailed)	.043	.099
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.200[b]

a. Grouping Variable: formula

b. Not corrected for ties.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
pH1	formula 1	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		
pH21	formula 1	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		

Test Statistics[a]

	pH1	pH21
Mann-Whitney U	.000	.000
Wilcoxon W	6.000	6.000
Z	-1.993	-1.993
Asymp. Sig. (2-tailed)	.046	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]

a. Grouping Variable: formula

b. Not corrected for ties.

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
pH1	12	5.34	.721	5	7
pH21	12	5.3167	.71971	4.80	6.51
formula	12	2.50	1.168	1	4

Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
pH1	formula 2	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		
pH21	formula 2	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		

Test Statistics[a]

	pH1	pH21
Mann-Whitney U	.000	.000
Wilcoxon W	6.000	6.000
Z	-1.993	-1.993
Asymp. Sig. (2-tailed)	.046	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]

a. Grouping Variable: formula

b. Not corrected for ties.

Lampiran 10. Data hasil uji statistik viskositas sediaan masker gel *peel-off* ekstrak daun kersen

Waktu	Formula	Uji viskositas			Rata-rata	SD
		R 1	R 2	R 3		
Hari Ke-1	0	100	110	120	110.00	10.00
	I	300	320	390	336.67	47.26
	II	620	700	680	666.67	41.63
	III	710	800	890	800.00	90.00
Hari Ke-21	0	120	130	140	130.00	10.00
	I	310	320	400	343.33	49.33
	II	630	710	700	680.00	43.59
	III	720	810	900	810.00	90.00

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Viskositas1	.189	12	.200*	.900	12	.158
Viskositas21	.187	12	.200*	.896	12	.140

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

a. Lilliefors Significance Correction

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Viskositas1	formula 0	3	110.00	10.000	5.774	85.16	134.84	100	120
	formula 1	3	336.67	47.258	27.285	219.27	454.06	300	390
	formula 2	3	666.67	41.633	24.037	563.24	770.09	620	700
	formula 3	3	800.00	90.000	51.962	576.43	1023.57	710	890
	Total	12	478.33	287.365	82.955	295.75	660.92	100	890
Viskositas21	formula 0	3	130.00	10.000	5.774	105.16	154.84	120	140
	formula 1	3	343.33	49.329	28.480	220.79	465.87	310	400
	formula 2	3	680.00	43.589	25.166	571.72	788.28	630	710
	formula 3	3	810.00	90.000	51.962	586.43	1033.57	720	900
	Total	12	490.83	285.066	82.292	309.71	671.96	120	900

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Viskositas1	1.709	3	8	.242
Viskositas21	1.764	3	8	.232

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Viskositas1	Between Groups	884033.333	3	294677.778	96.880	.000
	Within Groups	24333.333	8	3041.667		
	Total	908366.667	11			
Viskositas21	Between Groups	868825.000	3	289608.333	92.428	.000
	Within Groups	25066.667	8	3133.333		
	Total	893891.667	11			

Viskositas1

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05		
		1	2	3
formula 0	3	110.00		
formula 1	3		336.67	
formula 2	3			666.67
formula 3	3			800.00
Sig.		1.000	1.000	.070

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 3.000.

Viskositas21

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05		
		1	2	3
formula 0	3	130.00		
formula 1	3		343.33	
formula 2	3			680.00
formula 3	3			810.00
Sig.		1.000	1.000	.083

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 11. Data hasil uji statistik daya lekat sediaan masker gel *peel-off* ekstrak daun kersen

Waktu	Formula	Uji daya lekat (detik)			Rata-rata	SD
		R1	R 2	R 3		
Hari Ke – 1	0	4.62	4.75	4.66	4.68	0.07
	I	8.66	8.38	8.40	8.48	0.16
	II	12.29	12.00	12.2	12.16	0.15
	III	15.50	15.25	15.65	15.47	0.20
Hari Ke – 21	0	5.75	5.62	5.8	5.72	0.09
	I	10.20	10.29	10.73	10.41	0.28
	II	14.66	14.53	14.73	14.64	0.10
	III	17.65	17.00	17.03	17.23	0.37

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Dayalekat1	.166	12	.200*	.889	12	.115
Dayalekat21	.210	12	.149	.880	12	.089

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

a. Lilliefors Significance Correction

Oneway

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Dayalekat1	formula 0	3	4.6767	.06658	.03844	4.5113	4.8421	4.62	4.75
	formula 1	3	8.4800	.15620	.09018	8.0920	8.8680	8.38	8.66
	formula 2	3	12.1633	.14844	.08570	11.7946	12.5321	12.00	12.29
	formula 3	3	15.4667	.20207	.11667	14.9647	15.9686	15.25	15.65
	Total	12	10.1967	4.21423	1.21654	7.5191	12.8743	4.62	15.65
Dayalekat21	formula 0	3	5.7233	.09292	.05364	5.4925	5.9541	5.62	5.80
	formula 1	3	10.4067	.28361	.16374	9.7021	11.1112	10.20	10.73
	formula 2	3	14.6400	.10149	.05859	14.3879	14.8921	14.53	14.73
	formula 3	3	17.2267	.36692	.21184	16.3152	18.1382	17.00	17.65
	Total	12	11.9992	4.56406	1.31753	9.0993	14.8990	5.62	17.65

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Dayalekat1	1.134	3	8	.392
Dayalekat21	4.566	3	8	.038

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Dayalekat1	Between Groups	195.174	3	65.058	2837.864	.000
	Within Groups	.183	8	.023		
	Total	195.357	11			
Dayalekat21	Between Groups	228.669	3	76.223	1302.956	.000
	Within Groups	.468	8	.059		
	Total	229.137	11			

Post Hoc Tests

Dayalekat1

	Formula	N	Subset for alpha = 0.05			
			1	2	3	4
Tukey HSD[a]	formula 0	3	4.6767			
	formula 1	3		8.4800		
	formula 2	3			12.1633	
	formula 3	3				15.4667
	Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Multiple Comparisons

Dunnett T3

Dayalekat 21	formula 0	formula 1	-4.68333*	.17230	.002	-5.7600	-3.6066
		formula 2	-8.91667*	.07944	.000	-9.2650	-8.5684
		formula 3	-11.50333*	.21853	.001	-12.9687	-10.0379
	formula 1	formula 0	4.68333*	.17230	.002	3.6066	5.7600
		formula 2	-4.23333*	.17391	.002	-5.2883	-3.1784
		formula 3	-6.82000*	.26775	.000	-8.0295	-5.6105
	formula 2	formula 0	8.91667*	.07944	.000	8.5684	9.2650
		formula 1	4.23333*	.17391	.002	3.1784	5.2883
		formula 3	-2.58667*	.21980	.014	-4.0292	-1.1441
	formula 3	formula 0	11.50333*	.21853	.001	10.0379	12.9687
		formula 1	6.82000*	.26775	.000	5.6105	8.0295
		formula 2	2.58667*	.21980	.014	1.1441	4.0292

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

Lampiran 12. Data hasil uji statistik daya sebar sediaan masker gel *peel-off* ekstrak daun kersen

Formula	Beban (g)	Uji daya sebar (cm) ke 1			Rata-rata	SD	Uji daya sebar (cm) ke 21			Rata-rata	SD
		R 1	R 2	R 3			R 1	R 2	R 3		
0	0	4.5	4.4	4.3	4.40	0.10	4.3	4.25	4.12	4.22	0.09
	50	4.7	4.6	4.5	4.60	0.10	4.5	4.4	4.3	4.40	0.10
	100	4.9	4.8	4.7	4.80	0.10	4.7	4.62	4.52	4.61	0.09
	150	5.1	5	4.9	5.00	0.10	4.9	4.8	4.72	4.81	0.09
I	0	4.2	4.1	4	4.10	0.10	4	3.92	3.8	3.91	0.10
	50	4.5	4.4	4.3	4.40	0.10	4.3	4.2	4.1	4.20	0.10
	100	4.7	4.6	4.5	4.60	0.10	4.5	4.4	4.32	4.41	0.09
	150	4.9	4.8	4.7	4.80	0.10	4.7	4.6	4.5	4.60	0.10
II	0	3.5	3.3	3.4	3.40	0.10	3.3	3.1	3.2	3.20	0.10
	50	3.7	3.5	3.6	3.60	0.10	3.5	3.3	3.4	3.40	0.10
	100	3.9	3.7	3.8	3.80	0.10	3.7	3.5	3.6	3.60	0.10
	150	4.2	3.9	4	4.03	0.15	4	3.7	3.8	3.83	0.15
III	0	3.3	3.2	3.1	3.20	0.10	3.12	3	2.9	3.01	0.11
	50	3.5	3.4	3.3	3.40	0.10	3.27	3.2	3	3.16	0.14
	100	3.7	3.6	3.5	3.60	0.10	3.5	3.4	3.3	3.40	0.10
	150	3.9	3.8	3.7	3.80	0.10	3.7	3.6	3.5	3.60	0.10

Tests of Normality

	Formula	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Dayasebar1	Formula 0	.123	12	.200*	.973	12	.938
	Formula 1	.120	12	.200*	.969	12	.901
	Formula 2	.118	12	.200*	.980	12	.982
	Formula 3	.123	12	.200*	.973	12	.938
Dayasebar21	Formula 0	.141	12	.200*	.969	12	.902
	Formula 1	.118	12	.200*	.971	12	.923
	Formula 2	.118	12	.200*	.980	12	.982
	Formula 3	.126	12	.200*	.964	12	.842

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

a. Lilliefors Significance Correction

DAYA SEBAR 1

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
Dayasebar1	Based on Mean	.108	15	32	1.000
	Based on Median	.056	15	32	1.000
	Based on Median and with adjusted df	.056	15	27.000	1.000
	Based on trimmed mean	.105	15	32	1.000

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Dayasebar1

b. Design: Intercept + Formula + Beban + Formula * Beban

Tests of Between-Subjects Effects

Dependent Variable: Dayasebar1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	14.832[a]	15	.989	91.277	.000
Intercept	805.241	1	805.241	74329.923	.000
Formula	12.167	3	4.056	374.385	.000
Beban	2.648	3	.883	81.462	.000
Formula * Beban	.017	9	.002	.179	.995
Error	.347	32	.011		
Total	820.420	48			
Corrected Total	15.179	47			

a. R Squared = .977 (Adjusted R Squared = .966)

FORMULA

Dayasebar1

Tukey HSD[a,b]

Formula	N	Subset 1	2	3	4
Formula 3	12	3.5000			
Formula 2	12		3.7083		
Formula 1	12			4.4750	
Formula 0	12				4.7000
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .011.

a. Uses Harmonic Mean Sample Size = 12.000.

b. Alpha = .05.

BEBAN

Dayasebar1

Tukey HSD[a,b]

Beban	N	Subset 1	2	3	4
Beban 0	12	3.7750			
Beban 50	12		4.0000		
Beban 100	12			4.2000	
Beban 150	12				4.4083
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .011.

a. Uses Harmonic Mean Sample Size = 12.000.

b. Alpha = .05.

DAYA SEBAR 21

Levene's Test of Equality of Error Variances[a,b]

		Levene Statistic	df1	df2	Sig.
Dayasebar21	Based on Mean	.202	15	32	.999
	Based on Median	.085	15	32	1.000
	Based on Median and with adjusted df	.085	15	24.786	1.000
	Based on trimmed mean	.194	15	32	.999

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Dependent variable: Dayasebar21

b. Design: Intercept + Formula + Beban + Formula * Beban

Tests of Between-Subjects Effects

Dependent Variable: Dayasebar21

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	15.141[a]	15	1.009	90.598	.000
Intercept	728.988	1	728.988	65429.027	.000
Formula	12.488	3	4.163	373.627	.000
Beban	2.630	3	.877	78.669	.000
Formula * Beban	.023	9	.003	.232	.987
Error	.357	32	.011		
Total	744.486	48			
Corrected Total	15.498	47			

a. R Squared = .977 (Adjusted R Squared = .966)

FORMULA

Dayasebar21

Tukey HSD[a,b]

Formula	N	Subset 1	2	3	4
Formula 3	12	3.2908			
Formula 2	12		3.5083		
Formula 1	12			4.2783	
Formula 0	12				4.5108
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .011.

a. Uses Harmonic Mean Sample Size = 12.000.

b. Alpha = .05.

BEBAN

Dayasebar21

Tukey HSD[a,b]

Beban	N	Subset 1	2	3	4
Beban 0	12	3.5842			
Beban 50	12		3.7892		
Beban 100	12			4.0050	

Beban 150	12				4.2100
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = .011.

a. Uses Harmonic Mean Sample Size = 12.000.

b. Alpha = .05.

Lampiran 13. Data hasil uji statistik waktu mengering pada objek glass sediaan masker gel *peel-off* ekstrak daun kersen

Waktu	Formula	Uji waktu mengering			Rata-rata	SD
		R 1	R 2	R 3		
Hari Ke-1	0	22.33	22.00	22.25	22.19	0.17
	I	21.21	21.2	21.35	21.25	0.08
	II	19.25	19.35	19.4	19.33	0.08
	III	15.35	15.48	15.43	15.42	0.07
Hari Ke-21	0	24.3	24.45	24.3	24.35	0.09
	I	22.35	22.5	22.31	22.39	0.10
	II	20.35	20.4	20.3	20.35	0.05
	III	17.1	17.25	17.42	17.26	0.16

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
WM1	.228	12	.084	.825	12	.018
WM21	.172	12	.200*	.889	12	.113

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

a. Lilliefors Significance Correction

NPar Tests
Kruskal-Wallis Test

Ranks

	Formula	N	Mean Rank
WM1	formula 0	3	11.00
	formula 1	3	8.00
	formula 2	3	5.00
	formula 3	3	2.00
	Total	12	

Test Statistics[a,b]

	WM1
Chi-Square	10.385
Df	3
Asymp. Sig.	.016

a. Kruskal Wallis Test

b. Grouping Variable: Formula

NPar Tests
Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WM1	formula 0	3	5.00	15.00
	formula 1	3	2.00	6.00
	Total	6		

Test Statistics[a]

	WM1
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WM1	formula 0	3	5.00	15.00
	formula 2	3	2.00	6.00
	Total	6		

Test Statistics[a]

	WM1
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WM1	formula 0	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		

Test Statistics[a]

	WM1
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WM1	formula 1	3	5.00	15.00
	formula 2	3	2.00	6.00
	Total	6		

Test Statistics[a]

	WM1
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WM1	formula 1	3	5.00	15.00
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a. Grouping Variable: Formula

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NPar Tests
Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WM1	formula 2	3	5.00	15.00
	formula 3	3	2.00	6.00
	Total	6		

Test Statistics[a]

	WM1
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.964
Asymp. Sig. (2-tailed)	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Formula

b. Not corrected for ties.

Oneway

Descriptives

WM21

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
formula 0	3	24.3500	.08660	.05000	24.1349	24.5651	24.30	24.45
formula 1	3	22.3867	.10017	.05783	22.1378	22.6355	22.31	22.50
formula 2	3	20.3500	.05000	.02887	20.2258	20.4742	20.30	20.40
formula 3	3	17.2567	.16010	.09244	16.8589	17.6544	17.10	17.42
Total	12	21.0858	2.74266	.79174	19.3432	22.8284	17.10	24.45

Test of Homogeneity of Variances

WM21

Levene Statistic	df1	df2	Sig.
1.054	3	8	.421

ANOVA

WM21

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	82.653	3	27.551	2413.219	.000
Within Groups	.091	8	.011		
Total	82.744	11			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: WM21

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
formula 0	formula 1	1.96333*	.08724	.000	1.6840	2.2427
	formula 2	4.00000*	.08724	.000	3.7206	4.2794
	formula 3	7.09333*	.08724	.000	6.8140	7.3727
formula 1	formula 0	-1.96333*	.08724	.000	-2.2427	-1.6840
	formula 2	2.03667*	.08724	.000	1.7573	2.3160
	formula 3	5.13000*	.08724	.000	4.8506	5.4094
formula 2	formula 0	-4.00000*	.08724	.000	-4.2794	-3.7206
	formula 1	-2.03667*	.08724	.000	-2.3160	-1.7573
	formula 3	3.09333*	.08724	.000	2.8140	3.3727
formula 3	formula 0	-7.09333*	.08724	.000	-7.3727	-6.8140
	formula 1	-5.13000*	.08724	.000	-5.4094	-4.8506
	formula 2	-3.09333*	.08724	.000	-3.3727	-2.8140

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

Homogeneous Subsets

WM21

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05			
		1	2	3	4
formula 3	3	17.2567			
formula 2	3		20.3500		
formula 1	3			22.3867	
formula 0	3				24.3500
Sig.		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 14. Data hasil uji statistik waktu mengering pada tangan sediaan masker *peel-off* ekstrak daun kersen

Waktu	Formula	Uji waktu mengering (tangan)			Rata-rata	SD
		R 1	R 2	R 3		
Hari ke-1	0	20.15	20.1	20.08	20.11	0.04
	I	19.55	19.46	19.47	19.49	0.05
	II	17.2	17.31	17.42	17.31	0.11
	III	15.08	15.1	15.12	15.10	0.02
Hari ke-21	0	22.13	22.18	22.2	22.17	0.04
	I	21.15	21.1	21.17	21.14	0.04
	II	19.08	19.12	19.07	19.09	0.03
	III	16.48	16.54	16.45	16.49	0.05

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
WMT1	.260	12	.024	.832	12	.022
WMT21	.228	12	.084	.851	12	.038

a. Lilliefors Significance Correction

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
WMT1	12	18.00	2.061	15	20
WMT21	12	19.7225	2.26749	16.45	22.20
Formula	12	2.50	1.168	1	4

Ranks

	Formula	N	Mean Rank
WMT1	formula 0	3	11.00
	formula 1	3	8.00
	formula 2	3	5.00
	formula 3	3	2.00
	Total	12	
WMT21	formula 0	3	11.00
	formula 1	3	8.00
	formula 2	3	5.00
	formula 3	3	2.00
	Total	12	

Test Statistics[a,b]

	WMT1	WMT21
Chi-Square	10.385	10.385
Df	3	3
Asymp. Sig.	.016	.016

a. Kruskal Wallis Test

b. Grouping Variable: Formula

NPar Tests

Descriptive Statistics

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Mann-Whitney Test

Ranks

	Formula	N	Mean Rank	Sum of Ranks
WMT1	formula 0	3	5.00	15.00
	formula 1	3	2.00	6.00
	Total	6		
WMT21	formula 0	3	5.00	15.00
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Test Statistics[a]

	WMT1	WMT21
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Wilcoxon W	6.000	6.000
Z	-1.964	-1.964
Asymp. Sig. (2-tailed)	.050	.050
Exact Sig. [2*(1-tailed Sig.)]	.100[b]	.100[b]

a. Grouping Variable: Formula

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