

BAB V

KESIMPULAN DAN SARAN

A. Kesimpulan

Kesimpulan dari hasil penelitian krim ekstrak pegagan (*Centella asiatica* (L.) Urban) adalah:

1. Ekstrak pegagan (*Centella asiatica* (L.) Urban) dapat dibuat sediaan krim dengan variasi basis vaselin alba dan propilenglikol.
2. Semakin besar variasi basis vaselin alba dan propilenglikol maka semakin besar viskositas dan daya lekatnya serta semakin kecil daya sebarinya.

B. Saran

1. Perlu dilakukan penelitian lebih lanjut mengenai uji antioksidan dari krim ekstrak pegagan (*Centella asiatica* (L.) Urban) dengan variasi basis vaselin alba dan propilenglikol.
2. Perlu dilakukan penelitian lebih lanjut mengenai uji pelepasan zat aktif dari krim ekstrak pegagan (*Centella asiatica* (L.) Urban) dengan variasi basis vaselin alba dan propilenglikol.
3. Perlu dilakukan penelitian lebih lanjut mengenai uji stabilitas sediaan dari krim ekstrak pegagan (*Centella asiatica* (L.) Urban) dengan variasi basis vaselin alba dan propilenglikol.

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LAMPIRAN

Lampiran 1. Perhitungan rendemen ekstrak pegagan

➤ Rendemen ekstrak pegagan

$$\text{Berat gelas} = 136,08 \text{ gram}$$

$$\text{Berat gelas+Ekstrak} = 174,17 \text{ gram}$$

$$\text{Ekstrak pegagan} = 38,09 \text{ gram}$$

$$\text{Rumus} = \frac{\text{bobot ekstrak}}{\text{bobot serbuk}} \times 100\%$$

$$\begin{aligned} \text{prosentase rendemen} &= \frac{38,09}{200} \times 100\% \\ &= 19,045\% \end{aligned}$$

Lampiran 2. Perhitungan bahan pembuatan krim ekstrak pegagan

- Ekstrak pegagan $= \frac{1,5}{100} \times 100 = 1,5 \text{ g}$
- Basis *vanishing cream* = Total krim – ekstrak pegagan
 $= 100 \text{ g} - 1,5 \text{ g}$
 $= 98,5 \text{ g}$

a. Formula 1

Bahan	Formula (g)	Perhitungan (g)	Penimbangan (g)
Ekstrak pegagan	1,5	$\frac{1,5}{100} \times 100$	1,5
Asam stearat	3	$\frac{98,5}{25} \times 3$	11,82
Cera alba	0,5	$\frac{98,5}{25} \times 0,5$	1,97
Vaselin album	1,7	$\frac{98,5}{25} \times 1,7$	6,70
TEA	0,4	$\frac{98,5}{25} \times 0,4$	1,58
Propilenglikol	1,3	$\frac{98,5}{25} \times 1,3$	5,12
Aquadest	ad 25	ad 100	ad 100
Nipagin	0,1 %	$\frac{0,1}{100} \times 100$	0,1
Nipasol	0,05 %	$\frac{0,05}{100} \times 100$	0,05

b. Formula 2

Bahan	Formula (g)	Perhitungan (g)	Penimbangan (g)
Ekstrak pegagan	1,5	$\frac{1,5}{100} \times 100$	1,5
Asam stearat	3	$\frac{98,5}{25} \times 3$	11,82
Cera alba	0,5	$\frac{98,5}{25} \times 0,5$	1,97
Vaselin album	2,3	$\frac{98,5}{25} \times 2,3$	9,06
TEA	0,4	$\frac{98,5}{25} \times 0,4$	1,58
Propilenglikol	1,8	$\frac{98,5}{25} \times 1,8$	7,09
Aquadest	ad 25	ad 100	ad 100
Nipagin	0,1 %	$\frac{0,1}{100} \times 100$	0,1
Nipasol	0,05 %	$\frac{0,05}{100} \times 100$	0,05

c. Formula 3

Bahan	Formula	Perhitungan	Penimbangan
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	(g)	(g)	(g)
Ekstrak pegagan	1,5	$\frac{1,5}{100} \times 100$	1,5
Asam stearat	3	$\frac{98,5}{25} \times 3$	11,82
Cera alba	0,5	$\frac{98,5}{25} \times 0,5$	1,97
Vaselin album	2,6	$\frac{98,5}{25} \times 2,6$	10,24
TEA	0,4	$\frac{98,5}{25} \times 0,4$	1,58
Propilenglikol	2,3	$\frac{98,5}{25} \times 2,3$	9,062
Aquadest	ad 25	ad 100	ad 100
Nipagin	0,1 %	$\frac{0,1}{100} \times 100$	0,1
Nipasol	0,05 %	$\frac{0,05}{100} \times 100$	0,05

Lampiran 3. Data hasil uji daya sebar krim ekstrak pegagan

a. Data pengujian minggu ke-1

Formula	Beban (g)	Replikasi			Rata-rata (cm)
		1 (cm)	2 (cm)	3 (cm)	
1	49,12	7,30	7,43	7,49	7,41
	99,12	7,68	7,73	7,40	7,60
	149,12	8,18	8,25	7,90	8,11

	199,12	8,45	8,58	8,23	8,42
	249,12	8,85	8,73	8,48	8,69
2	49,12	6,18	6,55	6,88	6,54
	99,12	6,93	7,28	7,45	7,22
	149,12	7,45	7,78	8,05	7,76
	199,12	7,78	8,18	8,30	8,09
	249,12	8,03	8,33	8,63	8,33
3	49,12	3,48	3,75	3,85	3,69
	99,12	4,55	4,23	4,90	4,56
	149,12	4,93	4,50	5,33	4,92
	199,12	5,25	4,63	5,65	5,18
	249,12	5,58	5,05	5,93	5,52

b. Data pengujian minggu ke-2

Formula	Beban (g)	Replikasi			Rata-rata (cm)
		1 (cm)	2 (cm)	3 (cm)	
1	49,12	7,45	7,03	7,35	7,28
	99,12	7,80	7,35	7,73	7,63
	149,12	8,40	7,80	8,10	8,10
	199,12	8,80	8,10	8,43	8,44
	249,12	8,05	8,33	8,68	8,69
2	49,12	6,05	6,55	6,75	6,45
	99,12	6,55	7,28	7,53	7,12

	149,12	6,90	7,55	8,13	7,53
	199,12	7,15	7,65	8,65	7,82
	249,12	7,55	8,13	8,75	8,14
3	49,12	4,10	4,33	4,15	4,19
	99,12	4,60	4,83	4,50	4,64
	149,12	5,00	5,52	4,95	5,16
	199,12	5,40	5,50	5,33	5,41
	249,12	5,70	5,70	5,50	5,63

c. Data pengujian minggu ke-3

Formula	Beban (g)	Replikasi			Rata-rata (cm)
		1	2	3	
1	49,12	7,33	7,30	7,40	7,34
	99,12	7,48	7,60	7,78	7,62
	149,12	7,56	8,13	8,20	8,00
	199,12	7,73	8,43	8,58	8,25
	249,12	8,00	8,75	8,98	8,58
2	49,12	6,35	6,27	6,46	6,36
	99,12	6,65	6,78	6,53	6,65
	149,12	6,90	7,45	7,48	7,28
	199,12	7,25	7,55	8,25	7,68
	249,12	7,75	8,14	8,75	8,21
3	49,12	3,10	3,48	3,39	3,32
	99,12	3,46	3,85	3,65	3,65
	149,12	4,55	4,45	4,60	4,53

	199,12	5,28	5,13	5,35	5,25
	249,12	5,65	5,45	5,63	5,58

d. Data pengujian minggu ke-4

Formula	Beban (g)	Replikasi			Rata-rata (cm)
		1	2	3	
1	49,12	7,38	7,25	7,20	7,23
	99,12	7,55	7,48	7,36	7,46
	149,12	8,05	7,55	7,83	7,81
	199,12	8,35	7,88	8,23	8,15
	249,12	8,65	7,95	8,58	8,39
2	49,12	5,85	5,98	6,05	5,96
	99,12	6,28	6,35	6,38	6,34
	149,12	6,70	6,68	6,70	6,70
	199,12	6,98	7,13	7,05	7,05
	249,12	7,28	7,63	7,45	5,63
3	49,12	3,53	3,24	3,38	3,38
	99,12	3,78	3,53	3,63	3,65
	149,12	4,28	4,43	4,63	4,45
	199,12	5,18	5,10	5,03	5,10
	249,12	5,63	5,58	5,43	5,55

Lampiran 4. Data hasil uji daya lekat krim ekstrak pegagan

Minggu ke-	Formula 1			Formula 2			Formula 3		
	a	b	c	a	b	c	a	b	c
1	1,82	1,13	1,28	2,44	2,47	2,63	6,64	6,74	7,24
2	1,45	1,66	1,87	3,53	3,49	3,41	7,12	7,23	6,78
3	2,23	1,80	2,50	4,34	3,54	3,52	7,46	7,33	7,36
4	2,00	2,53	2,72	3,86	4,21	5,39	7,47	7,86	7,61

Lampiran 5. Data hasil pengujian viskositas

Minggu ke-	Formula 1			Formula 2			Formula 3		
	a	b	c	a	b	c	a	b	c
1	110	120	100	140	150	140	260	280	250
2	120	130	110	140	150	150	280	250	300
3	120	140	130	150	150	160	280	300	300
4	130	140	140	150	160	160	300	300	230

Lampiran 6. Uji statistik kolmogorov-Smirnov dan analisis anova satu jalan
formula krim ekstrak pegagan

1. Viskositas

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
viskositas (dPas)	9	172.22	70.494	100	280

One-Sample Kolmogorov-Smirnov Test

		viskositas (dPas)
N		9
Normal Parameters ^{a,b}	Mean	172.22
	Std. Deviation	70.494
	Most Extreme Differences	
	Absolute	.290
	Positive	.290
	Negative	-.198
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		
formula 1	3	110.00	10.000	5.774	85.16	134.84	100	120
formula 2	3	143.33	5.774	3.333	128.99	157.68	140	150
formula 3	3	263.33	15.275	8.819	225.39	301.28	250	280
Total	9	172.22	70.494	23.498	118.04	226.41	100	280

Test of Homogeneity of Variances

viskositas (dPas)

Levene Statistic	df1	df2	Sig.
1.217	2	6	.360

ANOVA

viskositas (dPas)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39022.222	2	19511.111	159.636	.000
Within Groups	733.333	6	122.222		
Total	39755.556	8			

Post Hoc Tests

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	-33.333*	9.027	.024	-61.03	-5.64
	formula 3	-153.333*	9.027	.000	-181.03	-125.64
formula 2	formula 1	33.333*	9.027	.024	5.64	61.03
	formula 3	-120.000*	9.027	.000	-147.70	-92.30
formula 3	formula 1	153.333*	9.027	.000	125.64	181.03
	formula 2	120.000*	9.027	.000	92.30	147.70

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

Homogeneous Subsets

viskositas (dPas)

Tukey HSD^a

formula	N	Subset for alpha = 0.05		
		1	2	3
formula 1	3	110.00		
formula 2	3		143.33	
formula 3	3			263.33
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

2. Daya sebar

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
daya sebar (cm)	9	5.8789	1.69439	3.48	7.49

One-Sample Kolmogorov-Smirnov Test

		daya sebar (cm)
N		9
Normal Parameters ^{a,b}	Mean	5.8789
	Std. Deviation	1.69439
Most Extreme Differences	Absolute	.237
	Positive	.218
	Negative	-.237
Kolmogorov-Smirnov Z		.712
Asymp. Sig. (2-tailed)		.692

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	7.4067	.09713	.05608	7.1654	7.6479	7.30	7.49
formula 2	3	6.5367	.35019	.20218	5.6667	7.4066	6.18	6.88
formula 3	3	3.6933	.19140	.11050	3.2179	4.1688	3.48	3.85
Total	9	5.8789	1.69439	.56480	4.5765	7.1813	3.48	7.49

Test of Homogeneity of Variances

daya sebar (cm)

Levene Statistic	df1	df2	Sig.
1.369	2	6	.324

ANOVA

daya sebar (cm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	22.630	2	11.315	201.218	.000

Within Groups	.337	6	.056	
Total	22.968	8		

Post Hoc Tests

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	.87000*	.19362	.010	.2759	1.4641
	formula 3	3.71333*	.19362	.000	3.1193	4.3074
formula 2	formula 1	-.87000*	.19362	.010	-1.4641	-.2759
	formula 3	2.84333*	.19362	.000	2.2493	3.4374
formula 3	formula 1	-3.71333*	.19362	.000	-4.3074	-3.1193
	formula 2	-2.84333*	.19362	.000	-3.4374	-2.2493

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

Homogeneous Subsets

daya sebar (cm)

Tukey HSD^a

formula	N	Subset for alpha = 0.05		
		1	2	3
formula 3	3	3.6933		

formula 2	3		6.5367	
formula 1	3			7.4067
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

3. Daya lekat

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
daya lekat (detik)	9	3.5989	2.51411	1.13	7.24

One-Sample Kolmogorov-Smirnov Test

		daya lekat (cm)
N		9
Normal Parameters ^{a,b}	Mean	3.5989
	Std. Deviation	2.51411
Most Extreme Differences	Absolute	.317
	Positive	.317
	Negative	-.220
Kolmogorov-Smirnov Z		.950
Asymp. Sig. (2-tailed)		.327

a. Test distribution is Normal.

One-Sample Kolmogorov-Smirnov Test

		daya lekat (cm)
N		9
Normal Parameters ^{a, b}	Mean	3.5989
	Std. Deviation	2.51411
Most Extreme Differences	Absolute	.317
	Positive	.317
	Negative	-.220
Kolmogorov-Smirnov Z		.950
Asymp. Sig. (2-tailed)		.327

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	1.4100	.36290	.20952	.5085	2.3115	1.13	1.82
formula 2	3	2.5133	.10214	.05897	2.2596	2.7671	2.44	2.63
formula 3	3	6.8733	.32146	.18559	6.0748	7.6719	6.64	7.24

Descriptives

daya lekat (detik)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
formula 1	3	1.4100	.36290	.20952	.5085	2.3115	1.13	1.82
formula 2	3	2.5133	.10214	.05897	2.2596	2.7671	2.44	2.63
formula 3	3	6.8733	.32146	.18559	6.0748	7.6719	6.64	7.24
Total	9	3.5989	2.51411	.83804	1.6664	5.5314	1.13	7.24

Test of Homogeneity of Variances

daya lekat (detik)

Levene Statistic	df1	df2	Sig.
2.890	2	6	.132

ANOVA

daya lekat (detik)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	50.075	2	25.037	305.999	.000
Within Groups	.491	6	.082		
Total	50.566	8			

Post Hoc Tests

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	-1.10333*	.23356	.008	-1.8199	-.3867
	formula 3	-5.46333*	.23356	.000	-6.1799	-4.7467
formula 2	formula 1	1.10333*	.23356	.008	.3867	1.8199
	formula 3	-4.36000*	.23356	.000	-5.0766	-3.6434
formula 3	formula 1	5.46333*	.23356	.000	4.7467	6.1799
	formula 2	4.36000*	.23356	.000	3.6434	5.0766

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

Homogeneous Subsets

daya lekat (detik)

Tukey HSD^a

formula	N	Subset for alpha = 0.05		
		1	2	3
formula 1	3	1.4100		
formula 2	3		2.5133	
formula 3	3			6.8733
Sig.		1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 7. Uji statistik *Independent sample test* krim ekstrak pegagan

1. Viskositas

1.1 Formula 1

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
viskositas (dPas)	6	123.33	16.330	100	140

One-Sample Kolmogorov-Smirnov Test

		viskositas (dPas)
N		6
Normal Parameters ^{a,b}	Mean	123.33
	Std. Deviation	16.330
Most Extreme Differences	Absolute	.180
	Positive	.154
	Negative	-.180
Kolmogorov-Smirnov Z		.440
Asymp. Sig. (2-tailed)		.990

a. Test distribution is Normal.

b. Calculated from data.

T-Test

Group Statistics

	Minggu	N	Mean	Std. Deviation	Std. Error Mean
viskositas (dPas)	1	3	110.00	10.000	5.774
	4	3	136.67	5.774	3.333

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositas (dPas)	Equal variances assumed	.400	.561	-4.000	4	.016	-26.667	6.667	-45.176	-8.157
	Equal variances not assumed			-4.000	3.200	.025	-26.667	6.667	-47.152	-6.181

1.2 Formula 2

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
viskositas (dPas)	6	150.00	8.944	140	160

One-Sample Kolmogorov-Smirnov Test

		viskositas (dPas)
N		6
Normal Parameters ^{a, b}	Mean	150.00
	Std. Deviation	8.944
Most Extreme Differences	Absolute	.202
	Positive	.202
	Negative	-.202
Kolmogorov-Smirnov Z		.494
Asymp. Sig. (2-tailed)		.968

a. Test distribution is Normal.

b. Calculated from data.

T-Test

Group Statistics

	Minggu	N	Mean	Std. Deviation	Std. Error Mean
viskositas (dPas)	1	3	143.33	5.774	3.333
	4	3	156.67	5.774	3.333

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositas (dPas)	Equal variances assumed	.000	1.000	-2.828	4	.047	-13.333	4.714	-26.422	-.245
	Equal variances not assumed			-2.828	4.000	.047	-13.333	4.714	-26.422	-.245

1.3 Formula 3

NPar Tests**Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
viskositas (dPas)	6	270.00	28.284	230	300

One-Sample Kolmogorov-Smirnov Test

		viskositas (dPas)
N		6
Normal Parameters ^{a,b}	Mean	270.00
	Std. Deviation	28.284
Most Extreme Differences	Absolute	.189
	Positive	.144
	Negative	-.189
Kolmogorov-Smirnov Z		.463
Asymp. Sig. (2-tailed)		.983

a. Test distribution is Normal.

b. Calculated from data.

T-Test**Group Statistics**

	Minggu	N	Mean	Std. Deviation	Std. Error Mean
viskositas (dPas)	1	3	263.33	15.275	8.819
	4	3	276.67	40.415	23.333

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
								95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
viskositas (dPas)	Equal variances assumed	5.226	.084	-.535	4	.621	-13.333	24.944	-82.590	55.923
	Equal variances not assumed			-.535	2.560	.636	-13.333	24.944	-101.023	74.357

2. Daya sebar

2.1 Formula 1

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
daya sebar (cm)	6	7.3417	.11089	7.20	7.49

One-Sample Kolmogorov-Smirnov Test

		daya sebar (cm)
N		6
Normal Parameters ^{a,,b}	Mean	7.3417
	Std. Deviation	.11089
Most Extreme Differences	Absolute	.146
	Positive	.146
	Negative	-.135
Kolmogorov-Smirnov Z		.359
Asymp. Sig. (2-tailed)		1.000

a. Test distribution is Normal.

b. Calculated from data.

T-Test

Group Statistics

	minggu	N	Mean	Std. Deviation	Std. Error Mean
daya sebar (cm)	1	3	7.4067	.09713	.05608
	4	3	7.2767	.09292	.05364

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
daya sebar (cm)	Equal variances assumed	.004	.950	1.675	4	.169	.13000	.07760	-.08546	.34546
	Equal variances not assumed			1.675	3.992	.169	.13000	.07760	-.08563	.34563

2.2 Formula 2

NPar Tests**Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
daya sebar (cm)	6	6.2483	.39107	5.85	6.88

One-Sample Kolmogorov-Smirnov Test

		daya sebar (cm)
N		6
Normal Parameters ^{a,b}	Mean	6.2483
	Std. Deviation	.39107
Most Extreme Differences	Absolute	.236
	Positive	.236
	Negative	-.154
Kolmogorov-Smirnov Z		.578
Asymp. Sig. (2-tailed)		.892

a. Test distribution is Normal.

b. Calculated from data.

T-Test**Group Statistics**

	minggu	N	Mean	Std. Deviation	Std. Error Mean
daya sebar (cm)	1	3	6.5367	.35019	.20218
	4	3	5.9600	.10149	.05859

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
daya sebar (cm)	Equal variances assumed	2.025	.228	2.739	4	.052	.57667	.21050	-.00778	1.16111
	Equal variances not assumed			2.739	2.334	.094	.57667	.21050	-.21562	1.36895

2.3 Formula 3

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
daya sebar (cm)	6	3.5383	.22781	3.24	3.85

One-Sample Kolmogorov-Smirnov Test

		daya sebar (cm)
N		6
Normal Parameters ^{a,b}	Mean	3.5383
	Std. Deviation	.22781
Most Extreme Differences	Absolute	.181
	Positive	.181
	Negative	-.157
Kolmogorov-Smirnov Z		.444
Asymp. Sig. (2-tailed)		.989

a. Test distribution is Normal.

b. Calculated from data.

T-Test

Group Statistics

	minggu	N	Mean	Std. Deviation	Std. Error Mean
daya	1	3	3.6933	.19140	.11050
sebar (cm)	4	3	3.3833	.14503	.08373

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
daya sebar (cm)	Equal variances assumed	.456	.536	2.236	4	.089	.31000	.13864	-.07494	.69494
	Equal variances not assumed			2.236	3.727	.094	.31000	.13864	-.08631	.70631

3. Daya lekat

3.1 Formula 1

NPar Tests

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
daya lekat (detik)	6	1.9133	.64217	1.13	2.72

One-Sample Kolmogorov-Smirnov Test

		daya lekat (detik)
N		6
Normal Parameters ^{a,b}	Mean	1.9133
	Std. Deviation	.64217
Most Extreme Differences	Absolute	.171
	Positive	.171
	Negative	-.165
Kolmogorov-Smirnov Z		.420
Asymp. Sig. (2-tailed)		.995

a. Test distribution is Normal.

b. Calculated from data.

T-Test**Group Statistics**

	minggu	N	Mean	Std. Deviation	Std. Error Mean
daya lekat	1	3	1.4100	.36290	.20952
(detik)	4	3	2.4167	.37314	.21543

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
daya lekat (detik)	Equal variances assumed	.001	.972	-3.350	4	.029	-1.00667	.30052	-1.84104	-.17229
	Equal variances not assumed			-3.350	3.997	.029	-1.00667	.30052	-1.84129	-.17204

3.2 Formula 2**NPar Tests****Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
daya lekat (detik)	6	3.4933	1.19329	2.44	5.39

One-Sample Kolmogorov-Smirnov Test

		daya lekat (detik)
N		6
Normal Parameters ^{a,b}	Mean	3.4933

	Std. Deviation	1.19329
Most Extreme Differences	Absolute	.265
	Positive	.265
	Negative	-.189
Kolmogorov-Smirnov Z		.650
Asymp. Sig. (2-tailed)		.792

a. Test distribution is Normal.

b. Calculated from data.

T-Test

Group Statistics

	minggu	N	Mean	Std. Deviation	Std. Error Mean
daya lekat (detik)	1	3	2.5133	.10214	.05897
	4	3	4.4867	.80164	.46283

Independent Samples Test

	Levene's Test for Equality of Variances	t-test for Equality of Means								
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
daya lekat (detik)	Equal variances assumed	8.252	.045	-4.229	4	.013	-1.97333	.46657	-3.26874	-.67792
	Equal variances not assumed			-4.229	2.065	.049	-1.97333	.46657	-3.92154	-.02513

3.3 Formula 3

NPar Tests

daya lekat (detik)	Equal variances assumed	1.400	.302	-3.550	4	.024	-.77333	.21784	-1.37816	-.16850
	Equal variances not assumed			-3.550	3.322	.032	-.77333	.21784	-1.43007	-.11660

Lampiran 8. Permohonan pesanan simplisia



KEMENTERIAN KESEHATAN RI
BADAN PENELITIAN DAN PENGEMBANGAN KESEHATAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
TANAMAN OBAT DAN OBAT TRADISIONAL

Jalan Raya Lawu No. 11 Tawangmangu, Karanganyar, Jawa Tengah

Telepon: (0271) 697010 Faksimile: (0271) 697451

E-mail: b2p2to2t@litbang.depkes.go.id Website: http://b2p2toot.litbang.depkes.go.id

Nomor : KM.03.02/VI.3/5057/2014 18 Desember 2014
 Lampiran : -
 Perihal : Permohonan Pemesanan Simplisia

Yang terhormat,
 Dekan Fakultas Farmasi
 Universitas Setia Budi
 Jl. Let. Jend. Sutoyo
 Solo

Merujuk surat Ibu nomor 045/D3-04/10.12.2014 dengan ini kami sampaikan bahwa permohonan mahasiswa Ibu atas nama:

No	Nama Mahasiswa	Nama Simplisia	Jumlah
1	Marfuah Wahyuningsih (NIM 15120910 B)	<i>Centella asiatica</i>	1 KG
2	Dominica Naiaki (NIM 15120911 B)	<i>Centella asiatica</i>	
3	Dini Ramadhani (NIM 15120919 B)	<i>Centella asiatica</i>	


Untuk melakukan pembelian simplisia serbuk *Centella asiatica* sebanyak 1 Kg dapat kami fasilitasi.

Perlu kami sampaikan bahwa B2P2TOOT telah menjadi institusi pengguna Pendapatan Negara Bukan Pajak (PNBP) sehingga kegiatan seperti kunjungan, survey, magang/pelatihan, pembelian bahan dan lain-lain akan dikenakan PNBP sesuai ketentuan yang berlaku.

Untuk keterangan lebih lanjut mengenai prosedur pembelian bahan kami persilahkan yang bersangkutan menemui Saudara Harto Widodo, M.Biotech pada hari dan jam kerja dengan menyerahkan proposal penelitian.

Atas perhatian Ibu kami ucapkan terima kasih.

a.n. Kepala
 Kabid Pelayanan Penelitian



Nita Supriyati, M.Biotech., Apt
 NIP. 197811152002122001

Tembusan:
 1. Kepala B2P2TOOT
 2. Yang bersangkutan

Lampiran 9. Keterangan pembelian simplisia



KEMENTERIAN KESEHATAN RI
BADAN PENELITIAN DAN PENGEMBANGAN KESEHATAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
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Jalan Raya Lawu No. 11 Tawangmangu, Karanganyar, Jawa Tengah
 Telepon: (0271) 697010 Faksimile: (0271) 697451

E-mail: b2p2to2t@litbang.depkes.go.id Website: http://b2p2toot.litbang.depkes.go.id

Nomor : KM.03.02/VI.3/SPSS/2014
 Lampiran : -
 Perihal : Keterangan Pembelian Bahan

18 Desember 2014

Yang terhormat,
 Dekan Fakultas Farmasi
 Universitas Setia Budi
 Jalan Let. Jend. Sutoyo
 Solo

Berdasarkan surat Ibu nomor 02/B/Lab.Bio.Far/X/2014 tanggal 31 Oktober 2014 perihal pembelian bahan dengan ini kami sampaikan bahwa mahasiswa Ibu a.n.:

No	Nama Mahasiswa	Nama Simplisia	Jumlah
1	Marfuah Wahyuningsih (NIM 15120910 B)	<i>Centella asiatica</i>	1 KG
2	Dominica Naiaki (NIM 15120911 B)	<i>Centella asiatica</i>	
3	Dini Ramadhani (NIM 15120919 B)	<i>Centella asiatica</i>	

telah melakukan pembelian simplisia serbuk *Centella asiatica* sebanyak 1 kg di Balai Besar Litbang Tanaman Obat dan Obat Tradisional (B2P2TOOT).

Sehubungan dengan itu, apabila telah selesai melakukan penelitian mahasiswa yang bersangkutan dimohon menyerahkan laporan hasil penelitian kepada Kepala B2P2TOOT.

Atas perhatian Ibu kami ucapkan terima kasih.

a.n. Kepala

Kabid Pelayanan Penelitian



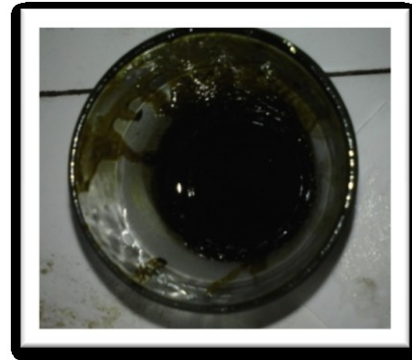
Nita Supriyati, M.Biotech., Apt
 NIP. 197811152002122001

Tembusan :
 Kepala B2P2TOOT

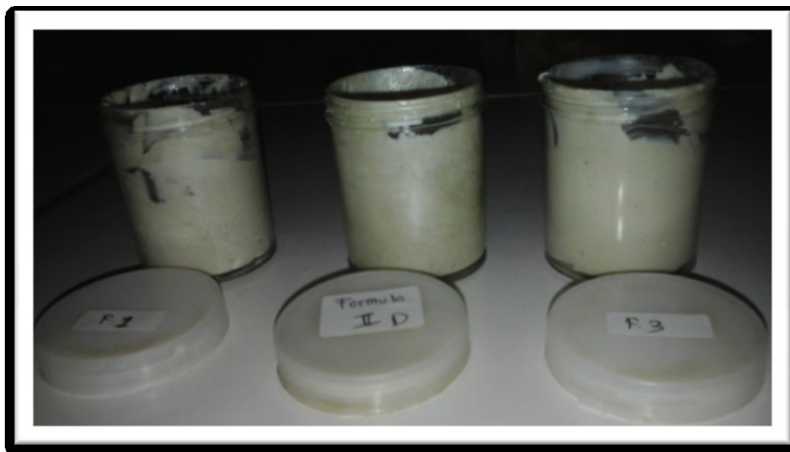
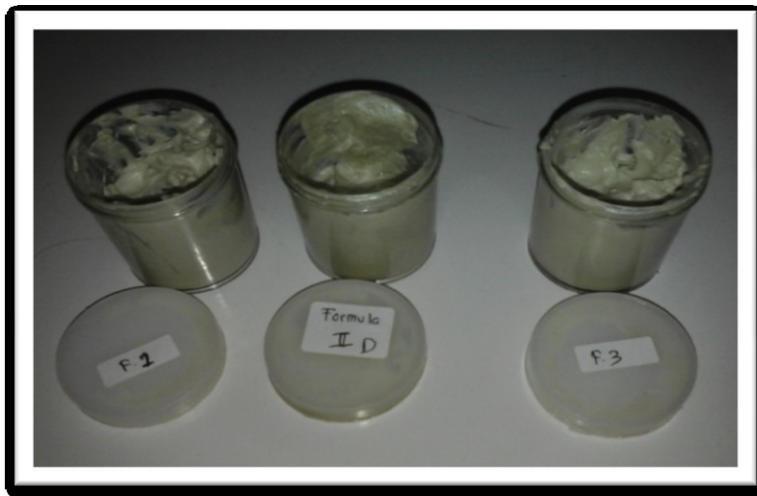
Lampiran 10. Gambar serbuk pegagan dan ekstrak pegagan



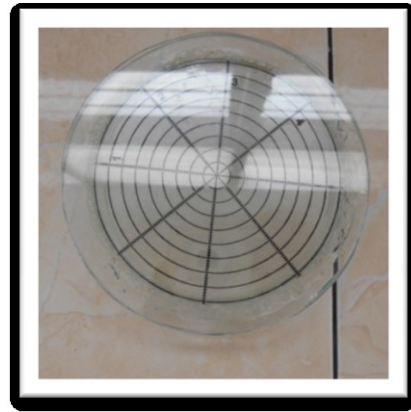
Serbuk pegagan



Ekstrak pegagan



Lampiran 12. Gambar alat pengujian krim ekstrak pegagan

**Alat uji daya lekat****Ekstensometer****Viscometer****Stik pH**

Uji homogenitas