

LAMPIRAN

Lampiran 1. Surat Keterangan Determinasi Tanaman Sambiloto



UNIVERSITAS MUHAMMADIYAH SURAKARTA
FAKULTAS FARMASI

Terakreditasi "A" SK. BAN. PT. No. : 029/BAN-PT/Ak-XI/S1/XI/2008
Jl. A. Yani- Tromol Pos 1 Pabelan, Kartasura Telp. (0271) 717417 - 719483 Fax. 715448 Surakarta 57102
e-mail : farmasi - ums.ac.id

Surat Keterangan Determinasi

Sehubungan dengan keperluan determinasi sampel tanaman, maka kami menerangkan bahwa mahasiswa berikut:

Nama : Dedy Rudianto

NIM : K100.060.033

Fakultas : Farmasi UMS

Keperluan : Skripsi

Telah melakukan determinasi terhadap *Andrographis paniculata* (Burm.f.) Nees. (Sambiloto) di Laboratorium Biologi Farmasi, Fakultas Farmasi UMS pada Jumat 3 September 2010.

Surakarta, 3 September 2010

Mengetahui,

Kepala Laboratorium Biologi Farmasi



Ratna Yuliani, M.Biotech.St

Penanggung jawab Determinasi

Laboratorium Biologi Farmasi UMS

Hamida Febra Maya Sari S.Si

Lampiran 1. Lanjutan

SPECIES: *Andrographis paniculata* (Burm.f.) Nees.

KLASIFIKASI¹

Divisi	: Magnoliophyta
Kelas	: Magnoliopsida
Anak kelas	: Asteridae
Bangsa	: Scrophulariales
Suku	: Acanthaceae
Marga	: <i>Andrographis</i>
Jenis	: <i>Andrographis paniculata</i> (Burm.f.) Nees.

SINONIM²

Andrographis subspathulata C.B. Clarke

DETERMINASI³

Perbungaan susunan bunga majemuk tandan, sering bercabang-cabang, muncul di ketiak daun, tangkai bunga 3-7 mm. Kelopak bunga terdiri dari 5 helai daun kelopak, berlekatan, panjang kelopak bunga 3-4 mm, berambut. Mahkota bunga 5, berlekatan, bentuk tabung, berbibir, panjang 6 mm, bibir bunga bagian atas berwarna putih dengan warna kuning di bagian atasnya, ukuran 7-8 mm, bibir bunga bawah lebar, berwarna ungu dan panjang 6 mm. Tangkai sari sempit dan melebar pada bagian pangkal, panjang 6 mm. Bentuk buah jorong dengan ujung yang tajam, panjang ± 2 cm, bila tua akan pecah terbagi menjadi 4 keping. Daun bersilang berhadapan, bentuk lanset, ujung daun dan pangkal daun runcing atau agak runcing, tepi daun rata, ukuran daun 3-12 cm x 1-3 cm, hijau atau hijau dengan sedikit warna kemerahan, rasa pahit, panjang tangkai daun 5-25 mm, daun bagian atas bentuknya seperti daun pelindung. Terna tumbuh tegak, tinggi 40-90 cm, percabangan banyak dengan letak yang berlawanan, cabang berbentuk segi empat dan tidak berambut.

Daun bersilang berhadapan, umumnya terlepas dari batang, bentuk lanset sampai bentuk lidah tombak, ukuran 2-7 cm x 1-2 cm, rapuh, tipis, tidak berambut, pangkal daun runcing, ujung meruncing, tepi daun rata. Permukaan atas berwarna hijau tua atau hijau kecoklatan, permukaan bawah berwarna hijau pucat. Tangkai daun pendek.

Lampiran 1. Lanjutan

KUNCI IDENTIFIKASI⁴

1b-2b-3b-4b-12b-13b-14b-17b-18b-19b-20b-21b-22b-23b-24b-25b-26b-27a-28b-29b-30b-31b-403b-404b-405a-406b-409a-410b-411a-187.**Acanthaceae**-1b-36b-39b-40b-42a-43a-44a-37.**Andrographis**-1a-**Andrographis paniculata** (Burm. f.) Ness.

SUMBER:

1. Cronquist, A., 1981, *An Integrated System of Classification of Flowering Plants*, Columbia University Press, New York, 477.
2. de Guzman, C.C. and Siemonsa, J.S. (Editors), 1999, *Plant Resources of South-East Asia No 12 (1), Medicinal and poisonous plants 1*, Backhuys Publisher, Leiden, the Netherlands, 119.
3. Anonim, 1979, *Materia Medika Indonesia*, Jilid 3, Departemen Kesehatan Republik Indonesia, Jakarta, 20-22.
4. Backer, C.A. and van den Brink, R.C.B., 1965, *Flora of Java: Spermatophytes only Volume 2*, N.V.P. Noordhoff-Groningen-The Netherlands, 574.

Lampiran 2. Hasil Pemeriksaan Organoleptis, Daya Lekat, dan Kekentalan Ekstrak Kental Daun Sambiloto

Hasil Pemeriksaan Organoleptis

Bau	Khas
Bentuk	Kental
Warna	Hijau tua
Rasa	Pahit

Hasil Pemeriksaan Daya Lekat

Replikasi	Waktu (detik)
1	34
2	34
3	34
4	35
5	35
Rata-rata	34,4
SD	0,548

Hasil Pemeriksaan Kekentalan

Replikasi	Kekentalan
1	200
2	200
3	200
Rata-rata	200
SD	0

Lampiran 3. Hasil Pemeriksaan Waktu Alir Granul

Replikasi	Waktu Alir (g/detik)				
	FI	FII	FIII	FIV	FV
1	5.33	5.88	5.47	6.07	5.80
2	5.26	5.92	5.51	6.05	5.75
3	5.67	5.89	5.52	6.08	5.84
Rerata	5.420	5.897	5.500	6.067	5.797
SD	0.219	0.021	0.026	0.015	0.045

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Waktu Alir
N		15
Normal Parameters ^{a,b}	Mean	5.7360
	Std. Deviation	.26541
Most Extreme Differences	Absolute	.129
	Positive	.125
	Negative	-.129
Kolmogorov-Smirnov Z		.498
Asymp. Sig. (2-tailed)		.965

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Waktu Alir

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F I	3	5.4200	.21932	.12662	4.8752	5.9648	5.26	5.67
F II	3	5.8967	.02082	.01202	5.8450	5.9484	5.88	5.92
F III	3	5.5000	.02646	.01528	5.4343	5.5657	5.47	5.52
F IV	3	6.0667	.01528	.00882	6.0287	6.1046	6.05	6.08
F V	3	5.7967	.04509	.02603	5.6847	5.9087	5.75	5.84
Total	15	5.7360	.26541	.06853	5.5890	5.8830	5.26	6.08

Test of Homogeneity of Variances

Waktu Alir

Levene Statistic	df1	df2	Sig.
9.104	4	10	.002

ANOVA

Waktu Alir

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.883	4	.221	21.436	.000
Within Groups	.103	10	.010		
Total	.986	14			

Post Hoc Test

Multiple Comparisons

Dependent Variable: Waktu Alir

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F I	F II	-.47667*	.08287	.000	-.6613	-.2920
	F III	-.08000	.08287	.357	-.2646	.1046
	F IV	-.64667*	.08287	.000	-.8313	-.4620
	F V	-.37667*	.08287	.001	-.5613	-.1920
F II	F I	.47667*	.08287	.000	.2920	.6613
	F III	.39667*	.08287	.001	.2120	.5813
	F IV	-.17000	.08287	.067	-.3546	.0146
	F V	.10000	.08287	.255	-.0846	.2846
F III	F I	.08000	.08287	.357	-.1046	.2646
	F II	-.39667*	.08287	.001	-.5813	-.2120
	F IV	-.56667*	.08287	.000	-.7513	-.3820
	F V	-.29667*	.08287	.005	-.4813	-.1120
F IV	F I	.64667*	.08287	.000	.4620	.8313
	F II	.17000	.08287	.067	-.0146	.3546
	F III	.56667*	.08287	.000	.3820	.7513
	F V	.27000*	.08287	.009	.0854	.4546
F V	F I	.37667*	.08287	.001	.1920	.5613
	F II	-.10000	.08287	.255	-.2846	.0846
	F III	.29667*	.08287	.005	.1120	.4813
	F IV	-.27000*	.08287	.009	-.4546	-.0854

*. The mean difference is significant at the .05 level.

Lampiran 4. Hasil Pemeriksaan Sudut Diam (°) Granul

Replikasi	Sudut Diam (°)				
	FI	FII	FIII	FIV	FV
1	31.30	27.29	28.24	31.01	28.72
2	29.25	29.55	28.24	30.88	28.10
3	29.86	27.29	29.03	30.24	28.72
Rerata	30.135	28.047	28.501	30.709	28.516
SD	1.054	1.304	0.458	0.409	0.359

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Sudut Diam
N		15
Normal Parameters ^{a,b}	Mean	29.1813
	Std. Deviation	1.28131
Most Extreme Differences	Absolute	.108
	Positive	.107
	Negative	-.108
Kolmogorov-Smirnov Z		.416
Asymp. Sig. (2-tailed)		.995

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Sudut Diam								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F I	3	30.1367	1.05263	.60774	27.522	32.752	29.25	31.30
F II	3	28.0433	1.30481	.75333	24.802	31.285	27.29	29.55
F III	3	28.5033	.45611	.26333	27.370	29.636	28.24	29.03
F IV	3	30.7100	.41219	.23798	29.686	31.734	30.24	31.01
F V	3	28.5133	.35796	.20667	27.624	29.403	28.10	28.72
Total	15	29.1813	1.28131	.33083	28.472	29.891	27.29	31.30

Test of Homogeneity of Variances

Sudut Diam

Levene Statistic	df1	df2	Sig.
3.529	4	10	.048

ANOVA

Sudut Diam

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.351	4	4.088	6.163	.009
Within Groups	6.633	10	.663		
Total	22.985	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Sudut Diam

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F I	F II	2.09333*	.66499	.010	.6116	3.5750
	F III	1.63333*	.66499	.034	.1516	3.1150
	F IV	-.57333	.66499	.409	-2.0550	.9084
	F V	1.62333*	.66499	.035	.1416	3.1050
F II	F I	-2.09333*	.66499	.010	-3.5750	-.6116
	F III	-.46000	.66499	.505	-1.9417	1.0217
	F IV	-2.66667*	.66499	.002	-4.1484	-1.1850
	F V	-.47000	.66499	.496	-1.9517	1.0117
F III	F I	-1.63333*	.66499	.034	-3.1150	-.1516
	F II	.46000	.66499	.505	-1.0217	1.9417
	F IV	-2.20667*	.66499	.008	-3.6884	-.7250
	F V	-.01000	.66499	.988	-1.4917	1.4717
F IV	F I	.57333	.66499	.409	-.9084	2.0550
	F II	2.66667*	.66499	.002	1.1850	4.1484
	F III	2.20667*	.66499	.008	.7250	3.6884
	F V	2.19667*	.66499	.008	.7150	3.6784
F V	F I	-1.62333*	.66499	.035	-3.1050	-.1416
	F II	.47000	.66499	.496	-1.0117	1.9517
	F III	.01000	.66499	.988	-1.4717	1.4917
	F IV	-2.19667*	.66499	.008	-3.6784	-.7150

* . The mean difference is significant at the .05 level.

Lampiran 5. Hasil Pemeriksaan Penetapan (%) Granul

Replikasi	Tap (%)				
	FI	FII	FIII	FIV	FV
1	3.00	5.00	3.00	4.00	4.00
2	5.00	4.00	4.00	4.00	3.00
3	5.00	4.00	3.00	5.00	3.00
Rerata	4.333	4.333	3.333	4.333	3.333
SD	1.155	0.577	0.577	0.577	0.577

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Tap
N		15
Normal Parameters ^{a,b}	Mean	3.9333
	Std. Deviation	.79881
Most Extreme Differences	Absolute	.212
	Positive	.212
	Negative	-.200
Kolmogorov-Smirnov Z		.821
Asymp. Sig. (2-tailed)		.510

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Tap								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F I	3	4.3333	1.15470	.66667	1.4649	7.2018	3.00	5.00
F II	3	4.3333	.57735	.33333	2.8991	5.7676	4.00	5.00
F III	3	3.3333	.57735	.33333	1.8991	4.7676	3.00	4.00
F IV	3	4.3333	.57735	.33333	2.8991	5.7676	4.00	5.00
F V	3	3.3333	.57735	.33333	1.8991	4.7676	3.00	4.00
Total	15	3.9333	.79881	.20625	3.4910	4.3757	3.00	5.00

Test of Homogeneity of Variances

Tap

Levene Statistic	df1	df2	Sig.
2.000	4	10	.171

ANOVA

Tap

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.600	4	.900	1.687	.229
Within Groups	5.333	10	.533		
Total	8.933	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Tap

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F I	F II	.00000	.59628	1.000	-1.3286	1.3286
	F III	1.00000	.59628	.124	-.3286	2.3286
	F IV	.00000	.59628	1.000	-1.3286	1.3286
	F V	1.00000	.59628	.124	-.3286	2.3286
F II	F I	.00000	.59628	1.000	-1.3286	1.3286
	F III	1.00000	.59628	.124	-.3286	2.3286
	F IV	.00000	.59628	1.000	-1.3286	1.3286
	F V	1.00000	.59628	.124	-.3286	2.3286
F III	F I	-1.00000	.59628	.124	-2.3286	.3286
	F II	-1.00000	.59628	.124	-2.3286	.3286
	F IV	-1.00000	.59628	.124	-2.3286	.3286
	F V	.00000	.59628	1.000	-1.3286	1.3286
F IV	F I	.00000	.59628	1.000	-1.3286	1.3286
	F II	.00000	.59628	1.000	-1.3286	1.3286
	F III	1.00000	.59628	.124	-.3286	2.3286
	F V	1.00000	.59628	.124	-.3286	2.3286
F V	F I	-1.00000	.59628	.124	-2.3286	.3286
	F II	-1.00000	.59628	.124	-2.3286	.3286
	F III	.00000	.59628	1.000	-1.3286	1.3286
	F IV	-1.00000	.59628	.124	-2.3286	.3286

Lampiran 6. Hasil Pemeriksaan Keseragaman Bobot Tablet

Replikasi	Keseragaman Bobot (gram)				
	FI	FII	FIII	FIV	FV
1	525.40	499.30	519.7	503.50	500.00
2	526.50	507.40	501.3	501.30	510.00
3	524.20	491.40	493.8	497.30	505.20
4	521.7	505.6	496.8	495.6	507.5
5	523.4	512.5	506.3	499	505.2
6	523.1	506.2	499.4	500	501.6
7	527.6	496.7	507	501.2	505.4
8	526.3	502.4	511.3	500.5	509.2
9	528.4	515.8	493.6	507.7	504.2
10	522.8	515.7	495.4	509.1	504.7
11	524.1	517.2	501.3	499.2	511.1
12	527.7	516.1	507.5	502	505.5
13	522.4	518.6	511.2	504.3	504.3
14	518.2	519	498.8	503.7	502.7
15	525.5	506.2	499.2	506.1	507.5
16	530.2	496	498.4	505.8	512.2
17	522.6	511.5	500.5	507.5	514
18	518.4	506.3	493.7	506.2	509.4
19	516.7	497.4	502.5	509.4	506.2
20	523	510.7	506.3	505.5	507.6
Rerata	523.910	507.600	502.200	503.245	506.675
SD	3.493	8.343	6.861	3.945	3.556
CV %	0,67	1,64	1,36	0,78	0,70

Perhitungan keseragaman bobot tablet menurut Farmakope Indonesia.

1. Formula I

Bobot rata-rata 20 tablet = 523,910 mg

a. Untuk penyimpangan 5% = $5/100 \times 523,910 \text{ mg} = 26,196 \text{ mg}$
 Jadi berat tablet = $(523,910 \pm 26,196) \text{ mg}$
 = $(497,71 - 550,11) \text{ mg}$

b. Untuk penyimpangan 10% = $10/100 \times 523,910 \text{ mg} = 52,391 \text{ mg}$
 Jadi berat tablet = $(523,910 \pm 52,391) \text{ mg}$
 = $(471,52 - 576,30) \text{ mg}$

2. Formula II

Bobot rata-rata 20 tablet = 507,600 mg

a. Untuk penyimpangan 5% = $5/100 \times 507,600 \text{ mg} = 25,38 \text{ mg}$
 Jadi berat tablet = $(507,600 \pm 25,38) \text{ mg}$
 = $(482,22 - 532,98) \text{ mg}$

- b. Untuk penyimpangan 10% = $10/100 \times 507,600\text{mg} = 50,76\text{mg}$
 Jadi berat tablet = $(507,600 \pm 50,76) \text{ mg}$
 = $(456,84 - 558,36) \text{ mg}$
3. Formula III
 Bobot rata-rata 20 tablet = 502,200mg
- a. Untuk penyimpangan 5% = $5/100 \times 502,200 \text{ mg} = 25,11 \text{ mg}$
 Jadi berat tablet = $(502,200 \pm 25,11) \text{ mg}$
 = $(451,98 - 552,42) \text{ mg}$
- b. Untuk penyimpangan 10% = $10/100 \times 502,200\text{mg} = 50,22\text{mg}$
 Jadi berat tablet = $502,200 \pm 50,22) \text{ mg}$
 = $(451,98 - 552,42) \text{ mg}$
4. Formula IV
 Bobot rata-rata 20 tablet = 503,245 mg
- a. Untuk penyimpangan 5% = $5/100 \times 503,245\text{mg} = 25,162 \text{ mg}$
 Jadi berat tablet = $(503,245 \pm 25,162) \text{ mg}$
 = $(478,08 - 528,41) \text{ mg}$
- b. Untuk penyimpangan 10% = $10/100 \times 503,245\text{mg} = 50,325 \text{ mg}$
 Jadi berat tablet = $(503,245 \pm 50,325) \text{ mg}$
 = $(452,92 - 553,57) \text{ mg}$
5. Formula V
 Bobot rata-rata 20 tablet = 506,665 mg
- a. Untuk penyimpangan 5% = $5/100 \times 506,665\text{mg} = 25,333 \text{ mg}$
 Jadi berat tablet = $(506,665 \pm 25,333) \text{ mg}$
 = $(481,33 - 532,00) \text{ mg}$
- b. Untuk penyimpangan 10% = $10/100 \times 506,665\text{mg} = 50,667 \text{ mg}$
 Jadi berat tablet = $(506,665 \pm 50,667) \text{ mg}$
 = $(456,00 - 557,33) \text{ mg}$

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Keseragaman Bobot
N		100
Normal Parameters ^{a,b}	Mean	508.7260
	Std. Deviation	9.61786
Most Extreme Differences	Absolute	.142
	Positive	.142
	Negative	-.082
Kolmogorov-Smirnov Z		1.425
Asymp. Sig. (2-tailed)		.034

a. Test distribution is Normal.

b. Calculated from data.

NPar Tests

Kruskal-Wallis Test

Ranks

	Formula	N	Mean Rank
Keseragaman Bobot	F I	20	90.00
	F II	20	49.50
	F III	20	30.73
	F IV	20	34.10
	F V	20	48.18
	Total	100	

Test Statistics^{a,b}

	Keseragaman Bobot
Chi-Square	52.922
df	4
Asymp. Sig.	.000

a. Kruskal Wallis Test

b. Grouping Variable: Formula

Lampiran 7. Hasil Pemeriksaan Kekerasan Tablet

Replikasi	Kekerasan (kg)				
	FI	FII	FIII	FIV	FV
1	4.89	5.40	5.79	7.53	8.32
2	5.22	5.46	5.96	7.61	8.17
3	5.36	5.01	5.39	7.25	8.46
4	4.7	5.56	6.12	6.95	7.94
5	4.2	5.58	5.43	6.59	8.18
Rerata	4.874	5.402	5.738	7.186	8.214
SD	0.458	0.231	0.322	0.422	0.194

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Kekerasan Tablet
N		25
Normal Parameters ^{a,b}	Mean	6.2828
	Std. Deviation	1.29654
Most Extreme Differences	Absolute	.186
	Positive	.186
	Negative	-.112
Kolmogorov-Smirnov Z		.931
Asymp. Sig. (2-tailed)		.352

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Kekerasan Tablet

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F I	5	4.8740	.45845	.20503	4.3048	5.4432	4.20	5.36
F II	5	5.4020	.23113	.10336	5.1150	5.6890	5.01	5.58
F III	5	5.7380	.32167	.14385	5.3386	6.1374	5.39	6.12
F IV	5	7.1860	.42223	.18883	6.6617	7.7103	6.59	7.61
F V	5	8.2140	.19360	.08658	7.9736	8.4544	7.94	8.46
Total	25	6.2828	1.29654	.25931	5.7476	6.8180	4.20	8.46

Test of Homogeneity of Variances

Kekerasan Tablet

Levene Statistic	df1	df2	Sig.
1.393	4	20	.272

ANOVA

Kekerasan Tablet

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	38.013	4	9.503	81.527	.000
Within Groups	2.331	20	.117		
Total	40.345	24			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Kekerasan Tablet

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F I	F II	-.52800*	.21593	.024	-.9784	-.0776
	F III	-.86400*	.21593	.001	-1.3144	-.4136
	F IV	-2.31200*	.21593	.000	-2.7624	-1.8616
	F V	-3.34000*	.21593	.000	-3.7904	-2.8896
F II	F I	.52800*	.21593	.024	.0776	.9784
	F III	-.33600	.21593	.135	-.7864	.1144
	F IV	-1.78400*	.21593	.000	-2.2344	-1.3336
	F V	-2.81200*	.21593	.000	-3.2624	-2.3616
F III	F I	.86400*	.21593	.001	.4136	1.3144
	F II	.33600	.21593	.135	-.1144	.7864
	F IV	-1.44800*	.21593	.000	-1.8984	-.9976
	F V	-2.47600*	.21593	.000	-2.9264	-2.0256
F IV	F I	2.31200*	.21593	.000	1.8616	2.7624
	F II	1.78400*	.21593	.000	1.3336	2.2344
	F III	1.44800*	.21593	.000	.9976	1.8984
	F V	-1.02800*	.21593	.000	-1.4784	-.5776
F V	F I	3.34000*	.21593	.000	2.8896	3.7904
	F II	2.81200*	.21593	.000	2.3616	3.2624
	F III	2.47600*	.21593	.000	2.0256	2.9264
	F IV	1.02800*	.21593	.000	.5776	1.4784

*. The mean difference is significant at the .05 level.

Lampiran 8. Hasil Pemeriksaan Kerapuhan Tablet

Replikasi	Kerapuhan (%)				
	FI	FII	FIII	FIV	FV
1	0,46	0.10	0.1	0.39	0.20
2	0,55	0.19	0.2	0.10	0.10
3	0,56	0.19	0.1	0.19	0.20
Rerata	#DIV/0!	0.160	0.133	0.227	0.167
SD	#DIV/0!	0.052	0.058	0.148	0.058

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Kerapuhan Tablet
N		15
Normal Parameters ^{a,b}	Mean	.2660
	Std. Deviation	.13902
Most Extreme Differences	Absolute	.150
	Positive	.150
	Negative	-.127
Kolmogorov-Smirnov Z		.583
Asymp. Sig. (2-tailed)		.886

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Kerapuhan Tablet

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F I	3	.4567	.04933	.02848	.3341	.5792	.40	.49
F II	3	.3133	.05774	.03333	.1699	.4568	.28	.38
F III	3	.2333	.15275	.08819	-.1461	.6128	.10	.40
F IV	3	.1933	.09504	.05487	-.0428	.4294	.10	.29
F V	3	.1333	.05774	.03333	-.0101	.2768	.10	.20
Total	15	.2660	.13902	.03589	.1890	.3430	.10	.49

Test of Homogeneity of Variances

Kerapuhan Tablet

Levene Statistic	df1	df2	Sig.
1.564	4	10	.258

ANOVA

Kerapuhan Tablet

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.188	4	.047	5.656	.012
Within Groups	.083	10	.008		
Total	.271	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Kerapuhan Tablet

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F I	F II	.14333	.07436	.083	-.0223	.3090
	F III	.22333*	.07436	.013	.0577	.3890
	F IV	.26333*	.07436	.005	.0977	.4290
	F V	.32333*	.07436	.001	.1577	.4890
F II	F I	-.14333	.07436	.083	-.3090	.0223
	F III	.08000	.07436	.307	-.0857	.2457
	F IV	.12000	.07436	.138	-.0457	.2857
	F V	.18000*	.07436	.036	.0143	.3457
F III	F I	-.22333*	.07436	.013	-.3890	-.0577
	F II	-.08000	.07436	.307	-.2457	.0857
	F IV	.04000	.07436	.602	-.1257	.2057
	F V	.10000	.07436	.208	-.0657	.2657
F IV	F I	-.26333*	.07436	.005	-.4290	-.0977
	F II	-.12000	.07436	.138	-.2857	.0457
	F III	-.04000	.07436	.602	-.2057	.1257
	F V	.06000	.07436	.438	-.1057	.2257
F V	F I	-.32333*	.07436	.001	-.4890	-.1577
	F II	-.18000*	.07436	.036	-.3457	-.0143
	F III	-.10000	.07436	.208	-.2657	.0657
	F IV	-.06000	.07436	.438	-.2257	.1057

*. The mean difference is significant at the .05 level.

Lampiran 9. Hasil Pemeriksaan Waktu Hancur Tablet

Replikasi	Waktu Hancur Tablet (menit)				
	FI	FII	FIII	FIV	FV
1	10.31	10.36	12.18	12.25	14.10
2	10.36	10.38	12.23	12.27	14.15
3	10.32	10.42	12.22	12.32	14.18
Rerata	10.330	10.387	12.210	12.280	14.143
SD	0.026	0.031	0.026	0.036	0.040

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Waktu Hancur
N		15
Normal Parameters ^{a,b}	Mean	11.8700
	Std. Deviation	1.46583
Most Extreme Differences	Absolute	.239
	Positive	.239
	Negative	-.184
Kolmogorov-Smirnov Z		.925
Asymp. Sig. (2-tailed)		.360

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Descriptives

Waktu Hancur								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F I	3	10.3300	.02646	.01528	10.264	10.396	10.31	10.36
F II	3	10.3867	.03055	.01764	10.311	10.463	10.36	10.42
F III	3	12.2100	.02646	.01528	12.144	12.276	12.18	12.23
F IV	3	12.2800	.03606	.02082	12.190	12.370	12.25	12.32
F V	3	14.1433	.04041	.02333	14.043	14.244	14.10	14.18
Total	15	11.8700	1.46583	.37848	11.058	12.682	10.31	14.18

Test of Homogeneity of Variances

Waktu Hancur

Levene Statistic	df1	df2	Sig.
.243	4	10	.908

ANOVA

Waktu Hancur

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30.071	4	7.518	7137.073	.000
Within Groups	.011	10	.001		
Total	30.081	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Waktu Hancur

LSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F I	F II	-.05667	.02650	.058	-.1157	.0024
	F III	-1.88000*	.02650	.000	-1.9390	-1.8210
	F IV	-1.95000*	.02650	.000	-2.0090	-1.8910
	F V	-3.81333*	.02650	.000	-3.8724	-3.7543
F II	F I	.05667	.02650	.058	-.0024	.1157
	F III	-1.82333*	.02650	.000	-1.8824	-1.7643
	F IV	-1.89333*	.02650	.000	-1.9524	-1.8343
	F V	-3.75667*	.02650	.000	-3.8157	-3.6976
F III	F I	1.88000*	.02650	.000	1.8210	1.9390
	F II	1.82333*	.02650	.000	1.7643	1.8824
	F IV	-.07000*	.02650	.025	-.1290	-.0110
	F V	-1.93333*	.02650	.000	-1.9924	-1.8743
F IV	F I	1.95000*	.02650	.000	1.8910	2.0090
	F II	1.89333*	.02650	.000	1.8343	1.9524
	F III	.07000*	.02650	.025	.0110	.1290
	F V	-1.86333*	.02650	.000	-1.9224	-1.8043
F V	F I	3.81333*	.02650	.000	3.7543	3.8724
	F II	3.75667*	.02650	.000	3.6976	3.8157
	F III	1.93333*	.02650	.000	1.8743	1.9924
	F IV	1.86333*	.02650	.000	1.8043	1.9224

*. The mean difference is significant at the .05 level.