

LAMPIRAN

Lampiran 1. Determinasi buah naga

UNIVERSITAS ISLAM INDONESIA
JURUSAN FARMASI FMIPA UII
BAGIAN BIOLOGI FARMASI

SURAT KETERANGAN

Nomor:81/UII/Jur Far/det/XII/2011

Yang bertanda tangan di bawah ini, Kepala Laboratorium Biologi Farmasi
Jurusan Farmasi FMIPA UII menerangkan bahwa:

Nama : Okky Safitri
NIM : 08613086
Pada tanggal : 20 Desember 2011

Telah mendeterminasi 1 (satu) species tanaman dengan bimbingan
Dra.Iyok Budiarti, di Laboratorium Biologi Farmasi FMIPA UII.

Tanaman tersebut: *Hylocereus polyrhizus* (buah naga merah)

Demikian surat keterangan ini di buat untuk dipergunakan semestinya.

Yogyakarta, 20 Desember 2011
Bagian Biologi Farmasi
Kepala,



Hady Anshory T.S.Si., Apt.
NIP.056130703

Lampiran 2. Dokumentasi



Gambar 1. Foto Maserasi



Gambar 2. Proses penyaringan



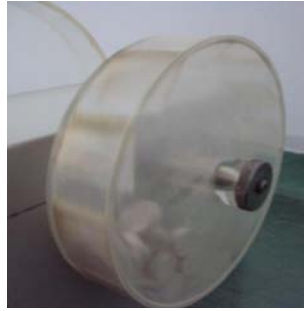
Gambar 3. Proses *Rotary Evaporator*



Gambar 4. Uji sifat alir



Gambar 5. Uji Diameter dan Ketebalan Tablet



Gambar 6. Uji Kerapuhan Tabet menggunakan *Friability Tester*

A



B



C



D



Keterangan

- A :Tablet effervescent tanpa larutan polivinilpirolidon (PVP)
- B :Tablet effervescent dengan larutan polivinilpirolidon (PVP) 2 %.
- C :Tablet effervescent dengan larutan polivinilpirolidon (PVP) 4 %
- D :Tablet effervescent dengan larutan polivinilpirolidon (PVP) 6 %

Lampiran 3. Data Hasil Uji Sifat Fisik Ekstrak Buah Naga

Uji Kadar Air Ekstrak Buah Naga

Replikasi	Bobot Awal (g)	Bobot Akhir (g)	Kadar air (%)
I	0,50	0,41	17,37
II	0,50	0,44	12,08
III	0,50	0,42	17,68
IV	0,50	0,42	15,94
V	0,50	0,44	11,90
Rata-rata	0,50	0,43	14,99
SD	0,002	0,01	2,82
CV (%)	0,40	3,26	18,81

Uji Viskositas Ekstrak Buah Naga

Replikasi	Viskositas (P)	RPM (%)
I	12,30	83,3
II	11,34	84,3
III	10,35	83
IV	12,42	84,3
V	12,30	84
Rata-rata	11,74	83,78
SD	0,89	0,60
CV (%)	7,59	0,72

Perhitungan ekstrak etanolik

$$\% \text{ Ekstrak etanolik} = \frac{\text{berat ekstrak yang diperoleh (g)}}{\text{simplisia kering(g) + jumlah pelarut (L)}} \times 100\%$$

$$\begin{aligned} \% \text{ Ekstrak etanolik} &= \frac{2226,75 \text{ g}}{3473,3 \text{ g} + 14,25 \text{ L}} \times 100\% \\ &= 63,85\% \end{aligned}$$

Lampiran 4. Data Hasil Uji Sifat Alir Granul

Uji Waktu Alir Granul

Replikasi	Formula A	Formula B	Formula C	Formula D
I	8,12	8,14	8,71	7,83
II	8,12	7,88	8,61	7,74
III	7,2	8,72	8,32	7,72
IV	7,91	7,3	8,63	7,97
V	8,55	8,8	8,65	7,96
Rata-rata	7,98	8,17	8,58	7,84
SD	0,49	0,62	0,15	0,12
CV (%)	6,14	7,59	1,75	1,53

Uji Sudut Istirahat

Replikasi	Formula A	Formula B	Formula C	Formula D
I	30,19	29,18	28,73	29,79
II	28,93	30,65	30,48	27,85
III	26,48	29,57	28,93	30,19
IV	27,10	30,96	28,50	27,41
V	30,19	30,48	31,82	29,38
Rata-rata	28,94	30,17	29,69	28,91
SD	1,67	0,76	1,42	1,22
CV (%)	5,83	2,52	4,78	4,22

Lampiran 5. Data Hasil Uji Sifat Fisik Tablet *effervescent* Ekstrak Buah Naga

Uji Keceragaman Bobot Tablet

Replikasi	A	B	C	D
1	2,98	3,18	3,12	2,95
2	3,10	3,10	3,06	2,90
3	2,95	3,10	3,03	2,82
4	2,97	3,17	3,09	2,94
5	2,93	3,17	3,09	3
6	3,06	3,01	3,11	2,91
7	3,08	3,03	3,04	2,78
8	3	3,10	3,13	2,89
9	2,98	3,20	3,02	2,88
10	2,98	3,10	3,11	2,92
11	2,97	3,16	3,10	2,97
12	2,91	3,14	3,19	2,88
13	2,87	3,16	2,95	2,96
14	2,99	3,13	3,14	2,93
15	2,96	3,16	3,13	2,97
16	2,89	3,12	3,07	2,90
17	2,97	3,12	3,02	2,98
18	3,03	3,15	3,02	2,82
19	2,90	3,20	3,23	2,97
20	3,01	3,07	3,13	2,97
Rata-rata	2,98	3,13	3,09	2,92
SD	0,06	0,05	0,07	0,06
CV (%)	2,03	1,60	2,27	2,05

Perhitungan penyimpangan bobot rata-rata tablet tiap formula

Formula A: $\frac{5}{100} \times 2,98 \text{ g} = 0,15 \text{ g}$, sehingga 2 bobot tablet tidak boleh lebih dari 3,13g
 $\frac{10}{100} \times 2,98 \text{ g} = 0,3 \text{ g}$, sehingga 1 bobot tablet tidak boleh lebih dari 3,28 g

Formula B: $\frac{5}{100} \times 3,13 \text{ g} = 0,16 \text{ g}$, sehingga 2 bobot tablet tidak boleh lebih dari 3,29g
 $\frac{10}{100} \times 3,13 \text{ g} = 0,31 \text{ g}$, sehingga 1 bobot tablet tidak boleh lebih dari 3,44 g

Formula C: $\frac{5}{100} \times 3,09 \text{ g} = 0,15 \text{ g}$, sehingga 2 bobot tablet tidak boleh lebih dari 3,24g
 $\frac{10}{100} \times 3,09 \text{ g} = 0,31 \text{ g}$, sehingga 1 bobot tablet tidak boleh lebih dari 3,40 g

Formula D: $\frac{5}{100} \times 2,92 \text{ g} = 0,15 \text{ g}$, sehingga 2 bobot tablet tidak boleh lebih dari 3,07g
 $\frac{10}{100} \times 2,92 \text{ g} = 0,30 \text{ g}$, sehingga 1 bobot tablet tidak boleh lebih dari 3,22 g

Replikasi	Penyimpangan Bobot tablet			
	A	B	C	D
1.	0	0,05	0,03	0,03
2.	0,12	0,03	0,03	0,02
3.	0,03	0,03	0,02	0,04
4.	0,01	0,04	0	0,02
5.	0,05	0,04	0	0,03
6.	0,04	0,12	0,02	0,07
7.	0,1	0,1	0,03	0,01
8.	0,02	0,03	0,04	0,04
9.	0	0,07	0,03	0,04
10.	0	0,03	0,02	0
11.	0,01	0,03	0,01	0,05
12.	0,07	0,01	0,1	0,04
13.	0,11	0,03	0,04	0,04
14.	0,01	0	0,03	0,01
15.	0,02	0,03	0,04	0,05
16.	0	0,01	0,02	0,02
17.	0,01	0,01	0,07	0,05
18.	0,05	0,02	0,07	0,1
19.	0,03	0,07	0,01	0,05
20.	0,03	0,03	0,04	0,05

Uji Kekerasan Tablet

Replikasi	Formula A	Formula B	Formula C	Formula D
1	11	10,7	12,7	15,2
2	10,6	8,9*	11	14,8
3	13,1	12,7	19,8	19,8
4	11,4	10,1	8,5*	15,8
5	9*	15,8	13,7	17,7
6	11,3	10,1	11,2	17,2
7	10	12,2	14,7	11,6
8	13,3	11,1	14,1	15,2
9	14,1	14,3	14,7	14,1
10	9,8	11,9	12,3	17,5
Rata-rata	11,4	11,78	13,26	15,89
SD	1,46	2,09	3	2,28
CV (%)	14,56	17,73	22,62	14,35

Keterangan : * = eksklusi

Data Setelah Eksklusi

Replikasi	Formula A	Formula B	Formula C
1	11	10,7	12,7
2	10,6	12,7	11
3	13,1	10,1	19,8
4	11,4	15,8	13,7
5	11,3	10,1	11,2
6	10	12,2	14,7
7	13,3	11,1	14,1
8	14,1	14,3	14,7
9		11,9	12,3
Rata-rata	11,9	12,1	13,8
SD	1,46	1,93	2,64
CV (%)	12,27	15,95	19,13

Uji Diameter dan Bobot Tablet

replikasi	Diameter Tablet				Bobot Tablet			
	A	B	C	D	A	B	C	D
1	20,07	20,04	19,99	20,04	7,18	7,19	6,80	6,99
2	20,04	20,04	19,62	20,18	7,23	7,20	6,93	6,84
3	20,03	20,02	20,05	20,02	7,19	7,19	6,86	6,93
4	20,11	20,07	20,05	20,04	7,23	6,96	6,82	6,92
5	20,02	20,06	20,05	20,01	7,21	7,20	6,86	6,92
6	20,04	20,08	20,06	20,03	7,20	7,04	6,82	6,95
7	20,01	20,07	20,09	20,01	7,25	7,19	6,84	6,80
8	20,01	20,06	20,04	20,05	7,18	7,17	6,84	6,76
9	20,04	20,16	20,04	20,02	7,16	7,19	6,84	6,88
10	20,02	20,07	20,06	20,05	7,27	6,99	6,82	6,95
X	20,04	20,07	20	20,05	7,21	7,13	6,84	6,88
SD	0,03	0,04	0,14	0,05	0,03	0,10	0,04	0,07
CV (%)	0,15	0,2	0,7	0,25	0,42	1,40	0,58	1,02

Uji Kerapuhan Tablet

Replikasi	Formula A	Formula B	Formula C	Formula D
I	0,60	0,40	0,58	0,40
II	0,98	0,60	0,48	0,30
III	0,96	0,50	0,58	0,30
IV	0,72	0,45	0,61	0,33
V	1,50	0,50	0,58	0,38
Rata-rata	0,95	0,49	0,57	0,34
SD	0,35	0,07	0,05	0,05
CV (%)	36,84	14,29	8,77	14,71

Uji Waktu Larut

Replikasi	Formula A	Formula B	Formula C	Formula D
I	1,57	2,10	2,40	3,02
II	1,58	2,18	2,33	2,59
III	2,10	2,35	2,28	3,17
IV	2,09	2,07	2,40	3,10
V	2,08	2,05	3,04	2,50
Rata-rata	1,88	2,24	2,49	2,88
SD	0,28	0,18	0,31	0,31

Lampiran 6. Hasil Uji Statistik *One Way Anova* Sifat Fisik Granul

a. Waktu Alir

		Notes	
Output Created			08-May-2012 18:26:49
Comments			
Input	Active Dataset	DataSet0	
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	N of Rows in Working Data File		20
Missing Value Handling	Definition of Missing Cases Used	User-defined missing values are treated as missing. Statistics for each test are based on all cases with valid data for the variable(s) used in that test.	
Syntax		NPART TESTS /K-S(NORMAL)=detik /MISSING ANALYSIS.	
Resources	Processor Time		0:00:00.000
	Elapsed Time		0:00:00.000
	Number of Cases Allowed ^a		196608

One-Sample Kolmogorov-Smirnov Test

		Detik
N		20
Normal Parameters ^{a,b}	Mean	8.1440
	Std. Deviation	.47142
	Positive	.103
	Negative	-.155
Kolmogorov-Smirnov Z		.695
Asymp. Sig. (2-tailed)		.719

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Notes

Output Created	08-May-2012 18:28:10	
Comments		
Input	Active Dataset	DataSet0
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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 detik BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS.	
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.014

Descriptives

Detik

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A	5	7.9800	.49432	.22107	7.3662	8.5938	7.20	8.55
B	5	8.1680	.62074	.27760	7.3972	8.9388	7.30	8.80
C	5	8.5840	.15225	.06809	8.3950	8.7730	8.32	8.71
D	5	7.8440	.11803	.05278	7.6975	7.9905	7.72	7.97
Total	20	8.1440	.47142	.10541	7.9234	8.3646	7.20	8.80

Test of Homogeneity of Variances

Detik

Levene Statistic	df1	df2	Sig.
3.155	3	16	.054

ANOVA

Detik

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.555	3	.518	3.110	.056
Within Groups	2.667	16	.167		

ANOVA

Detik

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.555	3	.518	3.110	.056
Within Groups	2.667	16	.167		
Total	4.222	19			

b. Sudut Istirahat

Notes

Output Created		08-May-2012 18:35:45
Comments		
Input	Active Dataset	DataSet0
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	Split File	<none>
	N of Rows in Working Data File	20
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		NPART TESTS /K-S(NORMAL)=derajat /MISSING ANALYSIS.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.000
	Number of Cases Allowed ^a	196608

Based on availability of workspace memory.

One-Sample Kolmogorov-Smirnov Test

		derajat
N		20
Normal Parameters ^{a,b}	Mean	29.3405
	Std. Deviation	1.37833
Most Extreme Differences	Absolute	.131
	Positive	.071
	Negative	-.131
Kolmogorov-Smirnov Z		.587
Asymp. Sig. (2-tailed)		.882

a. Test distribution is Normal.

b. Calculated from data.

Notes

Output Created		08-May-2012 18:36:15
Comments		
Input	Active Dataset	DataSet0
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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 derajat BY formula /MISSING ANALYSIS.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.000

Oneway

Notes

Output Created		08-May-2012 18:36:53
Comments		
Input	Active Dataset	DataSet0
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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 derajat BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS.
Resources	Processor Time	0:00:00.015
	Elapsed Time	0:00:00.015

Descriptives

Derajat

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
A	5	28.5780	1.72533	.77159	26.4357	30.7203	26.48	30.19
B	5	30.1680	.75675	.33843	29.2284	31.1076	29.18	30.96
C	5	29.6920	1.42094	.63546	27.9277	31.4563	28.50	31.82
D	5	28.9240	1.22539	.54801	27.4025	30.4455	27.41	30.19
Total	20	29.3405	1.37833	.30820	28.6954	29.9856	26.48	31.82

Test of Homogeneity of Variances

Derajat

Levene Statistic	df1	df2	Sig.
2.270	3	16	.120

ANOVA

Derajat

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7.816	3	2.605	1.474	.259
Within Groups	28.280	16	1.768		
Total	36.096	19			

Lampiran 7. Hasil Uji Statistik *One Way Anova* Sifat Fisik Tablet

a. Kekerasan

Notes

Output Created		01-May-2012 20:35:11
Comments		
Input	Active Dataset	DataSet0
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	Weight	<none>
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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		<pre> NPAR TESTS /K-S(NORMAL)=persen /MISSING ANALYSIS. </pre>
Resources	Processor Time	0:00:00.015
	Elapsed Time	0:00:00.015
	Number of Cases Allowed ^a	196608

a. Based on availability of workspace memory.

Oneway

Notes

Output Created		01-May-2012 20:39:31
Comments		
Input	Active Dataset	DataSet0
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	36
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		<pre> ONEWAY persen BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS /POSTHOC=TUKEY ALPHA(0.05). </pre>
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.032

Deskriptives

persen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	8	11.8500	1.46092	.51651	10.6286	13.0714	10.00	14.10
2.00	9	12.1000	1.93326	.64442	10.6140	13.5860	10.10	15.80
4.00	9	13.8000	2.64055	.88018	11.7703	15.8297	11.00	19.80
6.00	10	15.8900	2.27618	.71979	14.2617	17.5183	11.60	19.80
Total	36	13.5222	2.64349	.44058	12.6278	14.4167	10.00	19.80

Test of Homogeneity of Variances

Persen

Levene Statistic	df1	df2	Sig.
.321	3	32	.810

ANOVA

Persen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	97.333	3	32.444	7.051	.001
Within Groups	147.249	32	4.602		
Total	244.582	35			

Post Hoc Test
Multiple Comparisons

Persen

Tukey HSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
.00	2.00	-.25000	1.04234	.995	-3.0741	2.5741
	4.00	-1.95000	1.04234	.261	-4.7741	.8741
	6.00	-4.04000	1.01752	.002	-6.7968	-1.2832
2.00	.00	.25000	1.04234	.995	-2.5741	3.0741
	4.00	-1.70000	1.01122	.350	-4.4398	1.0398
	6.00	-3.79000	.98561	.003	-6.4604	-1.1196
4.00	.00	1.95000	1.04234	.261	-.8741	4.7741
	2.00	1.70000	1.01122	.350	-1.0398	4.4398
	6.00	-2.09000	.98561	.168	-4.7604	.5804
6.00	.00	4.04000	1.01752	.002	1.2832	6.7968
	2.00	3.79000	.98561	.003	1.1196	6.4604
	4.00	2.09000	.98561	.168	-.5804	4.7604

ANOVA

Persen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	97.333	3	32.444	7.051	.001
Within Groups	147.249	32	4.602		

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

Homogeneous Subsets

Persen

Tukey HSD^{a,b}

Formula	N	Subset for alpha = 0.05	
		1	2
.00	8	11.8500	
2.00	9	12.1000	
4.00	9	13.8000	13.8000
6.00	10		15.8900
Sig.		.239	.188

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 8.944.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

b. Kerapuhan

Notes

Output Created		01-May-2012 22:49:13
Comments		
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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		NPART TESTS /K-S(NORMAL)=persen /MISSING ANALYSIS.
Resources	Processor Time	0:00:00.000

Elapsed Time	0:00:00.031
Number of Cases Allowed ^a	196608

a. Based on availability of workspace memory.

One- sample Kolmogorov-Smirnov Test

		persen
N		20
Normal Parameters ^{a,b}	Mean	.5875
	Std. Deviation	.28421
Most Extreme Differences	Absolute	.268
	Positive	.268
	Negative	-.156
Kolmogorov-Smirnov Z		1.201
Asymp. Sig. (2-tailed)		.112

a. Test distribution is Normal.

c. Calculated from data.

Oneway

Notes

Output Created	01-May-2012 22:50:22	
Comments		
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	N of Rows in Working Data File	20
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 persen BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS.	
Resources	Processor Time	0:00:00.015
	Elapsed Time	0:00:00.052

Descriptives

Persen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	5	.9520	.34601	.15474	.5224	1.3816	.60	1.50
2.00	5	.4900	.07416	.03317	.3979	.5821	.40	.60
4.00	5	.5660	.04980	.02227	.5042	.6278	.48	.61
6.00	5	.3420	.04604	.02059	.2848	.3992	.30	.40
Total	20	.5875	.28421	.06355	.4545	.7205	.30	1.50

Test of Homogeneity of Variances

Persen

Levene Statistic	df1	df2	Sig.
3.378	3	16	.044

Oneway

Notes

Output Created	01-May-2012 22:53:11	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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 persen BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS /POSTHOC=TUKEY ALPHA(0.05).	
Resources	Processor Time	0:00:00.016
	Elapsed Time	0:00:00.070

Descriptives persen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	5	.9520	.34601	.15474	.5224	1.3816	.60	1.50
2.00	5	.4900	.07416	.03317	.3979	.5821	.40	.60
4.00	5	.5660	.04980	.02227	.5042	.6278	.48	.61
6.00	5	.3420	.04604	.02059	.2848	.3992	.30	.40
Total	20	.5875	.28421	.06355	.4545	.7205	.30	1.50

Test of Homogeneity of Variances

Persen

Levene Statistic	df1	df2	Sig.
3.378	3	16	.044

ANOVA

Persen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.015	3	.338	10.430	.000
Within Groups	.519	16	.032		
Total	1.535	19			

Post Hoc Tests
Multiple Comparisons

Persen

Tukey HSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
.00	2.00	.46200*	.11394	.005	.1360	.7880
	4.00	.38600	.11394	.018	.0600	.7120
	6.00	.61000	.11394	.000	.2840	.9360
2.00	.00	-.46200*	.11394	.005	-.7880	-.1360
	4.00	-.07600	.11394	.908	-.4020	.2500
	6.00	.14800	.11394	.577	-.1780	.4740
4.00	.00	-.38600	.11394	.018	-.7120	-.0600
	2.00	.07600	.11394	.908	-.2500	.4020
	6.00	.22400	.11394	.241	-.1020	.5500
6.00	.00	-.61000*	.11394	.000	-.9360	-.2840
	2.00	-.14800	.11394	.577	-.4740	.1780
	4.00	-.22400	.11394	.241	-.5500	.1020

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

Homogeneous Subsets

PersenTukey HSD^a

formula	N	Subset for alpha = 0.05	
		1	2
6.00	5	.3420	
2.00	5	.4900	
4.00	5	.5660	
.00	5		.9520
Sig.		.241	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000

d. Waktu larut**Notes**

Output Created		01-May-2012 23:05:05
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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		NPART TESTS /K-S(NORMAL)=persen /MISSING ANALYSIS.
Resources	Processor Time	0:00:00.015
	Elapsed Time	0:00:00.108
	Number of Cases Allowed ^a	196608

a. Based on availability of workspace memory.

One-Sample Kolmogorov-Smirnov Test

		persen
N		20
Normal Parameters ^{a,b}	Mean	2.2375
	Std. Deviation	.47827
Most Extreme Differences	Absolute	.198
	Positive	.163
	Negative	-.198
Kolmogorov-Smirnov Z		.883
Asymp. Sig. (2-tailed)		.416

a. Test distribution is Normal.

b. Calculated from data.

Oneway

Notes

Output Created		01-May-2012 23:05:45
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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 persen BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS.
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.053

Descriptives

Persen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	5	1.8840	.28219	.12620	1.5336	2.2344	1.57	2.10
2.00	5	1.9500	.33904	.15162	1.5290	2.3710	1.35	2.18
4.00	5	2.2400	.16643	.07443	2.0333	2.4467	2.05	2.40
6.00	5	2.8760	.30843	.13793	2.4930	3.2590	2.50	3.17
Total	20	2.2375	.47827	.10695	2.0137	2.4613	1.35	3.17

Test of Homogeneity of Variances

Persen

Levene Statistic	df1	df2	Sig.
1.065	3	16	.392

ANOVA

Persen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.077	3	1.026	12.923	.000
Within Groups	1.270	16	.079		
Total	4.346	19			

Oneway

Notes

Output Created	01-May-2012 23:06:22	
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
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 persen BY formula /STATISTICS DESCRIPTIVES HOMOGENEITY /MISSING ANALYSIS /POSTHOC=TUKEY ALPHA(0.05).	
Resources	Processor Time	0:00:00.000
	Elapsed Time	0:00:00.041

Descriptives

Persen

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	5	1.8840	.28219	.12620	1.5336	2.2344	1.57	2.10
2.00	5	1.9500	.33904	.15162	1.5290	2.3710	1.35	2.18
4.00	5	2.2400	.16643	.07443	2.0333	2.4467	2.05	2.40
6.00	5	2.8760	.30843	.13793	2.4930	3.2590	2.50	3.17
Total	20	2.2375	.47827	.10695	2.0137	2.4613	1.35	3.17

Test of Homogeneity of Variances

Persen

Levene Statistic	df1	df2	Sig.
1.065	3	16	.392

ANOVA

Persen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.077	3	1.026	12.923	.000
Within Groups	1.270	16	.079		
Total	4.346	19			

Post Hoc Tests

Multiple Comparisons

Persen
Tukey HSD

(I) formula	(J) formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
.00	2.00	-.06600	.17816	.982	-.5757	.4437
	4.00	-.35600	.17816	.229	-.8657	.1537
	6.00	-.99200	.17816	.000	-1.5017	-.4823
2.00	.00	.06600	.17816	.982	-.4437	.5757
	4.00	-.29000	.17816	.392	-.7997	.2197
	6.00	-.92600	.17816	.000	-1.4357	-.4163
4.00	.00	.35600	.17816	.229	-.1537	.8657
	2.00	.29000	.17816	.392	-.2197	.7997
	6.00	-.63600	.17816	.012	-1.1457	-.1263
6.00	.00	.99200	.17816	.000	.4823	1.5017
	2.00	.92600	.17816	.000	.4163	1.4357
	4.00	.63600	.17816	.012	.1263	1.1457

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

Homogeneous Subsets

persen

Tukey HSD^a

formula	N	Subset for alpha = 0.05	
		1	2
.00	5	1.8840	
2.00	5	1.9500	
4.00	5	2.2400	
6.00	5		2.8760
Sig.		.229	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5.000.