

7. LAMPIRAN

Lampiran 1. Uji Normalitas

Tests of Normality							
	KonsGlukomanan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	Df	Sig.
Hardness	2 persen	.091	81	.097	.956	81	.007
	3 persen	.086	81	.200 [*]	.958	81	.010
	4 persen	.094	81	.072	.955	81	.007
Cohesiveness	2 persen	.071	81	.200 [*]	.978	81	.187
	3 persen	.091	81	.097	.960	81	.012
	4 persen	.088	81	.184	.961	81	.014
Springiness	2 persen	.098	81	.051	.965	81	.027
	3 persen	.073	81	.200 [*]	.964	81	.021
	4 persen	.074	81	.200 [*]	.957	81	.009
Sineresis	2 persen	.097	81	.059	.940	81	.001
	3 persen	.097	81	.055	.958	81	.009
	4 persen	.098	81	.051	.956	81	.007
KejernihanWarna	2 persen	.092	81	.086	.948	81	.002
	3 persen	.093	81	.079	.951	81	.004
	4 persen	.086	81	.200 [*]	.948	81	.002

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

a. Lilliefors Significance Correction

Tests of Normality

	Perlakuan	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hardness	60 derajat	.143	27	.166	.947	27	.178
	70 derajat	.124	27	.200*	.961	27	.392
	80 derajat	.132	27	.200*	.951	27	.228
	90 derajat	.143	27	.163	.916	27	.031
	pH 4	.143	27	.163	.914	27	.028
	pH 6	.151	27	.118	.918	27	.035
	pH 8	.147	27	.137	.938	27	.111
	pH 9	.144	27	.157	.928	27	.062
	pH 10	.163	27	.063	.900	27	.014
	Cohesiveness	60 derajat	.078	27	.200*	.975	27
70 derajat		.104	27	.200*	.974	27	.716
80 derajat		.106	27	.200*	.940	27	.123
90 derajat		.150	27	.124	.914	27	.028
pH 4		.165	27	.056	.934	27	.086
pH 6		.108	27	.200*	.962	27	.409
pH 8		.156	27	.091	.964	27	.450
pH 9		.085	27	.200*	.981	27	.877
pH 10		.147	27	.142	.937	27	.105
Springiness		60 derajat	.081	27	.200*	.971	27
	70 derajat	.128	27	.200*	.954	27	.261
	80 derajat	.122	27	.200*	.953	27	.251
	90 derajat	.165	27	.058	.915	27	.031
	pH 4	.110	27	.200*	.977	27	.786
	pH 6	.105	27	.200*	.964	27	.448
	pH 8	.119	27	.200*	.966	27	.504
	pH 9	.151	27	.115	.910	27	.022
	pH 10	.142	27	.171	.923	27	.045
	Sineresis	60 derajat	.142	27	.171	.930	27
70 derajat		.153	27	.105	.911	27	.024
80 derajat		.151	27	.119	.929	27	.065
90 derajat		.141	27	.178	.943	27	.149
pH 4		.130	27	.200*	.931	27	.075
pH 6		.138	27	.199	.949	27	.206

	pH 8	.159	27	.077	.927	27	.058
	pH 9	.134	27	.200*	.949	27	.203
	pH 10	.152	27	.114	.904	27	.017
	60 derajat	.109	27	.200*	.979	27	.837
	70 derajat	.094	27	.200*	.967	27	.531
	80 derajat	.118	27	.200*	.946	27	.172
	90 derajat	.075	27	.200*	.972	27	.666
KejernihanWarna	pH 4	.115	27	.200*	.954	27	.274
	pH 6	.107	27	.200*	.962	27	.408
	pH 8	.121	27	.200*	.950	27	.214
	pH 9	.116	27	.200*	.959	27	.354
	pH 10	.096	27	.200*	.977	27	.791

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

a. Lilliefors Significance Correction

Lampiran 2. Hasil Analisis Ragam Dua Arah (*Two Way ANOVA*)

Tests of Between-Subjects Effects						
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Hardness	16973.914 ^a	26	652.843	302.765	.000
	Cohesiveness	16.112 ^b	26	.620	138.026	.000
	Springiness	3824.238 ^c	26	147.086	158.012	.000
	Sineresis	2619.150 ^d	26	100.737	72.331	.000
	Warna	6193.372 ^e	26	238.207	354.290	.000
Intercept	Hardness	646914.776	1	646914.776	300015.598	.000
	Cohesiveness	130.958	1	130.958	29169.297	.000
	Springiness	41626.156	1	41626.156	44718.283	.000
	Sineresis	14678.184	1	14678.184	10539.210	.000
	Warna	625539.974	1	625539.974	930379.623	.000
KonsGlukomanan	Hardness	4815.562	2	2407.781	1116.641	.000
	Cohesiveness	2.878	2	1.439	320.514	.000
	Springiness	448.053	2	224.026	240.668	.000
	Sineresis	1463.037	2	731.518	525.244	.000

	Warna	416.668	2	208.334	309.860	.000
	Hardness	11899.162	8	1487.395	689.800	.000
	Cohesiveness	13.088	8	1.636	364.404	.000
SuhuPemanasanDanpH	Springiness	3261.493	8	407.687	437.971	.000
	Sineresis	1100.820	8	137.602	98.801	.000
	Warna	5748.893	8	718.612	1068.807	.000
	Hardness	259.190	16	16.199	7.513	.000
KonsGlukomanan *	Cohesiveness	.146	16	.009	2.027	.013
SuhuPemanasanDanpH	Springiness	114.693	16	7.168	7.701	.000
	Sineresis	55.294	16	3.456	2.481	.002
	Warna	27.811	16	1.738	2.585	.001
	Hardness	465.754	216	2.156		
	Cohesiveness	.970	216	.004		
Error	Springiness	201.064	216	.931		
	Sineresis	300.828	216	1.393		
	Warna	145.227	216	.672		
	Hardness	664354.444	243			
	Cohesiveness	148.039	243			
Total	Springiness	45651.459	243			
	Sineresis	17598.162	243			
	Warna	631878.574	243			
	Hardness	17439.669	242			
	Cohesiveness	17.081	242			
Corrected Total	Springiness	4025.302	242			
	Sineresis	2919.978	242			
	Warna	6338.600	242			

a. R Squared = .973 (Adjusted R Squared = .970)

b. R Squared = .943 (Adjusted R Squared = .936)

c. R Squared = .950 (Adjusted R Squared = .944)

d. R Squared = .897 (Adjusted R Squared = .885)

e. R Squared = .977 (Adjusted R Squared = .974)

Lampiran 3. Hasil Analisis Ragam Dua Arah (*Two Way ANOVA*) dengan Uji Beda *Post Hoc* Metode Duncan

- Nilai *hardness* pada konsentrasi glukomanan berbeda

Hardness

Duncan

KonsGlukomanan	N	Subset		
		1	2	3
2 persen	81	46.3525		
3 persen	81		51.2017	
4 persen	81			57.2353
Sig.		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) = 2.156.

- Uses Harmonic Mean Sample Size = 81.000.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- Alpha = ,05.

- Nilai *cohesiveness* pada konsentrasi glukomanan berbeda

Cohesiveness

Duncan

KonsGlukomanan	N	Subset		
		1	2	3
4 persen	81	.6018		
3 persen	81		.7321	
2 persen	81			.8684
Sig.		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) = .004.

- a. Uses Harmonic Mean Sample Size = 81.000.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- c. Alpha = ,05.

- **Nilai *springiness* pada konsentrasi glukomanan berbeda**

Springiness

Duncan

KonsGlukomanan	N	Subset		
		1	2	3
2 persen	81	11.5966		
3 persen	81		12.7866	
4 persen	81			14.8814
Sig.		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) = .931.

- a. Uses Harmonic Mean Sample Size = 81.000.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- c. Alpha = ,05.

- **Nilai sineresis pada konsentrasi glukomanan berbeda**

Sineresis

Duncan

KonsGlukomanan	N	Subset		
		1	2	3
4 persen	81	4.8825		
3 persen	81		7.5528	
2 persen	81			10.8808
Sig.		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) = 1.393.

- Uses Harmonic Mean Sample Size = 81.000.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.
- Alpha = ,05.

- **Nilai kejernihan warna pada konsentrasi glukomanan berbeda**

Warna

Duncan

KonsGlukomanan	N	Subset		
		1	2	3
4 persen	81	49.1259		
3 persen	81		50.7516	
2 persen	81			52.3333
Sig.		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) = .672.

- Uses Harmonic Mean Sample Size = 81.000.
- The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

- Nilai *hardness* pada suhu dan pH berbeda

Hardness

Duncan

SuhuPemanasanDanpH	N	Subset								
		1	2	3	4	5	6	7	8	9
60 derajat	27	40.4022								
70 derajat	27		43.7171							
80 derajat	27			46.4972						
90 derajat	27				49.2897					
pH 4	27					51.1268				
pH 6	27						54.3950			
ph 8	27							56.4435		
pH 9	27								59.8134	
pH 10	27									62.6837
Sig.		1.000	1.000	1.000	1.000	1.000	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) = 2.156.

a. Uses Harmonic Mean Sample Size = 27.000.

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

c. Alpha = ,05.

- Nilai *cohesive* pada suhu dan pH berbeda

Cohesiveness

Duncan

SuhuPemanasanDanpH	N	Subset								
		1	2	3	4	5	6	7	8	9
90 derajat	27	.3517								
80 derajat	27		.4874							
70 derajat	27			.5831						
60 derajat	27				.6588					
pH 10	27					.7069				
pH 9	27						.7878			
ph 8	27							.9105		
pH 6	27								1.0328	
pH 4	27									1.0879
Sig.		1.000	1.000	1.000	1.000	1.000	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) = .004.

a. Uses Harmonic Mean Sample Size = 27.000.

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

c. Alpha = .05.

- Nilai *springiness* pada suhu dan pH berbeda

Springiness

Duncan

SuhuPemanasanDanpH	N	Subset								
		1	2	3	4	5	6	7	8	9
60 derajat	27	7.6604								
70 derajat	27		8.7901							
80 derajat	27			10.1259						
90 derajat	27				11.8282					
pH 4	27					12.8306				
pH 6	27						14.3671			
ph 8	27							15.7950		
pH 9	27								17.4100	
pH 10	27									18.9866
Sig.		1.000	1.000	1.000	1.000	1.000	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) = .931.

a. Uses Harmonic Mean Sample Size = 27.000.

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

c. Alpha = ,05.

- Nilai sineresis pada suhu dan pH berbeda

Sineresis

Duncan

SuhuPemanasanDanpH	N	Subset								
		1	2	3	4	5	6	7	8	9
90 derajat	27	4.4977								
80 derajat	27		5.2944							
70 derajat	27			5.9759						
60 derajat	27				6.8856					
pH 10	27					8.0208				
pH 9	27						8.7116			
ph 8	27							9.3934		
pH 6	27								10.0800	
pH 4	27									11.0886
Sig.		1.000	1.000	1.000	1.000	1.000	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) = 1.393.

a. Uses Harmonic Mean Sample Size = 27.000.

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

c. Alpha = ,05.

- Nilai kejernihan warna pada suhu dan pH berbeda

Warna

Duncan

SuhuPemanasanDanpH	N	Subset								
		1	2	3	4	5	6	7	8	9
pH 10	27	43.4159								
pH 9	27		44.9711							
ph 8	27			46.6933						
pH 6	27				48.8867					
pH 4	27					50.8019				
90 derajat	27						52.6996			
80 derajat	27							54.5156		
70 derajat	27								56.4919	
60 derajat	27									58.1567
Sig.		1.000	1.000	1.000	1.000	1.000	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) = .672.

a. Uses Harmonic Mean Sample Size = 27.000.

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

c. Alpha = .05.



8.17% PLAGIARISM
APPROXIMATELY

Report #11089232

PENDAHULUAN Latar Belakang Umbi porang termasuk dalam salah satu sumber pangan dari tanaman yang sudah banyak diekspor.  Volume ekspor umbi porang di Indonesia pada 1998-2001 memiliki variasi antara 179-260 ton, namun pada 2007 volume ekspor tersebut mengalami penurunan. Pada 2008 permintaan pasar luar negeri terhadap umbi porang sebesar 104 ton hanya bisa terpenuhi sebesar 24 ton (Rahayu et al., 2013). Produksi umbi porang di dalam negeri terutama di Jawa Timur pada tahun 2009 mencapai 600-1000 ton chip kering sedangkan kebutuhan industri sekitar 3.400 ton chip kering (Faridah et al., 2012). Kebutuhan terhadap umbi porang tersebut belum terpenuhi karena belum banyak dibudidayakan dan masih bergantung pada potensi alam maupun luas lahan penanaman yang masih sangat terbatas. Selain itu, teknologi penanganan pasca panen umbi porang masih belum memadai sehingga umbi porang lebih banyak diolah sampai bentuk chip kering. Umbi porang tidak hanya dapat diolah menjadi chip kering tetapi dapat diolah menjadi tepung glukomanan (Sumarwoto, 2004). Glukomanan termasuk senyawa polisakarida yang memiliki sifat mampu membentuk gel, daya mengembang yang besar dan viskositas tinggi sehingga mempunyai potensi cukup besar untuk dikembangkan dalam industri pangan. Glukomanan memiliki kandungan kadar serat yang cukup tinggi