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LAMPIRAN

Lampiran 1. Hasil uji lemak kakao

Perlakuan	kadar air	Bilangan Peroksida	Bilangan iod	asam lemak bebas
P1 F mcc02/110	0.23	2.85	29.11	1.27
	0.26	2.89	30.01	1.24
	0.24	2.86	29.08	1.26
p2 Fmcc02/115	0.18	3.26	30.78	1.46
	0.20	2.93	31.24	1.52
	0.15	3.13	31.33	1.48
p3TFmcc02/110	0.15	1.78	31.12	0.87
	0.13	1.81	31.78	0.92
	0.13	1.79	32.69	0.91
p4TFmcc02/115	0.10	1.50	33.59	1.04
	0.09	1.56	34.87	1.06
	0.07	1.58	34.76	1.06
p5FS2/110	0.19	3.44	31.62	2.10
	0.21	2.98	31.42	2.12
	0.18	2.85	31.37	2.12
P6FS2/115	0.12	2.72	33.15	1.38
	0.13	2.58	32.89	1.40
	0.11	2.59	33.21	1.41
P7TFS2/110	0.15	2.04	30.55	1.10
	0.12	1.81	30.28	1.08
	0.09	1.89	31.46	1.07
P8TFS2/115	0.14	1.58	32.61	1.28
	0.11	1.42	32.48	1.26
	0.13	1.47	32.19	1.26

Perlakuan	kadar air %	bilangan peroksida Meq O_2/kg	Iod I2 /100 g	Asam lemak bebas %
P1	0,24	2,87	29,74	1,26
P2	0,18	3,11	31,12	1,49
P3	0,14	1,79	31,86	0,09
P4	0,09	1,55	34,41	1,05
P5	0,19	3,09	31,47	2,11
P6	0,12	2,63	33,08	1,40
P7	0,12	1,91	30,76	1,08
P8	0,13	1,49	32,43	1,27

Nilai rerata dari setiap perlakuan

Lampiran 2. Hasil Uji *ANOVA* dan uji lanjut Duncan Kadar air

Tests of Between-Subjects Effects

Dependent Variable: kadar_air

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.037[a]	7	.005	24.352	.000
Intercept	.577	1	.577	2661.231	.000
Klon_Kakao	.003	1	.003	13.000	.002
Fermentasi	.014	1	.014	64.692	.000
Suhu	.015	1	.015	69.231	.000
Klon_Kakao * Fermentasi	.001	1	.001	4.923	.041
Klon_Kakao * Suhu	.004	1	.004	17.308	.001
Fermentasi * Suhu	1.667E-5	1	1.667E-5	.077	.785
Klon_Kakao * Fermentasi * Suhu	.000	1	.000	1.231	.284
Error	.003	16	.000		
Total	.617	24			
Corrected Total	.040	23			

a. R Squared = ,914 (Adjusted R Squared = ,877)

Hasil

Duncan[a]

Kadar_air	N	1	2	3	4	5	6
		Subset for alpha = 0.05					
P4	3	.0867					
P3	3		.1267				
P8	3		.1267				
P6	3		.1433	.1433			
P2	3			.1667	.1667		
P7	3				.1800	.1800	
P1	3					.1967	.1967
P5	3						.2133
Sig.		1.000	.207	.070	.284	.185	.185

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 3. Hasil Uji *ANOVA* dan uji lanjut Duncan bilangan peroksida

Tests of Between-Subjects Effects

Dependent Variable: Peroksida

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10.003[a]	7	1.429	74.935	.000
Intercept	127.467	1	127.467	6683.846	.000
Klon_Kakao	.014	1	.014	.710	.412
Fermentasi	.297	1	.297	15.575	.001
Suhu	9.188	1	9.188	481.806	.000
Klon_Kakao * Fermentasi	.288	1	.288	15.112	.001
Klon_Kakao * Suhu	.038	1	.038	1.972	.179
Fermentasi * Suhu	.076	1	.076	3.982	.063
Klon_Kakao * Fermentasi * Suhu	.103	1	.103	5.385	.034
Error	.305	16	.019		
Total	137.775	24			
Corrected Total	10.309	23			

a. R Squared = ,970 (Adjusted R Squared = ,957)

Lampiran 4. Hasil Uji *ANOVA* dan uji lanjut Duncan bilangan Iod

Tests of Between-Subjects Effects

Dependent Variable: Bilangan_Iod

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	28.155[a]	7	4.022	19.766	.000
Intercept	23914.275	1	23914.275	117522.085	.000
Klon_Kakao	3.278	1	3.278	16.110	.001
Fermentasi	11.496	1	11.496	56.492	.000
Suhu	2.142	1	2.142	10.527	.005
Klon_Kakao * Fermentasi	.388	1	.388	1.905	.187
Klon_Kakao * Suhu	9.818	1	9.818	48.247	.000
Fermentasi * Suhu	.473	1	.473	2.325	.147
Klon_Kakao * Fermentasi * Suhu	.561	1	.561	2.758	.116
Error	3.256	16	.203		
Total	23945.687	24			
Corrected Total	31.411	23			

a. R Squared = ,896 (Adjusted R Squared = ,851)

Hasil

Duncan[a]

Bilangan_Iod	N	1	2	3	4	5	6
				Subset for alpha = 0.05			
P1	3	29.4000					
P7	3		30.7633				
P2	3		31.1167	31.1167			
P5	3		31.4700	31.4700			
P3	3			31.8633	31.8633		
P8	3				32.4267	32.4267	
P6	3					33.0833	
P4	3						34.4067
Sig.		1.000	.116	.098	.183	.124	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 5. Hasil Uji *ANOVA* dan uji lanjut Duncan Asam lemak bebas

Tests of Between-Subjects Effects

Dependent Variable: Asam_Lemak

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.920[a]	7	.417	1221.002	.000
Intercept	41.791	1	41.791	122315.720	.000
Klon_Kakao	.508	1	.508	1485.378	.000
Fermentasi	.008	1	.008	24.695	.000
Suhu	1.426	1	1.426	4173.476	.000
Klon_Kakao * Fermentasi	.315	1	.315	922.256	.000
Klon_Kakao * Suhu	.051	1	.051	150.256	.000
Fermentasi * Suhu	.254	1	.254	744.012	.000
Klon_Kakao * Fermentasi * Suhu	.358	1	.358	1046.939	.000
Error	.005	16	.000		
Total	44.717	24			
Corrected Total	2.926	23			

a. R Squared = ,998 (Adjusted R Squared = ,997)

Hasil

Duncan[a]

Asam_lemak	N	1	2	3	4	5	6
				Subset for alpha = 0.05			
P3	3	.9000					
P4	3		1.0533				
P7	3		1.0833				
P1	3			1.2567			
P8	3			1.2667			
P6	3				1.3967		
P2	3					1.4867	
P5	3						2.1133
Sig.		1.000	.064	.517	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 6. Hasil Uji *ANOVA* dan uji lanjut Duncan pada organoleptik
warna lemak kakao

Tests of Between-Subjects Effects

Dependent Variable: warna

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9.073[a]	7	1.296	33.722	.000
Intercept	478.827	1	478.827	12457.279	.000
Klon_Kakao	.082	1	.082	2.125	.164
Fermentasi	1.707	1	1.707	44.401	.000
Suhu	3.840	1	3.840	99.902	.000
Klon_Kakao * Fermentasi	.602	1	.602	15.653	.001
Klon_Kakao * Suhu	2.160	1	2.160	56.195	.000
Fermentasi * Suhu	.482	1	.482	12.531	.003
Klon_Kakao * Fermentasi * Suhu	.202	1	.202	5.247	.036
Error	.615	16	.038		
Total	488.515	24			
Corrected Total	9.688	23			

a. R Squared = ,937 (Adjusted R Squared = ,909)

Hasil

Duncan[a]

warna	N	Subset for alpha = 0.05		
		1	2	3
P4	3	3.3667		
P8	3		3.9500	
P3	3		4.0500	
P6	3		4.2500	
P7	3			4.9000
P1	3			4.9833
P5	3			5.0000
P2	3			5.2333
Sig.		1.000	.094	.072

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 7. Hasil Uji *ANOVA* dan uji lanjut Duncan pada organoleptik

aroma lemak kakao

Tests of Between-Subjects Effects

Dependent Variable: Aroma

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10.315[a]	7	1.474	43.932	.000
Intercept	432.226	1	432.226	12886.239	.000
Klon_Kakao	.003	1	.003	.078	.784
Fermentasi	.076	1	.076	2.264	.152
Suhu	2.438	1	2.438	72.699	.000
Klon_Kakao * Fermentasi	.000	1	.000	.003	.956
Klon_Kakao * Suhu	2.313	1	2.313	68.947	.000
Fermentasi * Suhu	3.643	1	3.643	108.599	.000
Klon_Kakao * Fermentasi * Suhu	1.843	1	1.843	54.935	.000
Error	.537	16	.034		
Total	443.078	24			
Corrected Total	10.852	23			

a. R Squared = ,951 (Adjusted R Squared = ,929)

Hasil

Duncan[a]

Aroma	N	Subset for alpha = 0.05	
		1	2
P5	3	3.5167	
P4	3	3.5667	
P8	3	3.6167	
P3	3	3.6833	
P1	3		4.7167
P7	3		4.8333
P6	3		4.9667
P2	3		5.0500
Sig.		.320	.056

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 8. Hasil Uji *ANOVA* dan uji lanjut Duncan pada organoleptik tekstur lemak kakao

Tests of Between-Subjects Effects

Dependent Variable: tekstur

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.378[a]	7	.054	1.558	.218
Intercept	484.202	1	484.202	13958.967	.000
Klon_Kakao	.000	1	.000	.000	1.000
Fermentasi	.002	1	.002	.048	.829
Suhu	.304	1	.304	8.757	.009
Klon_Kakao * Fermentasi	.002	1	.002	.048	.829
Klon_Kakao * Suhu	.000	1	.000	.012	.914
Fermentasi * Suhu	.020	1	.020	.589	.454
Klon_Kakao * Fermentasi * Suhu	.050	1	.050	1.453	.246
Error	.555	16	.035		
Total	485.135	24			
Corrected Total	.933	23			

a. R Squared = ,405 (Adjusted R Squared = ,145)

Hasil

Duncan[a]

Tekstur	N	Subset for alpha = 0.05	
		1	2
P8	3	4.3167	
P3	3	4.3667	4.3667
P4	3	4.4000	4.4000
P7	3	4.4333	4.4333
P5	3	4.5167	4.5167
P2	3	4.5833	4.5833
P1	3	4.6167	4.6167
P6	3		4.7000
Sig.		.099	.070

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 10. Dokumentasi

Proses pengambilan bahan baku penelitian kakao

Penjemuran biji kakao perlakuan tanpa fermentasi

Proses Fermentasi dan pencucian biji kakao setelah fermentasi

Proses penyangraian

Sampel lemak kakao hasil pengepresan
menggunakan mesin press lemak kakao

Uji Organoleptik lemak kakao meliputi
aroma, warna dan tekstur

Lampiran Formulir Organoleptik Lemak Kakao

FORMULIR UJI ORGANOLEPTIK

Nama Panelis :

Tanggal :

Jenis Produk : Lemak Kakao (Cocoa Butter)

Instruksi : Amati warna, aroma, dan tekstur pada produk yang telah disajikan, nyatakan penilaian anda dan berikan tanda centang (√) yang sesuai dengan penilaian anda. Selesaikan penilaian satu sampel tanpa membandingkan sampel lainnya.

	Skala Penilaian	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Warna	Sangat Menarik (7)																								
	Menarik (6)																								
	Agak menarik (5)																								
	Netral (4)																								
	Agak Menarik (3)																								
	Tidak Menarik (2)																								
	Sangat Tidak Menarik (1)																								

Aroma	Skala Penilaian	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	Sangat Menarik (7)																								
	Menarik (6)																								
	Agak menarik (5)																								
	Netral (4)																								
	Agak Menarik (3)																								
	Tidak Menarik (2)																								
	Sangat Tidak Menarik (1)																								

Skala Penilaian	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sangat Menarik (7)																								
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Tekstur (row label spanning the table on the left)