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LAMPIRAN

Lampiran 1a. Tabel Pengamatan Pengaruh Konsentrasi Enzim terhadap Rendemen (%) VCO

Konsentrasi Enzim (%)	Ulangan 1	Ulangan 2	Rata-rata
0.5	25.5	19.4	22.45
1	26	19.4	22.7
1.5	25.5	19.8	22.65

Lampiran 1b. Hasil Uji ANOVA Pengaruh Konsentrasi Enzim terhadap Rendemen (%) VCO

Dependent Variable:Rendemen

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.070[a]	2	.035	.002	.998
Intercept	3064.560	1	3064.560	162.346	.001
Perlakuan	.070	2	.035	.002	.998
Error	56.630	3	18.877		
Total	3121.260	6			
Corrected Total	56.700	5			

a. R Squared = .001 (Adjusted R Squared = -.665)

Lampiran 2a. Tabel Pengamatan Pengaruh Konsentrasi Enzim terhadap Derajat Kejernihan (%) VCO

Konsentrasi Enzim (%)	Ulangan 1	Ulangan 2	Rata-rata
0.5	89.21	84.25	86.73
1	88.51	83.38	85.945
1.5	80.38	77.48	78.93

Lampiran 2b. Hasil Uji ANOVA Pengaruh Konsentrasi Enzim terhadap Derajat Kejernihan (%) VCO

Dependent Variable:Derajat_kejernihan

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	73.778[a]	2	36.889	3.731	.154
Intercept	42203.384	1	42203.384	4.268E3	.000
Perlakuan	73.778	2	36.889	3.731	.154
Error	29.664	3	9.888		
Total	42306.826	6			
Corrected Total	103.442	5			

a. R Squared = .713 (Adjusted R Squared = .522)

Lampiran 3a. Tabel Pengamatan Pengaruh Penggunaan Enzim dengan dan Tanpa Penggunaan Penyalut terhadap Rendemen (%) VCO

Sampel	Ulangan 1	Ulangan 2	Rata-rata
Tanpa enzim	14	15	14.5
Enzim 0,33%	19	23	21
Enzim+malto (1:2) 0,5%	20	21	20.5

Lampiran 3b. Hasil Uji ANOVA Pengaruh Penggunaan Enzim dengan dan Tanpa Penggunaan Penyalut terhadap Rendemen (%) VCO

Dependent Variable:Rendemen

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	52.333[a]	2	26.167	8.722	.056
Intercept	2090.667	1	2090.667	696.889	.000
Perlakuan	52.333	2	26.167	8.722	.056
Error	9.000	3	3.000		
Total	2152.000	6			
Corrected Total	61.333	5			

a. R Squared = .853 (Adjusted R Squared = .755)

Lampiran 3c. Hasil Uji Lanjut Pengaruh Penggunaan Enzim dengan dan Tanpa Penggunaan Penyalut terhadap Rendemen (%) VCO

Rendemen

Duncan

Perlakuan	N	Subset 1	Subset 2
Tanpa enzim	2	14.5000	
Enzim+malto	2		20.5000
Enzim	2		21.0000
Sig.		1.000	.792

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 3.000.

Lampiran 4a. Tabel Hasil Pengujian Rendemen

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	15	17.5	16.25
	12 jam	20	13	16.5
	18 jam	21.5	16	18.75
	24 jam	25	16	20.5
40	6 jam	16	14	15
	12 jam	17	17	17
	18 jam	20	21	20.5
	24 jam	20	27	23.5
50	6 jam	23	21	22
	12 jam	24	26	25
	18 jam	25	27	26
	24 jam	27	26	26.5
60	6 jam	23	22	22.5
	12 jam	24	24	24
	18 jam	24	26	25
	24 jam	25	28	26.5

Lampiran 4b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Rendemen (%) VCO

		Suhu (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	16.25	15	22	22.5	18.94
	12 jam	16.5	17	25	24	20.63
	18 jam	18.75	20.5	26	25	22.56
	24 jam	20.5	23.5	26.5	26.5	24.25
	Rata-rata	18	19	24.88	24.5	21.59

Lampiran 4c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Rendemen (%) VCO

Dependent Variable:Rendemen

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	15382.750[a]	16	961.422	124.305	.000
Suhu	310.844	3	103.615	13.397	.000
Lama_inkubasi	127.906	3	42.635	5.512	.009
Suhu * Lama_inkubasi	22.719	9	2.524	.326	.954
Error	123.750	16	7.734		
Total	15506.500	32			

a. R Squared = .992 (Adjusted R Squared = .984)

Lampiran 4d. Hasil Uji Lanjut Pengaruh Suhu Inkubasi terhadap Rendemen (%) VCO

Rendemen

Duncan

Suhu	N	Subset 1	Subset 2
S1	8	18.0000	
S2	8	19.0000	
S4	8		24.5000
S3	8		24.8750
Sig.		.482	.791

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 7.734.

Lampiran 4e. Hasil Uji Lanjut Pengaruh Waktu inkubasi terhadap Rendemen (%) VCO

Rendemen

Duncan

Lama_ink...	N	Subset 1	Subset 2	Subset 3
L1	8	18.9375		
L2	8	20.6250	20.6250	
L3	8		22.5625	22.5625
L4	8			24.2500
Sig.		.243	.183	.243

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 7.734.

Lampiran 5a. Tabel Hasil Pengujian Derajat Kejernihan (%)

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	89.9	89.2	89.55
	12 jam	87.4	85.8	86.6
	18 jam	85.3	83.1	84.2
	24 jam	83.5	82.6	83.05
40	6 jam	86.1	87.9	87
	12 jam	84	86.5	85.25
	18 jam	83.5	85.8	84.65
	24 jam	84.9	86	85.45
50	6 jam	94.3	93	93.65
	12 jam	94.3	90.8	92.55
	18 jam	93.3	89	91.15
	24 jam	93.5	89	91.25
60	6 jam	93.6	94.4	94
	12 jam	93.4	94.2	93.8
	18 jam	92.9	92.9	92.9
	24 jam	91.6	93.3	92.45

Lampiran 5b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Derajat Kejernihan (%) VCO

		Suhu Inkubasi (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	89.55	87	93.65	94	91.05
	12 jam	86.6	85.25	92.55	93.8	89.55
	18 jam	84.2	84.65	91.15	92.9	88.23
	24 jam	83.05	85.45	91.25	92.45	88.05
	Rata-rata	85.85	85.59	92.15	93.29	89.22

Lampiran 5c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Derajat Kejernihan (%) VCO

Dependent Variable:Derajat_kejernihan

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	255184.310[a]	16	15949.019	6.259E3	.000
Suhu	397.451	3	132.484	51.993	.000
Lama_inkubasi	46.534	3	15.511	6.087	.006
Suhu * Lama_inkubasi	20.794	9	2.310	.907	.542
Error	40.770	16	2.548		
Total	255225.080	32			

a. R Squared = 1.000 (Adjusted R Squared = 1.000)

Lampiran 5d. Hasil Uji Lanjut Pengaruh Suhu terhadap Derajat Kejernihan (%) VCO

Derajat_kejernihan

Duncan

Suhu	N	Subset 1	Subset 2
S2	8	85.5875	
S1	8	85.8500	
S3	8		92.1500
S4	8		93.2875
Sig.		.747	.173

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 2.548.

Lampiran 5e. Hasil Uji Lanjut Pengaruh Waktu inkubasi terhadap Derajat Kejernihan (%) VCO

Derajat_kejernihan

Duncan

Lama_ink...	N	Subset 1	Subset 2
L4	8	88.0500	
L3	8	88.2250	
L2	8	89.5500	89.5500
L1	8		91.0500
Sig.		.093	.079

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 2.548.

Lampiran 6a. Tabel Hasil Pengujian Asam Lemak Bebas (%)

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	0.20	0.30	0.25
	12 jam	0.50	0.60	0.55
	18 jam	0.70	0.80	0.75
	24 jam	0.80	0.80	0.80
40	6 jam	0.39	0.40	0.39
	12 jam	0.84	0.40	0.62
	18 jam	0.99	0.38	0.69
	24 jam	0.96	0.59	0.78
50	6 jam	0.44	0.50	0.47
	12 jam	0.85	0.45	0.65
	18 jam	1.03	0.39	0.71
	24 jam	1.03	0.55	0.79
60	6 jam	0.61	0.36	0.49
	12 jam	0.70	0.65	0.68
	18 jam	0.75	0.90	0.82
	24 jam	0.92	1.04	0.98

Lampiran 6b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Asam Lemak Bebas (%) VCO

		Suhu (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	0.25	0.39	0.47	0.49	0.40
	12 jam	0.55	0.62	0.65	0.68	0.63
	18 jam	0.75	0.69	0.71	0.82	0.74
	24 jam	0.8	0.78	0.79	0.98	0.84
	Rata-rata	0.59	0.62	0.66	0.74	0.65

Lampiran 6c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Asam Lemak Bebas (%) VCO

Dependent Variable:ALB

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	14.562[a]	16	.910	17.779	.000
Suhu	.106	3	.035	.689	.572
Lama_inkubasi	.851	3	.284	5.544	.008
Suhu * Lama_inkubasi	.059	9	.007	.128	.998
Error	.819	16	.051		
Total	15.382	32			

a. R Squared = .947 (Adjusted R Squared = .893)

Lampiran 6d. Hasil Uji Lanjut Pengaruh Waktu inkubasi terhadap Asam Lemak Bebas (%) VCO

ALB

Duncan

Lama_ink...	N	Subset 1	Subset 2
L1	8	.4000	
L2	8	.6238	.6238
L3	8		.7425
L4	8		.8363
Sig.		.065	.093

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .051.

Lampiran 7a. Tabel Hasil Pengujian Bilangan Peroksida (mg ek/kg)

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	0.74	1.75	1.25
	12 jam	1.11	1.24	1.18
	18 jam	1.37	1.74	1.55
	24 jam	1.49	2.00	1.75
40	6 jam	1.00	0.98	0.99
	12 jam	0.99	1.50	1.25
	18 jam	1.00	1.00	1.00
	24 jam	1.00	1.50	1.25
50	6 jam	1.00	1.49	1.24
	12 jam	0.98	1.99	1.49
	18 jam	1.96	3.00	2.48
	24 jam	1.97	2.99	2.48
60	6 jam	1.94	1.99	1.97
	12 jam	2.43	2.45	2.44
	18 jam	2.93	2.48	2.70
	24 jam	2.93	2.50	2.71

Lampiran 7b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Bilangan Peroksida (mg ek/kg) VCO

		Suhu (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	1.25	0.99	1.24	1.97	1.36
	12 jam	1.18	1.25	1.49	2.44	1.59
	18 jam	1.55	1	2.48	2.7	1.93
	24 jam	1.75	1.25	2.48	2.71	2.05
	Rata-rata	1.43	1.12	1.92	2.46	1.73

Lampiran 7c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Bilangan Peroksida (mg ek/kg) VCO

Dependent Variable:Bil_peroksida

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	108.091[a]	16	6.756	37.814	.000
Suhu	8.200	3	2.733	15.300	.000
Lama_inkubasi	2.396	3	.799	4.470	.018
Suhu * Lama_inkubasi	1.445	9	.161	.899	.548
Error	2.859	16	.179		
Total	110.949	32			

a. R Squared = .974 (Adjusted R Squared = .948)

Lampiran 7d. Hasil Uji Lanjut Pengaruh Suhu Inkubasi terhadap Bilangan Peroksida (mg ek/kg) VCO

Bil_peroksida

Duncan

Suhu	N	Subset 1	Subset 2	Subset 3
S2	8	1.1212		
S1	8	1.4300		
S3	8		1.9225	
S4	8			2.4563
Sig.		.163	1.000	1.000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .179.

Lampiran 7e. Hasil Uji Lanjut Pengaruh Waktu inkubasi terhadap Bilangan Peroksida (mg ek/kg) VCO

Bil_peroksida

Duncan

Lama_ink...	N	Subset 1	Subset 2
L1	8	1.3612	
L2	8	1.5862	1.5862
L3	8		1.9350
L4	8		2.0475
Sig.		.303	.054

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .179.

Lampiran 8a. Tabel Hasil Pengujian Bilangan Iod (g iod/100g)

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	9.14	11.75	10.44
	12 jam	7.32	12.18	9.75
	18 jam	7.81	8.16	7.98
	24 jam	6.60	7.32	6.96
40	6 jam	9.95	6.98	8.47
	12 jam	5.86	7.36	6.61
	18 jam	6.84	7.57	7.20
	24 jam	5.71	5.72	5.72
50	6 jam	8.50	7.96	8.23
	12 jam	7.11	9.26	8.19
	18 jam	5.97	7.99	6.98
	24 jam	5.46	5.84	5.65
60	6 jam	8.38	7.71	8.04
	12 jam	8.26	6.85	7.56
	18 jam	5.33	4.39	4.86
	24 jam	5.33	4.27	4.80

Lampiran 8b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Bilangan Iod (g iod/100g) VCO

		Suhu (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	10.44	8.47	8.23	8.04	8.80
	12 jam	9.75	6.61	8.19	7.56	8.03
	18 jam	7.98	7.2	6.98	4.86	6.76
	24 jam	6.96	5.72	5.65	4.8	5.78
	Rata-rata	8.78	7	7.26	6.32	7.34

Lampiran 8c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Bilangan Iod (g iod/100g) VCO

Dependent Variable:Bil_iod

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	108.091[a]	16	6.756	37.814	.000
Suhu	8.200	3	2.733	15.300	.000
Lama_inkubasi	2.396	3	.799	4.470	.018
Suhu * Lama_inkubasi	1.445	9	.161	.899	.548
Error	2.859	16	.179		
Total	110.949	32			

a. R Squared = .974 (Adjusted R Squared = .948)

Lampiran 8d. Hasil Uji Lanjut Pengaruh Suhu terhadap Bilangan Iod (g iod/100g) VCO

Bil_iod

Duncan

Suhu	N	Subset 1	Subset 2	Subset 3
S2	8	1.1212		
S1	8	1.4300		
S3	8		1.9225	
S4	8			2.4563
Sig.		.163	1.000	1.000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .179.

Lampiran 8e. Hasil Uji Lanjut Pengaruh Waktu inkubasi terhadap Bilangan Iod (g iod/100g) VCO

Bil_iod

Duncan

Lama_ink...	N	Subset 1	Subset 2
L1	8	1.3612	
L2	8	1.5862	1.5862
L3	8		1.9350
L4	8		2.0475
Sig.		.303	.054

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .179.

Lampiran 9a. Tabel Hasil Pengujian Kadar Air (%)

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	0.15	0.29	0.22
	12 jam	0.44	0.28	0.36
	18 jam	0.21	0.39	0.30
	24 jam	0.36	0.48	0.42
40	6 jam	0.14	0.19	0.16
	12 jam	0.20	0.19	0.19
	18 jam	0.18	0.25	0.22
	24 jam	0.25	0.48	0.36
50	6 jam	0.25	0.19	0.22
	12 jam	0.25	0.28	0.26
	18 jam	0.38	0.21	0.29
	24 jam	0.33	0.25	0.29
60	6 jam	0.23	0.28	0.26
	12 jam	0.54	0.23	0.38
	18 jam	0.36	0.34	0.35
	24 jam	0.33	0.39	0.36

Lampiran 9b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Kadar Air (%) VCO

		Suhu (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	0.22	0.16	0.22	0.26	0.22
	12 jam	0.36	0.19	0.26	0.38	0.30
	18 jam	0.30	0.22	0.29	0.35	0.29
	24 jam	0.42	0.36	0.29	0.36	0.36
	Rata-rata	0.32	0.23	0.27	0.34	0.29

Lampiran 9c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Kadar Air (%) VCO

Dependent Variable:Kadar_air

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	2.888[a]	16	.181	19.596	.000
Suhu	.056	3	.019	2.028	.151
Lama_inkubasi	.084	3	.028	3.031	.060
Suhu * Lama_inkubasi	.034	9	.004	.412	.911
Error	.147	16	.009		
Total	3.036	32			

a. R Squared = .951 (Adjusted R Squared = .903)

Lampiran 10a. Tabel Hasil Pengujian Bilangan Penyabunan (mg KOH/g)

Suhu (°C)	Waktu inkubasi	Ulangan 1	Ulangan 2	Rata-rata
30	6 jam	302.94	247.17	275.06
	12 jam	290.32	266.54	278.43
	18 jam	297.25	256.66	276.95
	24 jam	295.93	258.06	276.99
40	6 jam	315.39	316.97	316.18
	12 jam	304.22	288.75	296.49
	18 jam	311.97	308.14	310.05
	24 jam	313.50	327.02	320.26
50	6 jam	234.88	223.70	229.29
	12 jam	265.92	226.50	246.21
	18 jam	268.98	226.50	247.74
	24 jam	280.50	199.16	239.83
60	6 jam	268.13	274.33	271.23
	12 jam	272.09	269.97	271.03
	18 jam	279.81	269.84	274.82
	24 jam	278.26	279.38	278.82

Lampiran 10b. Rataan Antarperlakuan Suhu dan Waktu inkubasi terhadap Bilangan Penyabunan (mg KOH/g) VCO

		Suhu (°C)				
		30	40	50	60	Rata-rata
Waktu inkubasi	6 jam	275.06	316.18	229.29	271.23	272.94
	12 jam	278.43	296.49	246.21	271.03	273.04
	18 jam	276.95	310.05	247.74	274.82	277.39
	24 jam	276.99	320.26	239.83	278.82	278.98
	Rata-rata	276.858	310.745	240.77	273.975	275.59

Lampiran 10c. Hasil Analisis ANOVA Pengaruh Suhu dan Waktu inkubasi terhadap Bilangan Penyabunan (mg KOH/g) VCO

Tests of Between-Subjects Effects

Dependent Variable:Bil_penyabunan

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	2.452E6[a]	16	153230.337	282.592	.000
Suhu	19542.289	3	6514.096	12.013	.000
Lama_inkubasi	220.377	3	73.459	.135	.937
Suhu * Lama_inkubasi	954.322	9	106.036	.196	.991
Error	8675.715	16	542.232		
Total	2460361.103	32			

a. R Squared = .996 (Adjusted R Squared = .993)

Lampiran 10d. Hasil Uji Lanjut Pengaruh Suhu terhadap Bilangan Penyabunan (mg KOH/g) VCO

Bil_penyabunan

Duncan

Suhu	N	Subset 1	Subset 2	Subset 3
S3	8	2.4091E2		
S4	8		2.7398E2	
S1	8		2.7686E2	
S2	8			3.1074E2
Sig.		1.000	.808	1.000

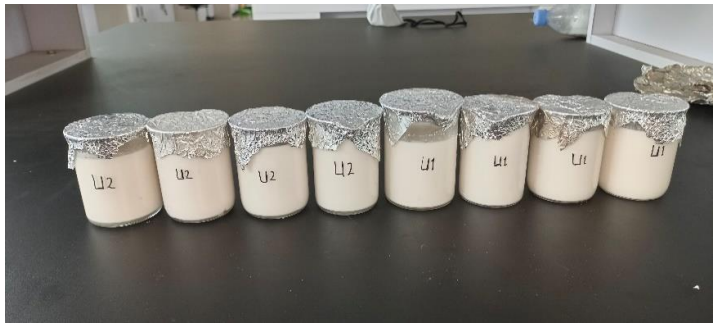
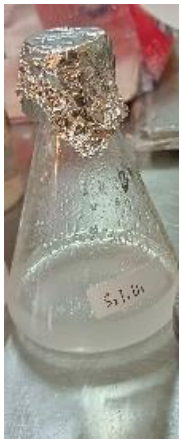
Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 542.232.

Lampiran 11. Dokumentasi Kegiatan Penelitian

Penyiapan enzim papain

Ekstraksi Santan

Pembuatan Virgin Coconut Oil (VCO)



Pengujian Mutu VCO