

7. LAMPIRAN

7.1. Perhitungan

7.1.1. Perhitungan Kadar Air

- Sampel AK46

Ulangan 1:

$$\frac{0,78}{5,00} \times 100\% = 15,60\%$$

Ulangan 2:

$$\frac{0,68}{5,00} \times 100\% = 13,60\%$$

Ulangan 3:

$$\frac{0,75}{4,99} \times 100\% = 15,03\%$$

- Sampel AK55

Ulangan 1:

$$\frac{0,76}{5,05} \times 100\% = 15,05\%$$

Ulangan 2:

$$\frac{0,79}{4,99} \times 100\% = 15,83\%$$

Ulangan 3:

$$\frac{0,69}{5,03} \times 100\% = 13,72\%$$

- Sampel AK64

Ulangan 1:

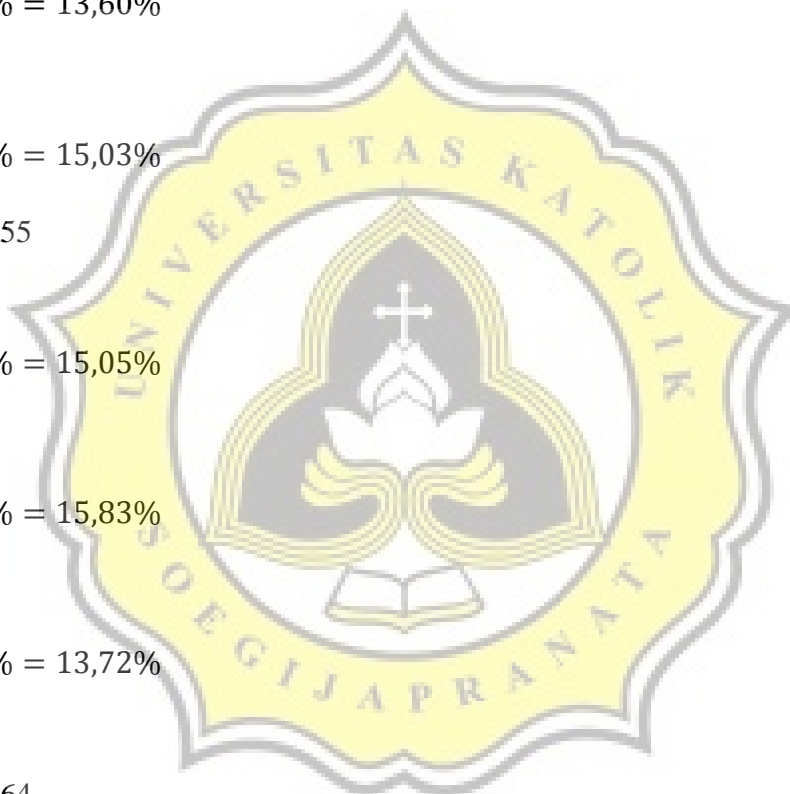
$$\frac{0,75}{5,02} \times 100\% = 14,94\%$$

Ulangan 2:

$$\frac{0,8}{5,00} \times 100\% = 16,00\%$$

Ulangan 3:

$$\frac{0,8}{5,03} \times 100\% = 15,90\%$$



7.1.2. Perhitungan Kadar Abu

- Sampel AK46

Ulangan 1:

$$\frac{0,07}{5,02} \times 100\% = 1,43\%$$

Ulangan 2:

$$\frac{0,07}{5,09} \times 100\% = 1,38\%$$

Ulangan 3:

$$\frac{0,08}{5,01} \times 100\% = 1,59\%$$

- Sampel AK55

Ulangan 1:

$$\frac{0,07}{5,01} \times 100\% = 1,40\%$$

Ulangan 2:

$$\frac{0,05}{4,95} \times 100\% = 1,01\%$$

Ulangan 3:

$$\frac{0,06}{4,94} \times 100\% = 1,22\%$$

- Sampel AK64

Ulangan 1:

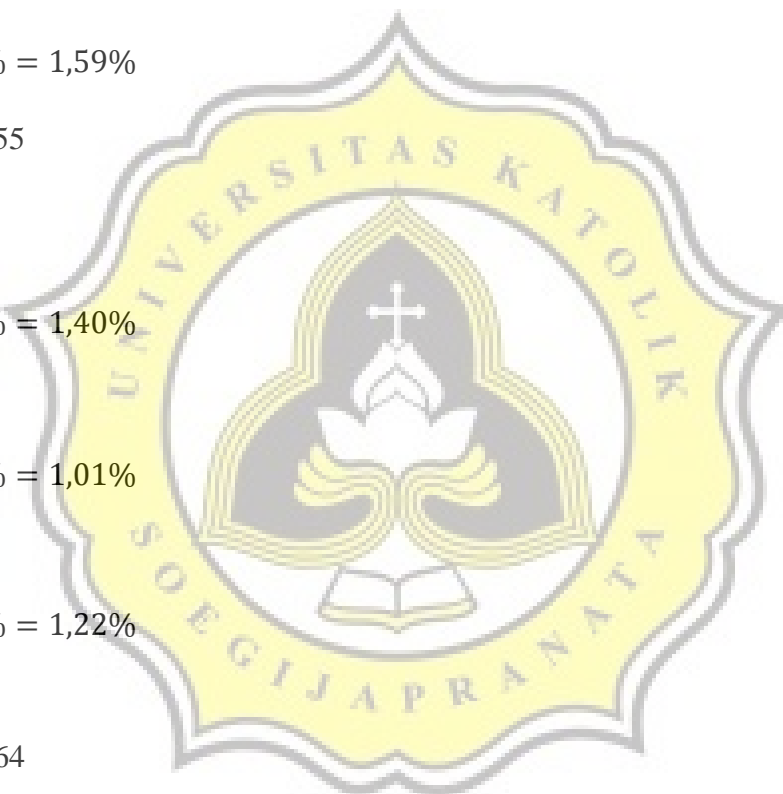
$$\frac{0,06}{5,02} \times 100\% = 1,20\%$$

Ulangan 2:

$$\frac{0,07}{5,01} \times 100\% = 1,40\%$$

Ulangan 3:

$$\frac{0,09}{4,95} \times 100\% = 1,81\%$$



7.1.3. Perhitungan Kadar Protein

- Sampel AK46

Ulangan 1:

$$\frac{7,5 \times 0,1 \times 14,008}{0,52} \times 100\% = 20,20\%$$

Ulangan 2:

$$\frac{11,5 \times 0,1 \times 14,008}{0,54} \times 100\% = 29,83\%$$

Ulangan 3:

$$\frac{13 \times 0,1 \times 14,008}{0,53} \times 100\% = 34,36\%$$

- Sampel AK55

Ulangan 1:

$$\frac{8,9 \times 0,1 \times 14,008}{0,53} \times 100\% = 23,52\%$$

Ulangan 2:

$$\frac{10 \times 0,1 \times 14,008}{0,51} \times 100\% = 27,47$$

Ulangan 3:

$$\frac{8 \times 0,1 \times 14,008}{0,50} \times 100\% = 22,41\%$$

- Sampel AK64

Ulangan 1:

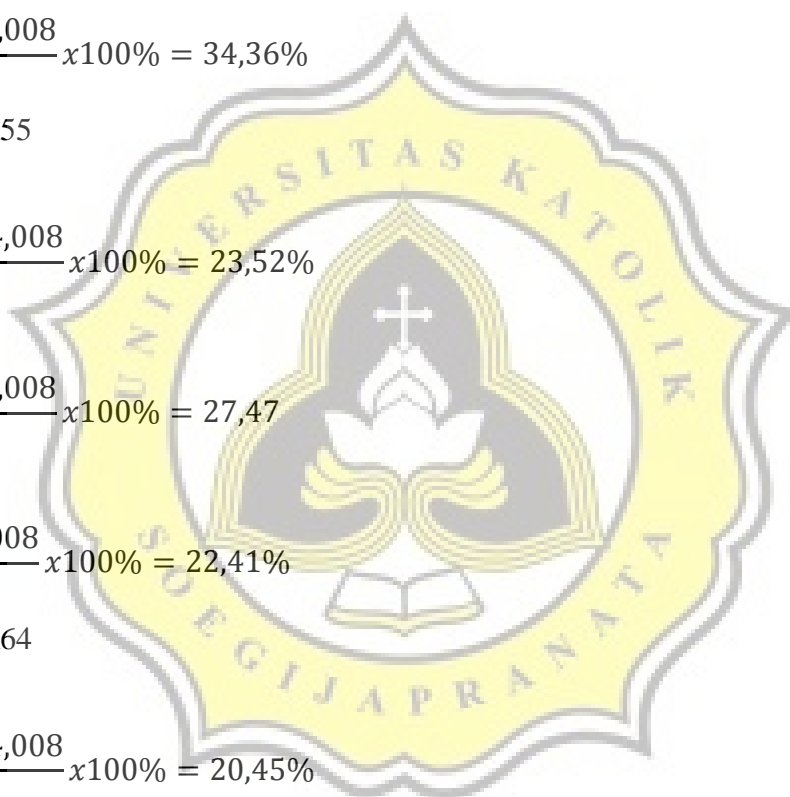
$$\frac{7,3 \times 0,1 \times 14,008}{0,50} \times 100\% = 20,45\%$$

Ulangan 2:

$$\frac{8,8 \times 0,1 \times 14,008}{0,50} \times 100\% = 24,65\%$$

Ulangan 3:

$$\frac{8,2 \times 0,1 \times 14,008}{0,51} \times 100\% = 22,52\%$$



7.1.4. Perhitungan Kadar Lemak

- Sampel AK46

Ulangan 1:

$$\frac{(100 - 15,60)}{100} \times 20,59 \times 100\% = 17,38\%$$

Ulangan 2:

$$\frac{(100 - 13,60)}{100} \times 18,81 \times 100\% = 16,25\%$$

Ulangan 3:

$$\frac{(100 - 15,03)}{100} \times 17 \times 100\% = 14,44\%$$

- Sampel AK55

Ulangan 1:

$$\frac{(100 - 15,05)}{100} \times 16,98 \times 100\% = 14,44\%$$

Ulangan 2:

$$\frac{(100 - 15,83)}{100} \times 18,00 \times 100\% = 15,15\%$$

Ulangan 3:

$$\frac{(100 - 13,72)}{100} \times 18,63 \times 100\% = 16,07\%$$

- Sampel AK64

Ulangan 1:

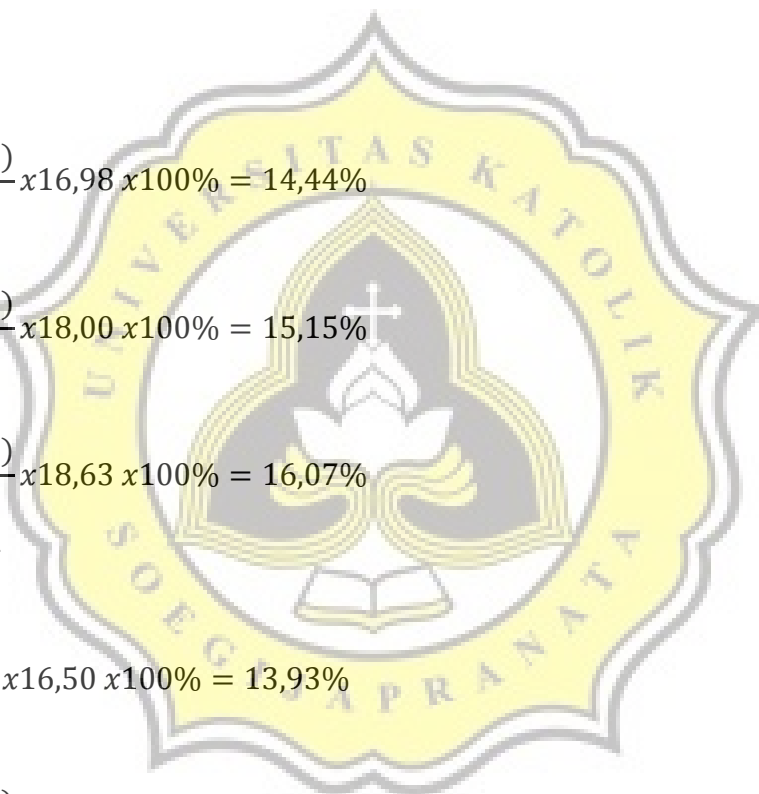
$$\frac{(100 - 15,6)}{100} \times 16,50 \times 100\% = 13,93\%$$

Ulangan 2:

$$\frac{(100 - 16,00)}{100} \times 15,84 \times 100\% = 15,88\%$$

Ulangan 3:

$$\frac{(100 - 15,90)}{100} \times 17,65 \times 100\% = 14,99\%$$



7.1.5. Perhitungan Kadar Karbohidrat

AK46

Ulangan 1:

$$100 - (15,60 + 1,42 + 20,20 + 17,38) = 45,39\%$$

Ulangan 2:

$$100 - (13,60 + 1,38 + 29,83 + 16,25) = 38,94\%$$

Ulangan 3:

$$100 - (15,03 + 1,60 + 34,36 + 14,44) = 34,57\%$$

AK55

Ulangan 1:

$$100 - (15,05 + 1,40 + 23,52 + 14,44) = 45,59\%$$

Ulangan 2:

$$100 - (15,83 + 1,01 + 27,47 + 15,15) = 40,54\%$$

Ulangan 3:

$$100 - (13,72 + 1,21 + 22,41 + 16,07) = 46,58\%$$

AK64

Ulangan 1:

$$100 - (15,6 + 1,20 + 20,45 + 13,93) = 49,59\%$$

Ulangan 2:

$$100 - (13,6 + 1,40 + 24,65 + 15,88) = 40,54\%$$

Ulangan 3:

$$100 - (15,03 + 1,82 + 22,52 + 15,00) = 46,58\%$$

7.1.6. Perhitungan Total Kalori

AK46

Ulangan 1:

$$\frac{(20,20 \times 4 + 17,38 \times 9 + 45,39 \times 4)}{100} \times 30 = 125,63$$

Ulangan 2:

$$\frac{(29,83x4 + 16,25x9 + 38,94x4)}{100} x30 = 126,41$$

Ulangan 3:

$$\frac{(34,36x4 + 12,69x9 + 34,57x4)}{100} x30 = 121,72$$

AK55

Ulangan 1:

$$\frac{(23,52x4 + 14,44x9 + 45,59x4)}{100} x30 = 121,93$$

Ulangan 2:

$$\frac{(23,47x4 + 15,15x9 + 40,54x4)}{100} x30 = 122,52$$

Ulangan 3:

$$\frac{(22,41x4 + 16,07x9 + 46,58x4)}{100} x30 = 126,19$$

AK46

Ulangan 1:

$$\frac{(20,45x4 + 16,88x9 + 47,06x4)}{100} x30 = 121,53$$

Ulangan 2:

$$\frac{(24,65x4 + 15,88x9 + 45,85x4)}{100} x30 = 122,94$$

Ulangan 3:

$$\frac{(22,52x4 + 15,00x9 + 47,43x4)}{100} x30 = 121,23$$

7.1.7. Perhitungan Serat Kasar

AK46

Ulangan 1:

$$\frac{(0,92 - 0,78)}{1,01} \times 100\% = 13,86\%$$

Ulangan 2:

$$\frac{0,94 - 0,79}{1} \times 100\% = 15\%$$

Ulangan 3:

$$\frac{(0,95 - 0,78)}{1,01} \times 100\% = 16,83\%$$

AK55

Ulangan 1:

$$\frac{(0,89 - 0,79)}{1,02} \times 30 = 10,78\%$$

Ulangan 2:

$$\frac{(0,88 - 0,76)}{1,01} \times 30 = 11,88\%$$

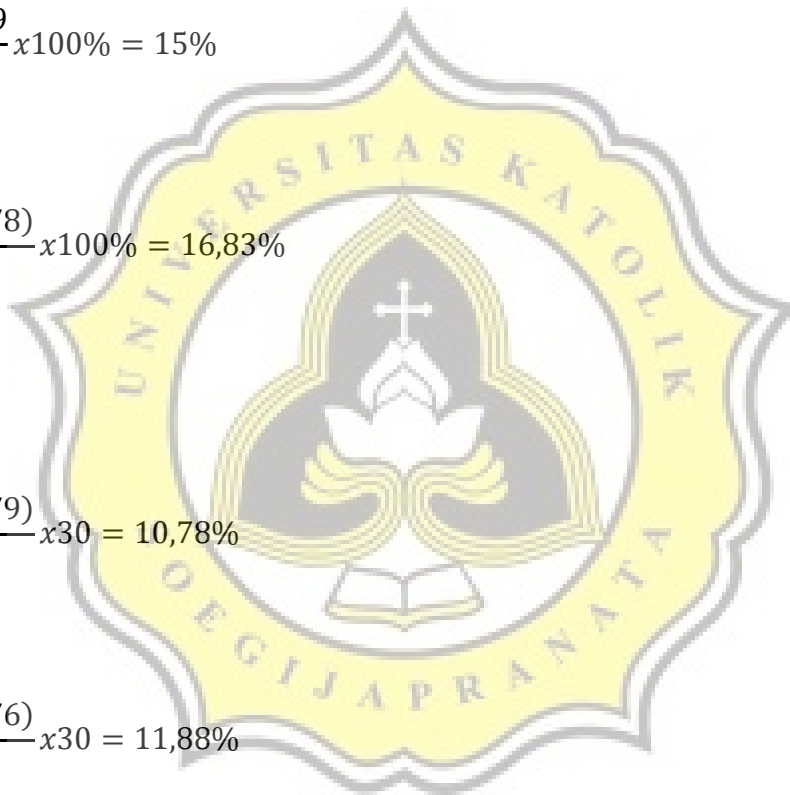
Ulangan 3:

$$\frac{(0,90 - 0,76)}{1,01} \times 30 = 13,86\%$$

AK64

Ulangan 1:

$$\frac{(0,9 - 0,77)}{100} \times 100\% = 12,87\%$$



Ulangan 2:

$$\frac{(0,89 - 0,78)}{1} \times 100\% = 11,00\%$$

Ulangan 3:

$$\frac{(0,88)}{1,02} \times 100\% = 10,78\%$$



7.2. Hasil Penelitian

7.2.1. Kadar Air

Ulangan	Nama Sampel	Berat Cawan sebelum	Berat sampel + cawan sebelum	Berat Cawan + sampel sesudah	Berat sampel awal	Berat sampel kering	Berat Air dalam sampel	Kadar Air
1	AK-46	23,35	28,35	27,57	5	4,22	0,78	15,60
2		26,88	31,88	31,2	5	4,32	0,68	13,60
3		23,27	28,26	27,51	4,99	4,24	0,75	15,03
1	AK-55	28,12	33,17	32,41	5,05	4,29	0,76	15,05
2		24,94	29,93	29,14	4,99	4,2	0,79	15,83
3		23,58	28,61	27,92	5,03	4,34	0,69	13,72
1	AK-64	25,2	30,22	29,47	5,02	4,27	0,75	14,94
2		23,93	28,93	28,13	5	4,2	0,8	16,00
3		21,94	26,97	26,17	5,03	4,23	0,8	15,90

7.2.2. Kadar Abu

Ulangan	Nama Sampel	Berat cawan sebelum	Berat sampel + cawan sebelum	Berat Cawan + sampel sesudah	Berat sampel awal	Berat sampel kering	Kadar Abu
1	AK-46	23,69	28,6	23,76	4,91	0,07	1,43
2		18,28	23,37	18,35	5,09	0,07	1,38
3		22,36	27,37	22,44	5,01	0,08	1,60
1	AK-55	24,19	29,2	24,26	5,01	0,07	1,40
2		21,24	26,19	21,29	4,95	0,05	1,01
3		24,84	29,78	24,9	4,94	0,06	1,21
1	AK-64	26,88	31,9	26,94	5,02	0,06	1,20
2		23,27	28,28	23,34	5,01	0,07	1,40
3		23,34	28,29	23,43	4,95	0,09	1,82

7.2.3. Kadar Protein

Ulangan	Nama Sampel	Berat sampel awal	TAT HCl	Kadar Protein
1	AK-46	0,52	7,5	20,20
2		0,54	11,5	29,83
3		0,53	13	34,36
1	AK-55	0,53	8,9	23,52
2		0,51	10	27,47
3		0,5	8	22,41
1	AK-64	0,5	7,3	20,45
2		0,5	8,8	24,65
3		0,51	8,2	22,52

7.2.4. Kadar Lemak

Ulangan	Nama Sampel	Lemak Berat Kering(%)	kadar air(%)	Lemak berat basah (%)
1	AK-46	20.59	15.60	17.38
2		18.81	13.60	16.25
3		17.00	15.03	14.44
1	AK-55	17.00	15.05	14.44
2		18.00	15.83	15.15
3		18.63	13.72	16.07
1	AK-64	16.50	14.94	13.93
2		15.84	16.00	15.88
3		17.65	15.90	14.99

7.2.5. Kadar Karbohidrat

Ulangan	Nama Sampel	Kadar Air	Kadar Abu	Kadar Protein	Kadar Lemak	Kadar Karbohidrat
1	AK-46	15.60	1.43	20.20	17.38	45.39
2		13.60	1.38	29.83	16.25	38.94
3		15.03	1.60	34.36	14.44	34.57
1	AK-55	15.05	1.40	23.52	14.44	45.59
2		15.83	1.01	27.47	15.15	40.54
3		13.72	1.21	22.41	16.07	46.58
1	AK-64	14.94	1.20	20.45	13.93	49.49
2		16.00	1.40	24.65	15.88	42.07
3		15.90	1.82	22.52	14.99	44.76

7.2.6. Total Kalori

Ulangan	Nama Sampel	Protein	Lemak	Karbohidrat	Total (100 g)	Kalori per saji (30g)
1	AK-46	80.82	156.39	181.58	418.78	125.63
2		119.33	146.28	155.76	421.37	126.41
3		137.44	130.00	138.28	405.72	121.72
1	AK-55	94.09	129.97	182.36	406.42	121.93
2		109.87	136.35	162.17	408.38	122.52
3		89.65	144.65	186.33	420.63	126.19
1	AK-64	81.81	125.33	197.95	405.09	121.53
2		98.62	142.92	168.27	409.81	122.94
3		90.09	134.95	179.04	404.08	121.22

7.2.7. Analisa Serat Kasar

Nama Sampel	Berat Sampel	Berat Kertas Saring	Berat sampel Akhir + Kertas saring	Berat Serat	Kadar Serat
AK46	1.01	0.78	0.92	0.14	13.86
	1	0.79	0.94	0.15	15.00
AK55	1.01	0.78	0.95	0.17	16.83
	1.02	0.78	0.89	0.11	10.78
	1.01	0.76	0.88	0.12	11.88
AK64	1.01	0.76	0.9	0.14	13.86
	1.01	0.77	0.9	0.13	12.87
	1	0.78	0.89	0.11	11.00
	1.02	0.77	0.88	0.11	10.78

7.3. Uji SPSS

7.3.1. Uji Normalitas

One-Sample Kolmogorov-Smirnov Test

		Air_R	Abu_R	Protein_R	Lemak_R	Karbo_R	Kalori_R	Beta_R
N		9	9	9	9	9	9	9
Normal Parameters ^{a,b}	Mean	15.074	1.381	25.0456	16.3073	43.5567	126.354	175.8983
	Std. Deviation	.89657	.23453	4.68954	1.99375	4.44670	2.93255	132.71297
Most Extreme Differences	Absolute	.218	.202	.200	.188	.201	.204	.302
	Positive	.157	.202	.200	.188	.146	.204	.302
	Negative	-.218	-.157	-.151	-.110	-.201	-.198	-.189
Test Statistic		.218	.202	.200	.188	.201	.204	.302
Asymp. Sig. (2-tailed)		.200 ^{c,d}	.200 ^{c,d}	.200 ^{c,d}	.200 ^{c,d}	.200 ^{c,d}	.200 ^{c,d}	.018 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

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

7.3.2. Uji Proksimat

7.3.2.1. Uji Kadar Air

Air_R

Tukey HSD^a

Kode	N	Subset for alpha = 0.01 1
ak46	3	14.7434
ak55	3	14.8663
ak64	3	15.6149
Sig.		.517

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

7.3.2.2. Uji Kadar Abu

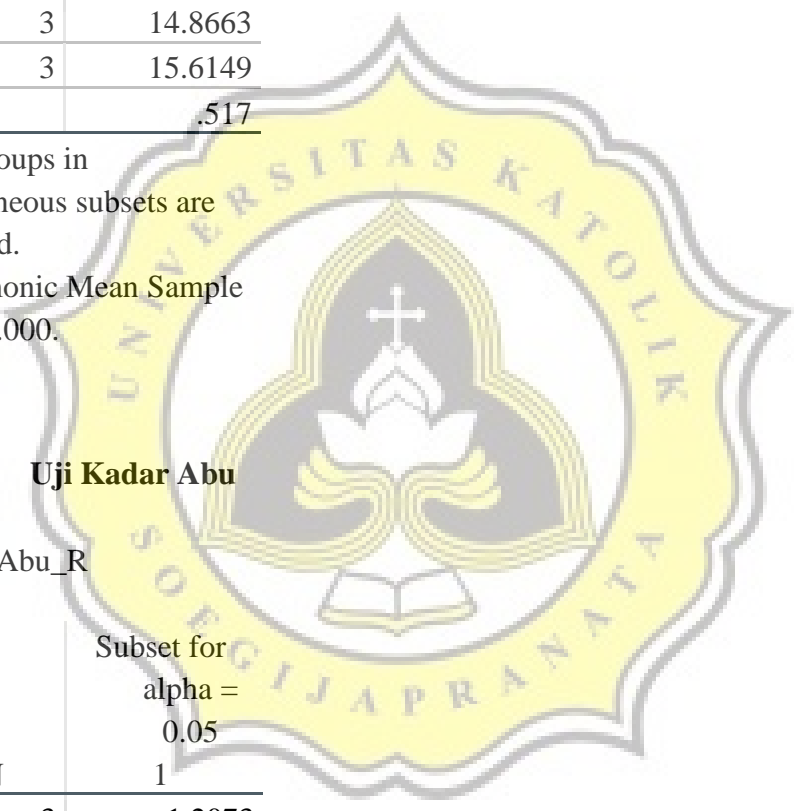
Abu_R

Tukey HSD^a

Kode	N	Subset for alpha = 0.05 1
ak55	3	1,2073
ak46	3	1,4659
ak64	3	1,4702
Sig.		,385

Means for groups in homogeneous subsets are displayed.

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



7.3.2.3. Uji Kadar Protein

Protein_R
Tukey HSD^a

Kode	N	Subset for alpha = 0.05 1
ak64	3	22,5400
ak55	3	24,4667
ak46	3	28,1300
Sig.		,362

Means for groups in

homogeneous subsets are
displayed.

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

7.3.2.4. Uji Kadar Lemak

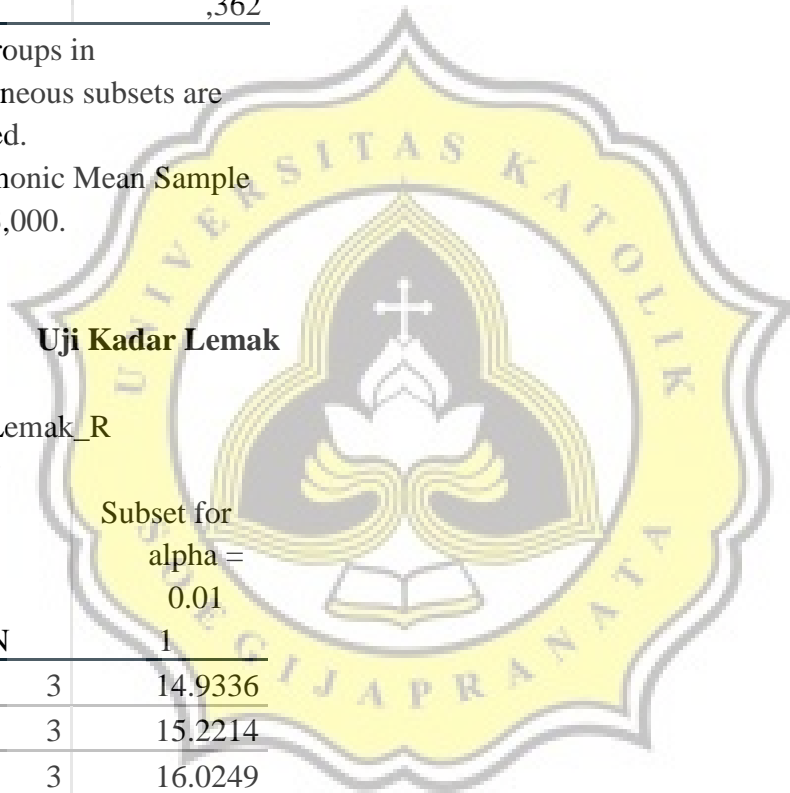
Lemak_R
Tukey HSD^a

Kode	N	Subset for alpha = 0.01 1
ak64	3	14.9336
ak55	3	15.2214
ak46	3	16.0249
Sig.		.503

Means for groups in

homogeneous subsets are
displayed.

- a. Uses Harmonic Mean Sample
Size = 3.000.



7.3.2.5. Uji Kadar Karbohidrat

Karbo_R
Tukey HSD^a

Kode	N	Subset for alpha = 0.01 1
ak46	3	39.6342
ak55	3	44.2376
ak64	3	45.4385
Sig.		.290

Means for groups in

homogeneous subsets are
displayed.

- a. Uses Harmonic Mean Sample
Size = 3.000.

7.3.2.6. Penentuan Total Kalori

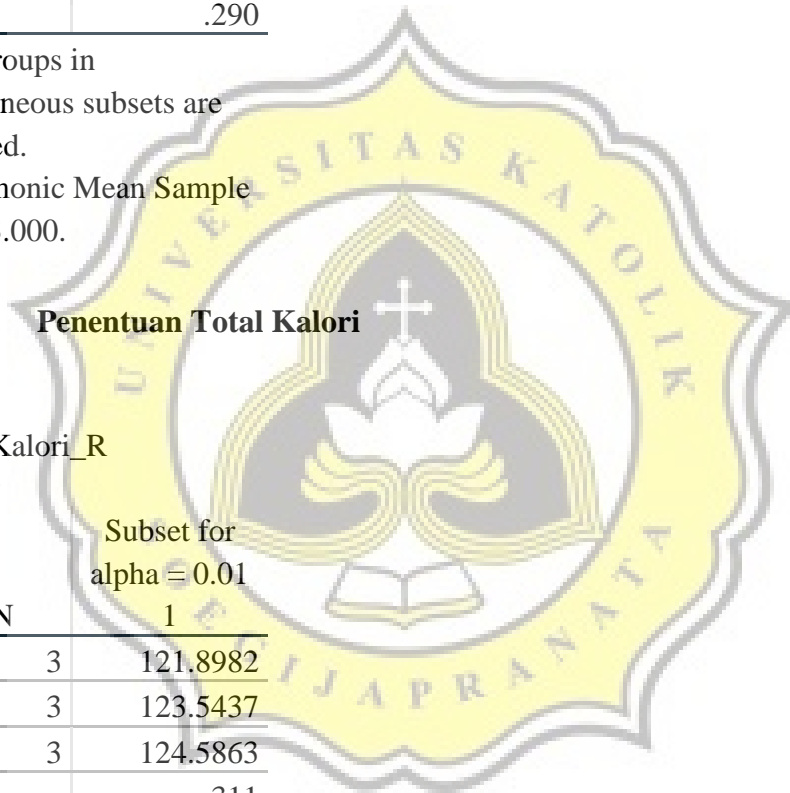
Kalori_R
Tukey HSD^a

Kode	N	Subset for alpha = 0.01 1
ak64	3	121.8982
ak55	3	123.5437
ak46	3	124.5863
Sig.		.311

Means for groups in

homogeneous subsets are
displayed.

- a. Uses Harmonic Mean Sample
Size = 3.000.



7.3.3. Uji Serat Kasar

Serat_R

Tukey HSD^a

Kode	N	Subset for alpha = 0.05	
		1	2
ak64	3	11.5500	
ak55	3	12.1733	12.1733
ak46	3		15.2300
Sig.		.855	.085

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

7.3.4. Uji Sensori

7.3.4.1. Parameter Warna

Test Statistics ^a		
N		50
Chi-Square		41,712
df		3
Asymp. Sig.		,000
Monte Carlo Sig.		,000
95% Confidence Interval	Lower Bound	,000
	Upper Bound	,058

a. Friedman Test

7.3.4.2. Parameter Tekstur

Test Statistics ^a		
N		50
Chi-Square		2,136
df		3
Asymp. Sig.		,545
Monte Carlo Sig.		,600
95% Confidence Interval	Lower Bound	,464
	Upper Bound	,736

7.3.4.3. Parameter Aroma

Test Statistics ^a			
N			50
Chi-Square			7,416
df			3
Asymp. Sig.			,060
Monte Carlo Sig.	Sig.		,040
	95% Confidence Interval	Lower Bound	,000
		Upper Bound	,094

a. Friedman Test

7.3.4.4. Parameter Rasa

Test Statistics ^a			
N			50
Chi-Square			4,488
df			3
Asymp. Sig.			,213
Monte Carlo Sig.	Sig.		,160
	95% Confidence Interval	Lower Bound	,058
		Upper Bound	,262

a. Friedman Test

7.3.4.5. Parameter Overall

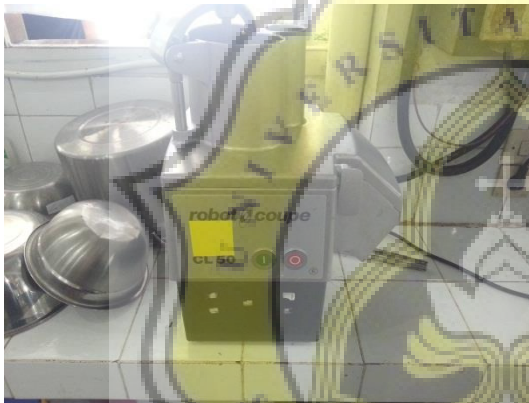
Test Statistics ^a			
N			50
Chi-Square			,528
df			3
Asymp. Sig.			,913
Monte Carlo Sig.	Sig.		,880
	95% Confidence Interval	Lower Bound	,790
		Upper Bound	,970

7.4. Foto

7.4.1. Alat Pengolahan Koro Benguk (Mesin Perajang dan *Grinding Mill*)

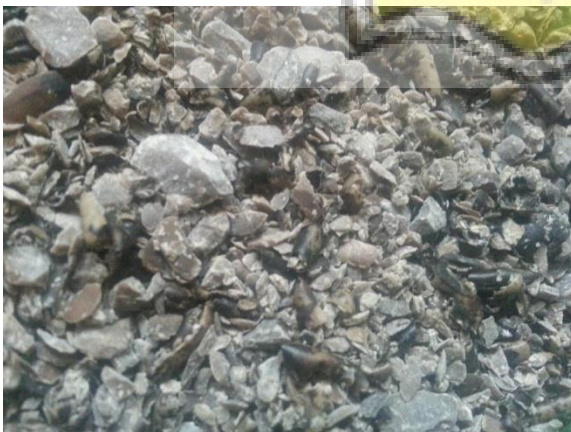


7.4.2. *Slicer* untuk Pemotongan Apel



7.4.3. Pengolahan Koro

7.4.4. Koro Rajang

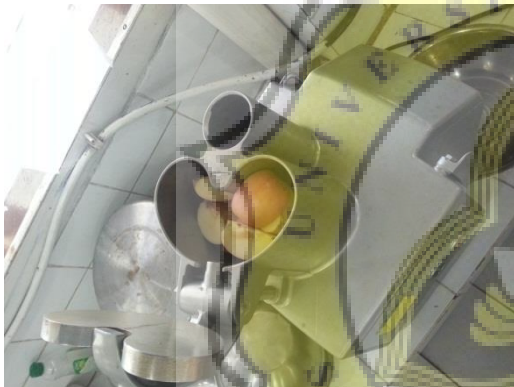


7.4.5. Koro rajang (STD) dan tepung koro



7.4.6. Pengolahan apel

7.4.6.1. Pemotongan apel



7.4.6.2. Penjemuran apel dan apel kering (STD)



7.4.7. Pembuatan *snack bar*

7.4.7.1. Adonan



7.4.7.2. Cetakan Adonan pada Loyang dan Pengovenan



7.4.7.3. Hasil akhir (dari kiri ke kanan: sampel AK46, AK55 dan AK64)



7.4.8. Produk Komersial dan *Nutrition Fact*



	Jumlah per sajian	%AKG	Jumlah per sajian	%AKG
INFORMASI GIZI	Lemak Total 6g	10%	Karbohidrat Total 14g	5%
	Lemak jenuh 2.5g	14%	Serat pangan 4g	14%
	Kolesterol 4mg	1%	Gula 1g	0%
1 bar (30g)	Protein 5g	8%	Natrium 10mg	4%
per kemasan: 1			Kalium 180mg	8%
kal 130kkal	Vitamin A	4%	Kalsium	6%
lemak 60kkal	Vitamin B1	10%	Besi	20%
	Vitamin B2	8%	Asam Folat	10%
	Vitamin B6	8%	Magnesium	
	Vitamin E	8%		

Berdasarkan kebutuhan energi 2000 kkal. Kebutuhan energi anda mungkin lebih tinggi atau lebih rendah.