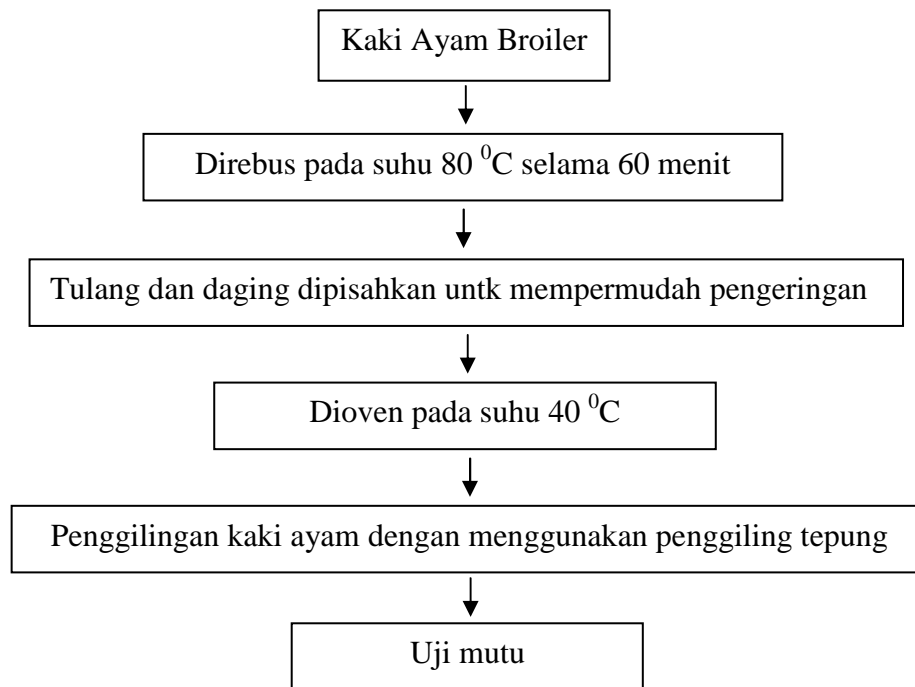
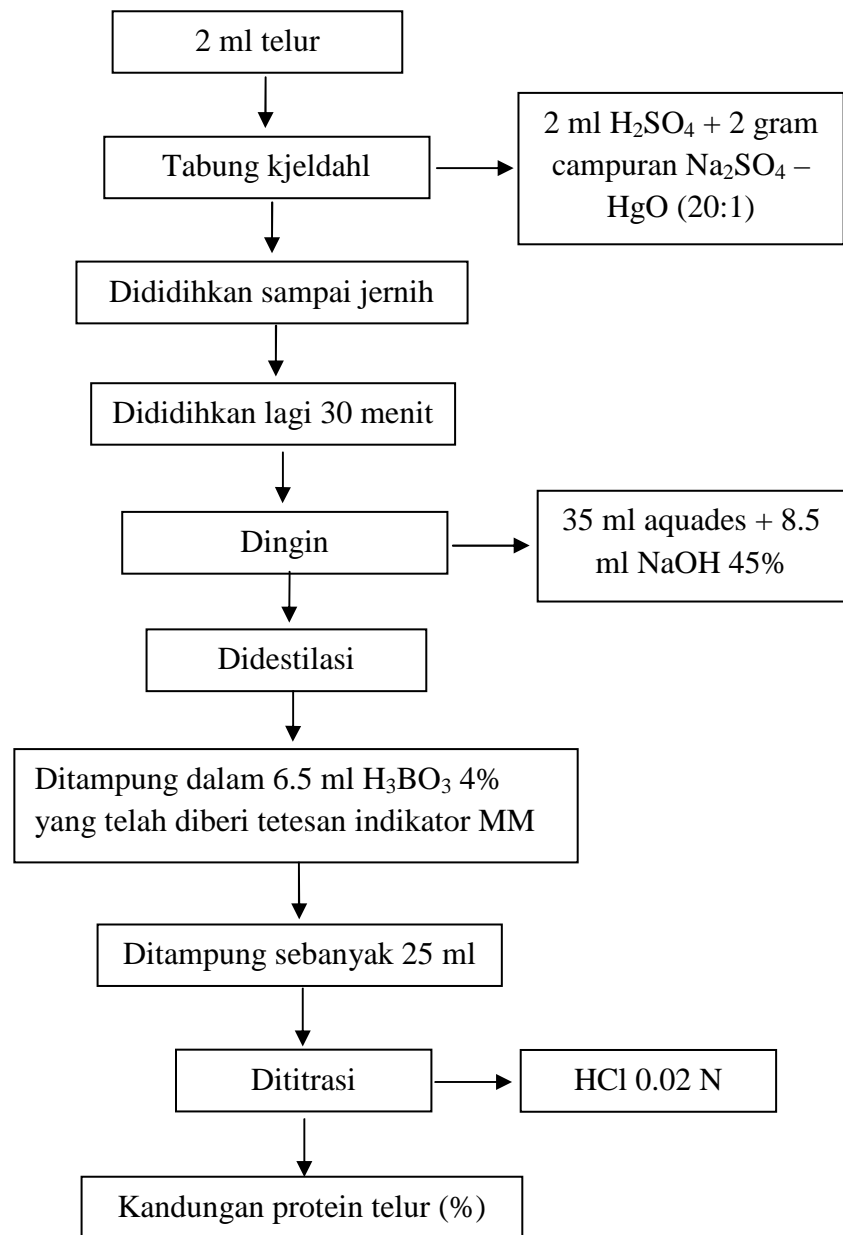


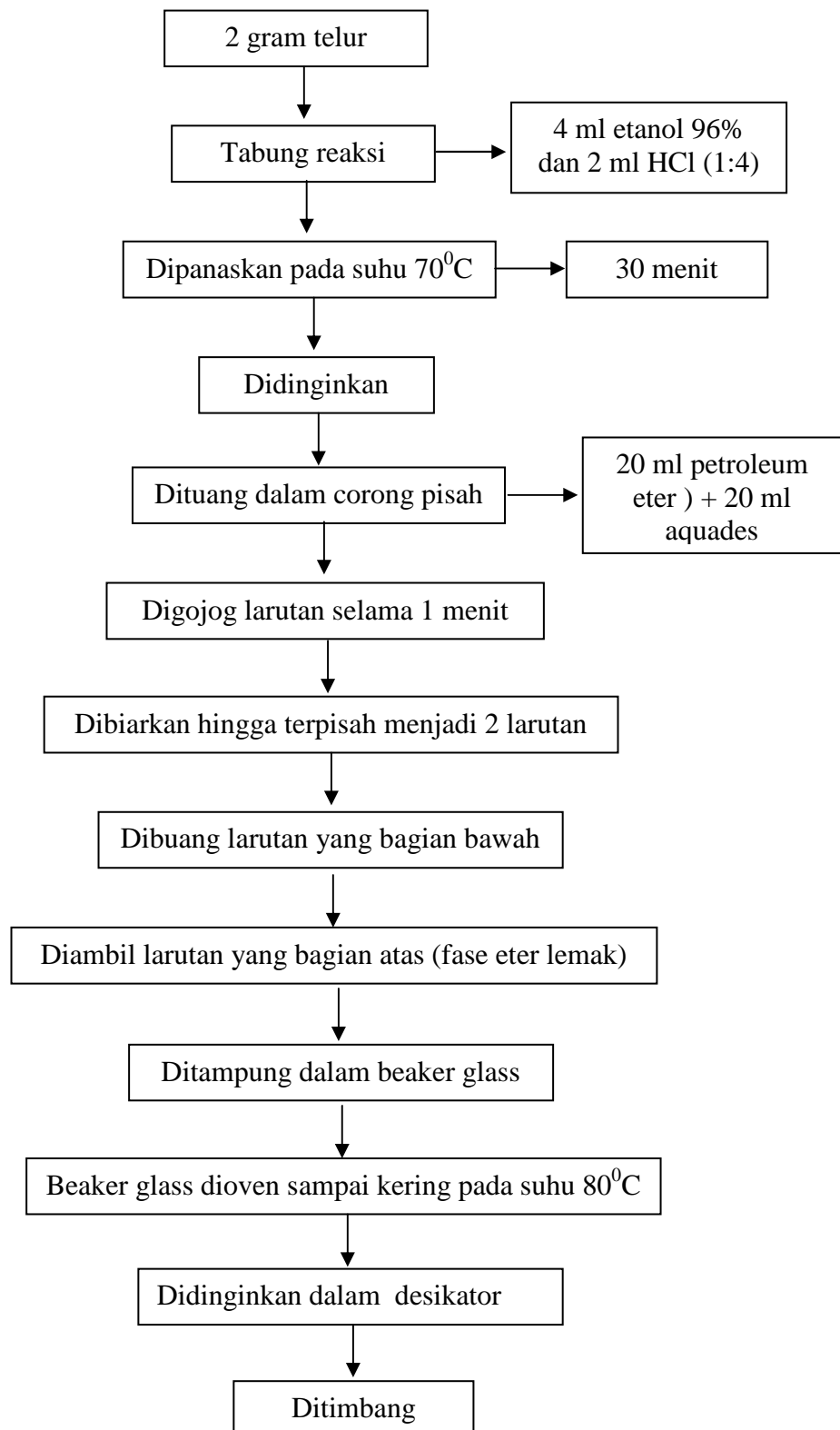
Lampiran 1. Diagram Pembuatan Tepung Kaki Ayam Broiler



Lampiran 2. Diagram Preparasi Sampel Uji Kandungan Protein Telur



Lampiran 3. Diagram Preparasi Sampel Uji Kandungan Lemak Telur



Lampiran 4. Penyusunan Ransum untuk Ayam Arab (*Gallus turcicus*) selama penelitian

Bahan	Nilai (%)	Bahan	Nilai (%)
Protein	17-18	Jagung	50-65
Energi Metabolisme (kkal)	2850- 2900	Bungkil kedelai	10-30
Serat Kasar	3-4	Dedak	10-20
Lemak	5-7		

Sumber: Sudarmono (2003)

Tabel 4.1 Susunan Ransum pada Perlakuan 1 (Kontrol)

No	API	%	Protein %	Energi ME	SK (%)	Lemak (%)	Jumlah protein(%)	Jumlah Energi (%)	Jumlah SK (%)	Jumlah Lemak (%)
1.	Jagung	60	9	3360	2,2	4,1	5,4	2016	1,32	2,46
2.	Bungkil kedelai	14	41,7	2240	6,2	4	5,8	313,6	0,868	0,56
3.	Dedak	16	10,1	1270	15,3	4,9	1,616	203,2	2,448	0,784
4.	Tepung ikan	10	61,8	2910	0,6	7,8	6,18	291	0,06	0,78
	Total	100					18,996	2823,8	4,696	4,554

Tabel 4.2 Susunan Ransum pada Perlakuan 2

No	AP2	%	Protein %	Energi ME	SK (%)	Lemak (%)	Jumlah protein(%)	Jumlah Energi (%)	Jumlah SK (%)	Jumlah Lemak (%)
1.	Jagung	58	9	3360	2,2	4,1	5,22	1948,8	1,276	2,378
2.	Bungkil kedelai	24	41,7	2240	6,2	4	10,008	537,6	1,488	0,96
3.	Dedak	14	10,1	1270	15,3	4,9	1,414	177,8	2,142	0,686
4.	Tepung Ceker	4	34,56	4931,4	0,6	33,49	1,382	197,256	0,024	1,339
	Total	100					18,024	2861,46	4,93	5,364

Lanjutan Lampiran 4

Tabel 4.3 Susunan Ransum pada Perlakuan 3

No	AP3	%	Protein %	Energi ME	SK (%)	Lemak (%)	Jumlah protein (%)	Jumlah Energi (%)	Jumlah SK (%)	Jumlah Lemak (%)
1.	Jagung	56	9	3360	2,2	4,1	5,04	1881,6	1,232	2,296
2.	Bungkil kedelai	23	41,7	2240	6,2	4	9,591	515,2	1,426	0,92
3.	Dedak	15	10,1	1270	15,3	4,9	1,515	190,5	2,296	0,736
4.	Tepung Ceker	6	34,56	4931,4	0,6	33,49	2,074	295,8	0,036	2,009
	Total	100					18,22	2883,1	4,99	5,961

4.4 Susunan Ransum pada Perlakuan 4

No	AP4	%	Protein %	Energi ME	SK (%)	Lemak (%)	Jumlah protein(%)	Jumlah Energi (%)	Jumlah SK (%)	Jumlah Lemak (%)
1.	Jagung	54	9	3360	2,2	4,1	4,86	1814,4	1,188	2,214
2.	Bungkil kedelai	21	41,7	2240	6,2	4	8,757	470,4	1,302	0,84
3.	Dedak	17	10,1	1270	15,3	4,9	1,717	215,9	2,601	0,833
4.	Tepung Ceker	8	34,56	4931,4	0,6	33,49	2,765	394,513	0,048	2,679
	Total	100					18,099	2895,2	5,139	6,566

4.5 Susunan Ransum pada Perlakuan 5

No	AP5	%	Protein %	Energi ME	SK (%)	Lemak (%)	Jumlah protein(%)	Jumlah Energi (%)	Jumlah SK (%)	Jumlah Lemak (%)
1.	Jagung	51	9	3360	2,2	4,1	4,59	1713,6	1,122	2,091
2.	Bungkil kedelai	20	41,7	2240	6,2	4	8,34	448	1,24	0,8
3.	Dedak	19	10,1	1270	15,3	4,9	1,919	241,3	2,907	0,931
4.	Tepung Ceker	10	34,56	4931,4	0,6	33,49	1,919	4931,14	0,06	3,349
	Total	100					18,305	2896,0	5,329	7,171

4.6 Hasil Proksimat Ransum

Sampel	Protein (%)	Lemak (%)	energi (kkall)	Asam linoleat (ug/g)	Metionin (g/100)	Vitamin A	Karoten (ug/g)	Total Ca (mg/100)
P2	18,024	5,364	2861	40.378	0.339	23,23	0.901	817.247
P3	18,22	5,961	2883	69.975	0.828	38,74	1.546	1169.393
P4	8,099	6,566	2895	78, 625	1,001	43, 07	1,931	1235,006
P4	18,305	7,171	2896	93.293	1.113	58, 412	2.336	1337.462

4.7 Perbandingan Kandungan Gizi Tepung Ikan dan Tepung Kaki Ayam Broiler

Kandungan nutrisi	Satuan (%)	
	Tepung kaki ayam broiler	Tepung ikan
Protein	34,56	56,2
Lemak	33,49	7,8
Serat Kasar	0,58	2,2
Metionin gram/100 gram	1, 887	1,04
Asam linoleat mg/kg	189,167	102,62
ME (kkal)	4931,4	2820

Tabel 5.1 Data Rataan Kandungan Lemak Telur Ayam Arab (*Gallus turcicus*)

Perlakuan	Ulangan			
	I	II	III	IV
P1	11,69	11,52	11,41	11,76
P2	11,40	12,57	11,82	12,35
P3	12,06	12,47	12,93	13,16
P4	13,89	13,61	14,16	13,92
P5	14,17	14,11	14,20	14,84

Tabel 5.2 Data Rataan Kandungan Protein Telur Ayam Arab (*Gallus turcicus*)

Perlakuan	Ulangan			
	I	II	III	IV
P1	12,40	12,47	12,59	12,57
P2	12,69	13,14	13,28	13,54
P3	13,25	13,35	14,32	14,22
P4	14,25	14,16	14,21	14,42
P5	14,51	14,49	14,33	14,33
Total				

Tabel 5.3 Data Rataan Bobot Telur Ayam Arab (*Gallus turcicus*)

perlakuan	Ulangan			
	I	II	III	IV
P1	43,09	42,52	42,57	44,88
P2	40,41	44,55	42,31	38,21
P3	39,83	37,61	41,23	43,92
P4	41,57	45,15	45,94	39,70
P5	40,82	47,16	44,05	43,35
Total	197,23	216,99	216,1	208,13

Lampiran 6. Hasil Penelitian Pengaruh Pemberian Tepung Kaki Ayam Broiler sebagai substitusi Tepung Ikan di dalam Ransum terhadap Kadar Protein Telur Ayam Arab (*Gallus turcicus*)

Tabel 6.1 Kadar Protein Telur Ayam Arab (*Gallus turcicus*)

Perlakuan	Ulangan				Total	Rerata
	I	II	III	IV		
P1	12,40	12,47	12,59	12,57	50,03	12,50
P2	12,69	13,14	13,28	13,54	52,65	13,16
P3	13,25	13,35	14,32	14,22	55,14	13,78
P4	14,25	14,16	14,21	14,42	57,04	14,26
P5	14,51	14,49	14,33	14,33	57,66	14,41
Total					272,52	

$$FK = \frac{(\sum \bar{y})^2}{r \times n} = \frac{(572,52)^2}{4 \times 5} = \frac{327.779,15}{20} = 3.713,35$$

$$\begin{aligned} JK \text{ Total} &= (12,40)^2 + (12,47)^2 + (12,59)^2 + \dots + (14,33)^2 - FK \\ &= (153,76) + (155,50) + (158,50) + \dots + (205,34) - 3.329,23 \\ &= 3.724 - 3.713,35 \\ &= 11,4 \end{aligned}$$

$$\begin{aligned} JK \text{ Perlakuan} &= \frac{(50,03)^2 + (52,65)^2 + (55,14)^2 + (57,04)^2 + (57,66)^2}{4} - FK \\ &= \frac{14.893,66}{4} - FK \\ &= 3.723,41 - 3.713,35 \\ &= 10,06 \end{aligned}$$

$$JK \text{ Galat} = JK \text{ Total Percobaan} - JK \text{ Perlakuan}$$

$$= 11,4 - 10,06$$

$$= 1,34$$

Lanjutan Lampiran 6.

SK	Db	JK	KT	F Hitung	F tabel 5%
Perlakuan	4	10,06	2,515	26,755	3,06
Galat	15	1,39	0,094		
Total	19				

$$\begin{aligned}
 \text{BTN}_{0,05} &= t_{0,05(15)} \times \sqrt{\frac{2 \text{ KT galat}}{\text{Ulangan}}} \\
 &= 2,13 \times \sqrt{\frac{2 \times 0,094}{4}} \\
 &= 2,31 \times \sqrt{\frac{0,188}{4}} \\
 &= 2,13 \times 0,216 \\
 &= 0,461
 \end{aligned}$$

Lampiran 7. Hasil Penelitian Pengaruh Pemberian Tepung Kaki Ayam Broiler sebagai Substitusi Tepung Ikan di dalam Ransum terhadap Kadar Lemak Telur Ayam Arab (*Gallus turcicus*)

Tabel 7.1 Kadar Lemak Telur Ayam Arab (*Gallus turcicus*)

Perlakuan	Ulangan				Total	Rerata
	I	II	III	IV		
P1	11,69	11,52	11,41	11,76	46,38	11,59
P2	11,40	12,57	11,82	12,35	48,14	12,03
P3	12,06	12,47	12,93	13,16	50,62	12,65
P4	13,89	13,61	14,16	13,92	55,58	13,89
P5	14,17	14,11	14,20	14,84	57,32	14,33

$$FK = \frac{(\sum d)^2}{r \times n} = \frac{(258,04)^2}{4 \times 5} = \frac{66.584,64}{20} = 3.329,23$$

$$\begin{aligned} JK \text{ Total} &= (43,09)^2 + (42,52)^2 + (42,57)^2 + \dots\dots\dots(43,35)^2 - FK \\ &= (136,65) + (132,71) + (130,18) + \dots\dots\dots (202,22) - 3.329,23 \\ &= 3.353,47 - 3.329,23 \\ &= 24,24 \end{aligned}$$

$$\begin{aligned} JK \text{ Perlakuan} &= \frac{(46,38)^2 + (48,14)^2 + (50,62)^2 + (55,58)^2 + (57,32)^2}{4} - FK \\ &= \frac{13.405,64}{4} - FK \\ &= 3.351,41 - 3.329,23 \\ &= 22,18 \end{aligned}$$

$$JK \text{ Galat} = JK \text{ Total Percobaan} - JK \text{ Perlakuan}$$

$$= 24,24 - 22,18$$

$$= 2,06$$

Lanjutan Lampiran 7.

SK	Db	JK	KT	F Hitung	F tabel 5%
Perlakuan	4	21,424	5,356	39,102	3,06
Galat	15	2,055	0,137		
Total	19				

$$BNT_{0,05} = t_{0,05(15)} \times \sqrt{\frac{2 \text{ KT galat}}{\text{Ulangan}}}$$

$$= 2,31 \times \sqrt{\frac{2 \times 0,317}{4}}$$

$$= 2,31 \times \sqrt{\frac{0,274}{4}}$$

$$= 2,31 \times \sqrt{0,06}$$

$$= 2,31 \times 0,244$$

$$0,521$$

Lampiran 8. Hasil Penelitian Pengaruh Pemberian Tepung Kaki Ayam Broiler sebagai Substitusi Tepung ikan di dalam Ransum terhadap Bobot Telur Ayam Arab (*Gallus turcicus*)

Tabel 8.1 Bobot Telur Ayam Arab (*Gallus turcicus*)

Perlakuan	Ulangan				Total	Rerata
	I	II	III	IV		
P1	43,09	42,52	42,57	44,88	173,06	43,26
P2	40,41	44,55	42,31	38,21	165,48	41,37
P3	39,83	37,61	41,23	43,92	162,59	40,64
P4	41,57	45,15	45,94	39,70	172,35	43,08
P5	40,82	47,16	44,05	43,35	172,38	43,38
Total	197,23	216,99	216,1	208,13	838,45	

$$FK = \frac{(\bar{d})^2}{r \times n} = \frac{(848,86)^2}{4 \times 5} = \frac{702.563,29}{20} = 36.028,16$$

$$\begin{aligned} JK \text{ Total} &= (43,09)^2 + (42,52)^2 + (42,57)^2 + \dots\dots\dots(43,35)^2 - FK \\ &= (1.856,74) + (1.807,95) + (1.812,95) + \dots\dots\dots (1.879,22) - 36.028,16 \\ &= 36.150,88 - 36.028,16 \\ &= 122,72 \end{aligned}$$

$$\begin{aligned} JK \text{ Perlakuan} &= \frac{(173,06)^2 + (165,48)^2 + (162,59)^2 + (172,35)^2 + (175,38)^2}{4} - FK \\ &= \frac{144.231,55}{4} - FK \\ &= 36.057,88 - 36.028,16 \\ &= 29,728 \end{aligned}$$

$$JK \text{ Galat} = JK \text{ Total Percobaan} - JK \text{ Perlakuan}$$

$$= 122,72 - 29,728$$

$$= 92,992$$

SK	Db	JK	KT	F Hitung	F tabel 5%
Perlakuan	4	29,728	7,432	1,198	3,06
Galat	15	122,72	6,199		
Total	19				

Lampiran 9. Hasil Perhitungan SPSS untuk Kadar Protein

Oneway

ANOVA					
Data					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.063	4	2.516	26.537	.000
Within Groups	1.422	15	.095		
Total	11.484	19			

Post Hoc Tests

Multiple Comparisons						
Data LSD						
(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.65500*	.21771	.009	-1.1190	-.1910
	3	-1.27750*	.21771	.000	-1.7415	-.8135
	4	-1.75250*	.21771	.000	-2.2165	-1.2885
	5	-1.90750*	.21771	.000	-2.3715	-1.4435
2	1	.65500*	.21771	.009	.1910	1.1190
	3	-.62250*	.21771	.012	-1.0865	-.1585
	4	-1.09750*	.21771	.000	-1.5615	-.6335
	5	-1.25250*	.21771	.000	-1.7165	-.7885
3	1	1.27750*	.21771	.000	.8135	1.7415
	2	.62250*	.21771	.012	.1585	1.0865
	4	-.47500*	.21771	.045	-.9390	-.0110
	5	-.63000*	.21771	.011	-1.0940	-.1660
4	1	1.75250*	.21771	.000	1.2885	2.2165
	2	1.09750*	.21771	.000	.6335	1.5615
	3	.47500*	.21771	.045	.0110	.9390
	5	-.15500	.21771	.487	-.6190	.3090
5	1	1.90750*	.21771	.000	1.4435	2.3715
	2	1.25250*	.21771	.000	.7885	1.7165
	3	.63000*	.21771	.011	.1660	1.0940
	4	.15500	.21771	.487	-.3090	.6190

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

Lampiran 9. Hasil Perhitungan SPSS untuk Kadar Lemak

Oneway

ANOVA					
Data					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	22.185	4	5.546	39.003	.000
Within Groups	2.133	15	.142		
Total	24.318	19			

Post Hoc Tests

Multiple Comparisons						
Data LSD					95% Confidence Interval	
(I) prlakuan	(J) prlakuan	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1	2	-.44000	.26665	.120	-1.0083	.1283
	3	-1.06000 [*]	.26665	.001	-1.6283	-.4917
	4	-2.30000 [*]	.26665	.000	-2.8683	-1.7317
	5	-2.73500 [*]	.26665	.000	-3.3033	-2.1667
2	1	.44000	.26665	.120	-.1283	1.0083
	3	-.62000 [*]	.26665	.035	-1.1883	-.0517
	4	-1.86000 [*]	.26665	.000	-2.4283	-1.2917
	5	-2.29500 [*]	.26665	.000	-2.8633	-1.7267
3	1	1.06000 [*]	.26665	.001	.4917	1.6283
	2	.62000 [*]	.26665	.035	.0517	1.1883
	4	-1.24000 [*]	.26665	.000	-1.8083	-.6717
	5	-1.67500 [*]	.26665	.000	-2.2433	-1.1067
4	1	2.30000 [*]	.26665	.000	1.7317	2.8683
	2	1.86000 [*]	.26665	.000	1.2917	2.4283
	3	1.24000 [*]	.26665	.000	.6717	1.8083
	5	-.43500	.26665	.124	-1.0033	.1333
5	1	2.73500 [*]	.26665	.000	2.1667	3.3033
	2	2.29500 [*]	.26665	.000	1.7267	2.8633
	3	1.67500 [*]	.26665	.000	1.1067	2.2433
	4	.43500	.26665	.124	-.1333	1.0033

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

Lampiran 12. Hasil Perhitungan SPSS untuk Bobot Telur

Oneway

ANOVA					
Data					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.727	4	7.432	1.198	.352
Within Groups	93.078	15	6.205		
Total	122.805	19			

Post Hoc Tests

Multiple Comparisons						
Data LSD					95% Confidence Interval	
(I) perlakuan	(J) perlakuan	Mean Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1	2	1.89500	1.76142	.299	-1.8594	5.6494
	3	2.61750	1.76142	.158	-1.1369	6.3719
	4	.17750	1.76142	.921	-3.5769	3.9319
	5	-.58000	1.76142	.746	-4.3344	3.1744
2	1	-1.89500	1.76142	.299	-5.6494	1.8594
	3	.72250	1.76142	.687	-3.0319	4.4769
	4	-1.71750	1.76142	.345	-5.4719	2.0369
	5	-2.47500	1.76142	.180	-6.2294	1.2794
3	1	-2.61750	1.76142	.158	-6.3719	1.1369
	2	-.72250	1.76142	.687	-4.4769	3.0319
	4	-2.44000	1.76142	.186	-6.1944	1.3144
	5	-3.19750	1.76142	.090	-6.9519	.5569
4	1	-.17750	1.76142	.921	-3.9319	3.5769
	2	1.71750	1.76142	.345	-2.0369	5.4719
	3	2.44000	1.76142	.186	-1.3144	6.1944
	5	-.75750	1.76142	.673	-4.5119	2.9969
5	1	.58000	1.76142	.746	-3.1744	4.3344
	2	2.47500	1.76142	.180	-1.2794	6.2294
	3	3.19750	1.76142	.090	-.5569	6.9519
	4	.75750	1.76142	.673	-2.9969	4.5119

Lampiran 8. Daftar Gambar



Gambar 8.1 tepung kaki ayam broiler



Gambar 8.2 tepung bungkil kedelai



Gambar 8.3 Tepung jagung



Gambar 8.4 Dedak halus



Gambar 8.5 Greet



Gambar 8.6 Top mix



Gambar 8.7 Kandang ayam



Gambar 8.8 Aktivitas meransum pakan



Gambar 8.9 Aktifitas Pemberian Pakan



Gambar 8.10 Aktifitas Pengambilan Telur



Gambar 8.11 Penimbangan Telur



Gambar 8.12 Bobot Telur

Lampiran 9. Gambar Analisa Protein



Gambar 9.1 Proses destilasi



Gambar 9.2 Proses destruksi



Gambar 9.3 Timbangan



Gambar 9.4 Titrasi



Gambar 9.5 Titrasi awal



Gambar 9.6 Titrasi akhir

Lampiran 10. Gambar Analisa Lemak



Gambar 10.1 Waterbath



Gambar 10.2 Corong pisah



Gambar 10.3 Oven



Gambar 10.4 Beaker glas

