

Lampiran 3. Penghitungan Aktivasi NF-kB

Nama Kelompok	Jumlah Teraktivasi	Total	Rerata Aktivasi NF-kB (%)
K+ A	4	5	68,1
	3	4	
	5	7	
	5	7	
	3	6	
	2	3	
	3	4	
	2	4	
	2	3	
	3	4	
K+ B	2	3	72,6
	4	7	
	5	6	
	2	3	
	4	6	
	5	6	
	6	8	
	5	7	
	5	7	
	7	9	
K+ C	3	5	66,7
	2	3	
	2	4	
	4	6	
	4	5	
	4	7	
	2	3	
	5	6	
	6	8	
	4	7	
K+ D	6	8	63,8
	7	9	
	4	6	
	1	3	
	2	4	
	3	5	
	2	4	

3	5
3	6
6	8

Nama Kelompok	Jumlah Teraktivasi	Total	Rerata Aktivasi NF-kB (%)
K- A	1	7	27,4
	2	8	
	1	5	
	2	5	
	1	7	
	2	4	
	1	6	
	2	5	
	3	8	
	2	7	
K- B	2	8	27,7
	2	8	
	1	6	
	2	5	
	2	7	
	2	6	
	2	7	
	3	9	
	0	5	
	1	8	
K- C	3	4	24,1
	1	5	
	2	8	
	1	3	
	0	3	
	2	6	
	1	5	
	3	8	
	1	7	
	2	6	
K- D	1	7	25,0
	1	8	
	0	7	
	2	7	
	3	8	



- 1 6
- 4 7
- 2 8
- 3 9
- 2 8
- 1 8

Nama Kelompok Jumlah Total Rerata Aktivasi NF-kB (%)

P1 A

- 3 7
- 4 5
- 3 8
- 3 4
- 1 8
- 4 7
- 4 6
- 3 7
- 1 3

45,8

P1 B

- 1 4
- 1 6
- 3 8
- 3 5
- 3 4
- 2 6
- 2 4
- 3 3
- 3 4
- 1 2

46,8

P1 C

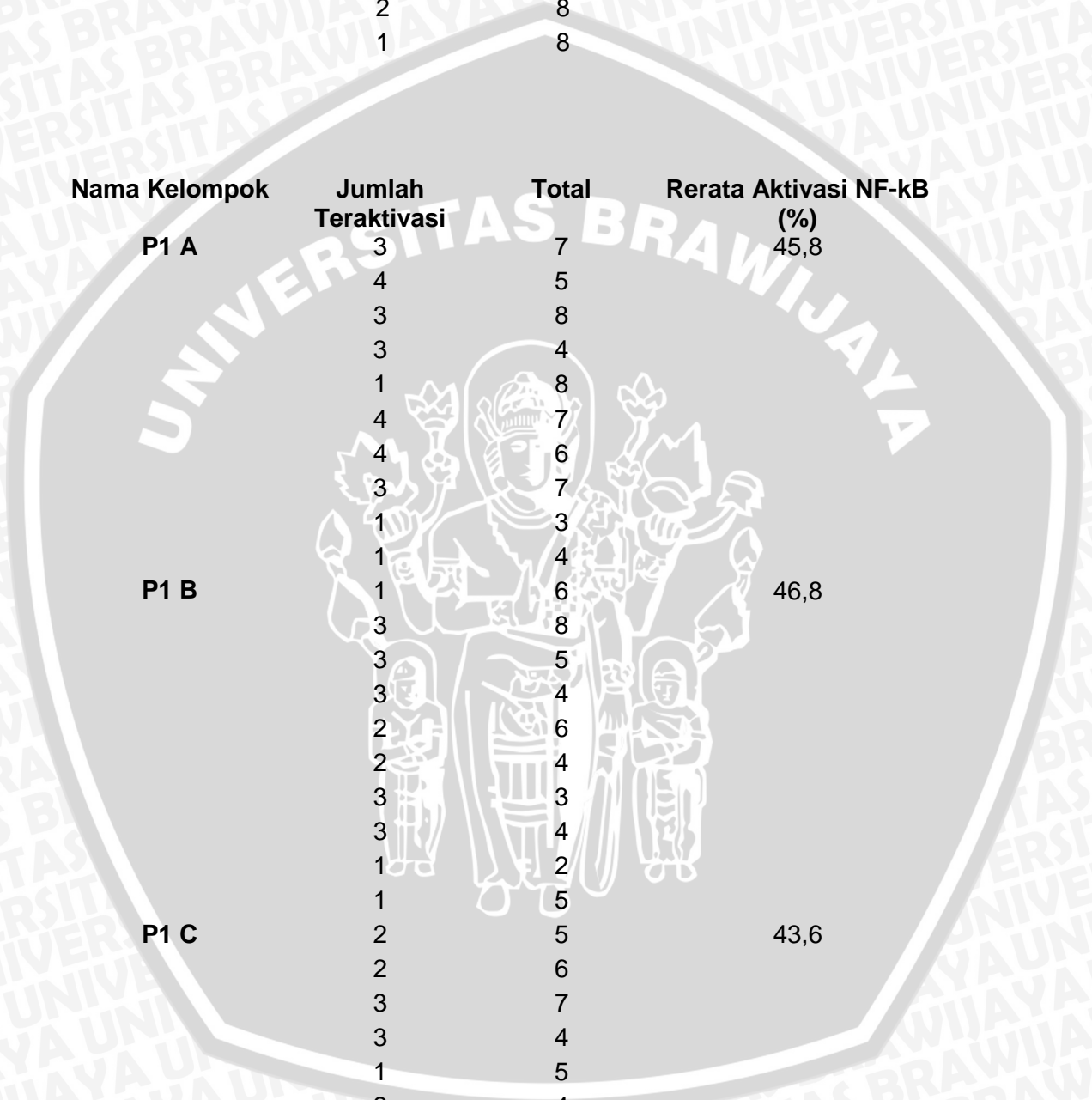
- 1 5
- 2 5
- 2 6
- 3 7
- 3 4
- 1 5
- 2 4
- 2 7
- 3 6
- 4 6
- 2 5

43,6

P1 D

- 2 6

44,2



1 4
 3 5
 2 6
 2 6
 3 5
 3 5
 2 3
 2 4
 3 8

Nama Kelompok Jumlah Total Rerata Aktivasi NF-kB
Teraktivasi (%)

P2 A 3 7 48,3

P2 B 2 4 44,0

P2 C 2 6 40,8



P2 D	2	4
	1	5
	2	5
	2	3
	3	6
	2	5
	2	5
	3	4
	2	6
	2	4
	1	3

43,5

Nama Kelompok Jumlah Total Rerata Aktivasi NF-kB

P3 A



Teraktivasi

2	6
1	5
3	7
3	8
2	4
2	5
2	6
4	7
2	3
1	4
2	6
1	4
1	3
2	4
1	4
2	5
2	4
2	5
2	6
2	4
1	6
2	4
1	5
1	3
2	6
2	4
1	5

40,0

P3 B

37,8

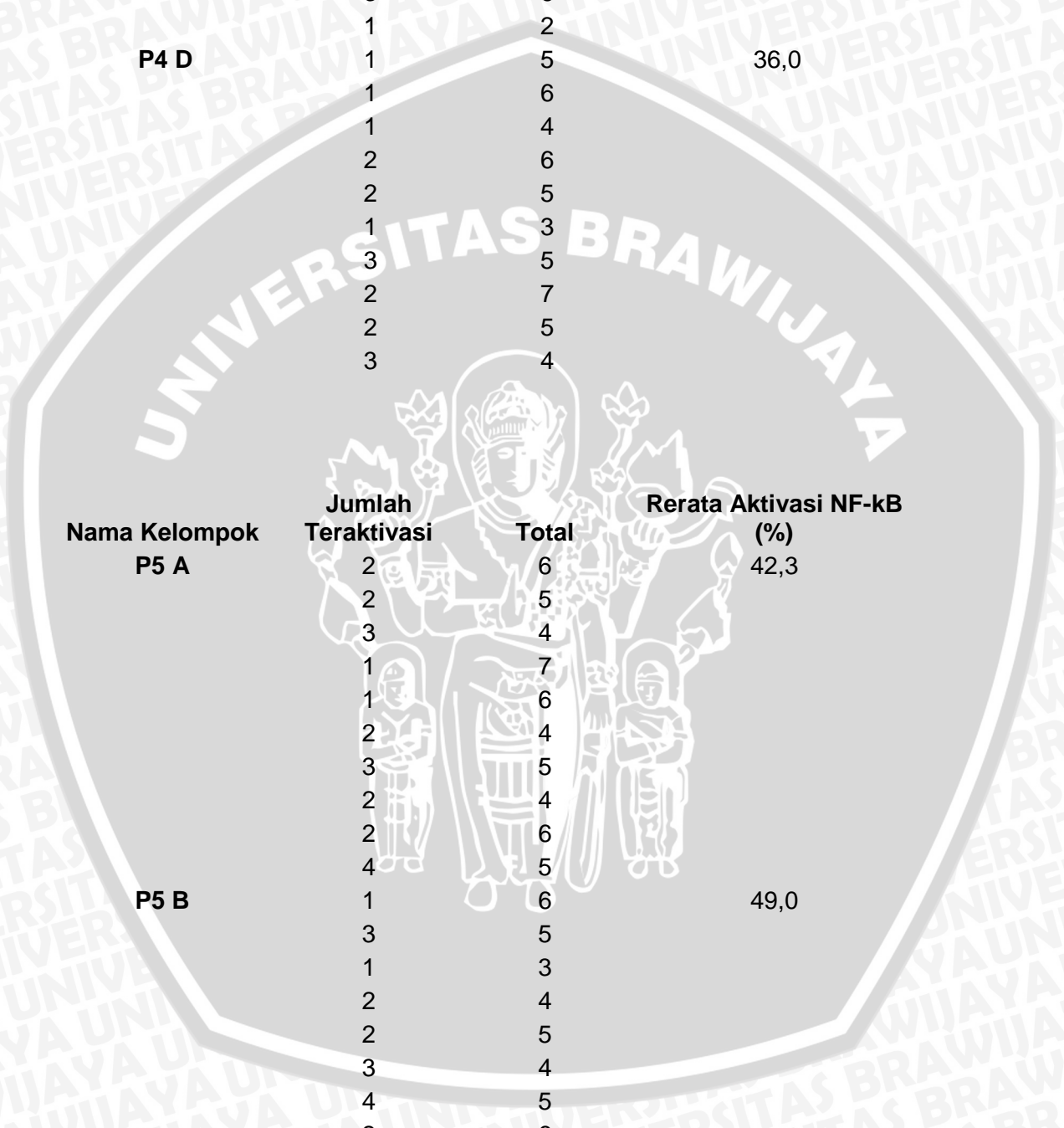
P3C

32,6



Nama Kelompok	Jumlah Teraktivasi	Total	Rerata Aktivasi NF-kB (%)
P3 D	2	6	44,1
	2	4	
	1	3	
	2	5	
	2	4	
	2	3	
	1	3	
	1	3	
	1	4	
	1	3	
P4 A	1	6	31,9
	2	5	
	1	4	
	1	4	
	1	4	
	1	3	
	2	5	
	2	6	
	2	5	
	2	5	
P4 B	2	5	30,6
	2	6	
	2	7	
	1	4	
	1	3	
	2	4	
	2	5	
	2	6	
	1	4	
	1	5	
P4 C	2	5	34,2
	1	4	
	1	3	
	1	2	
	1	2	
	1	3	





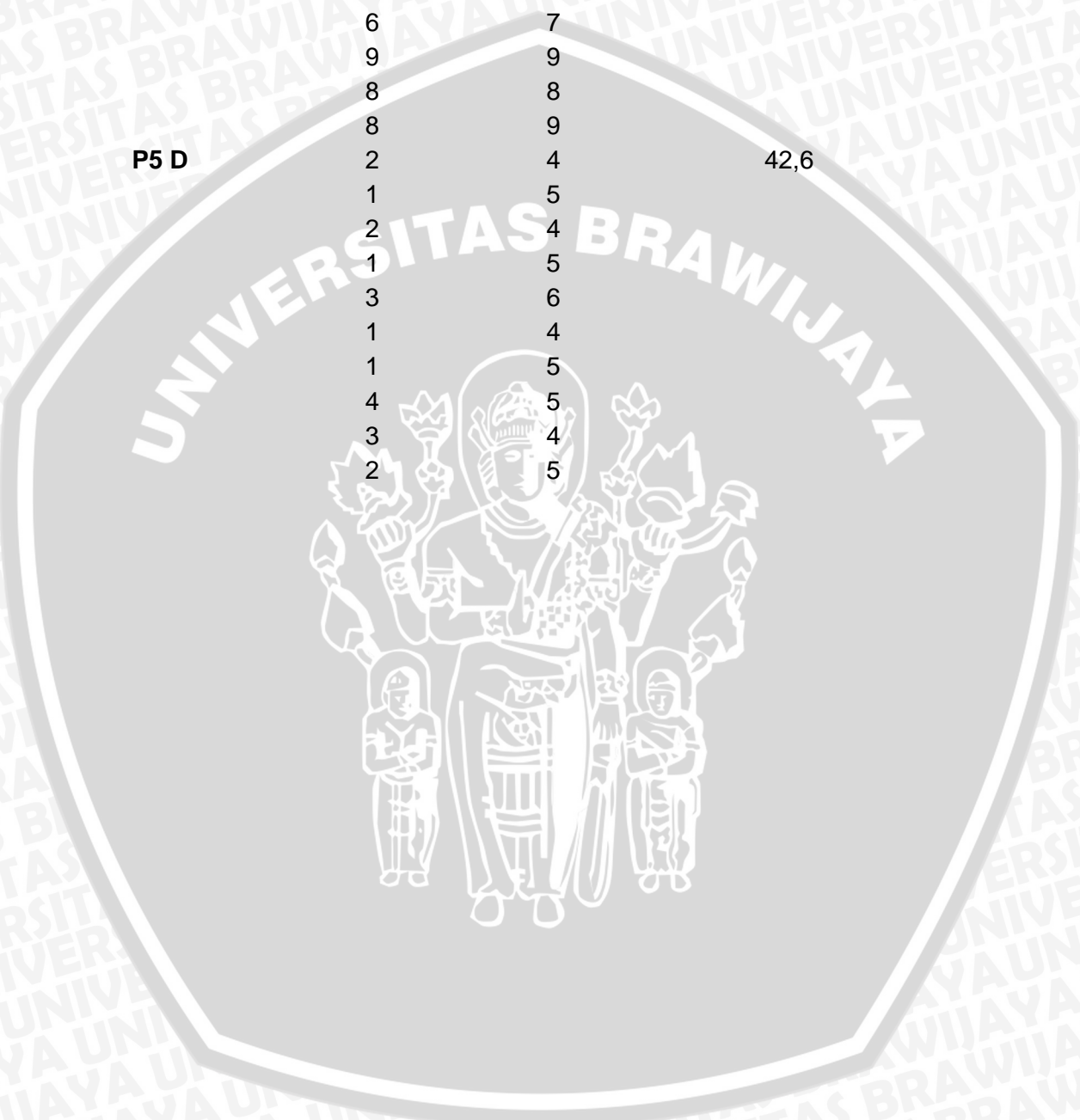
Nama Kelompok	Jumlah Teraktivasi	Total	Rerata Aktivasi NF-kB (%)
P4 D	1	4	36,0
	1	4	
	1	5	
	3	6	
	1	2	
	1	5	
	1	6	
	1	4	
	2	6	
	2	5	
P5 A	1	3	42,3
	3	5	
	2	7	
	2	5	
	3	4	
	1	7	
	1	6	
	2	4	
	3	5	
	2	4	
P5 B	4	5	49,0
	1	6	
	3	5	
	1	3	
	2	4	
	2	5	
	3	4	
	4	5	
	2	6	
	5	6	
P5 C	1	5	39,2
	7	8	
	6	8	
	6	8	



P5 D

42,6

7	8
6	7
7	8
7	8
6	7
9	9
8	8
8	9
2	4
1	5
2	4
1	5
3	6
1	4
1	5
4	5
3	4
2	5



Lampiran 4. Analisis Data Asupan Pakan Tikus

1. Uji Normalitas Data Asupan Pakan Tikus antar Masing – Masing Kelompok Penelitian

Tests of Normality

Kelompok		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Asupan Pakan Tikus	Kn	.307	4	.	.729	4	.024
	Kp	.283	4	.	.863	4	.272
	P1	.283	4	.	.863	4	.272
	P2	.441	4	.	.630	4	.001
	P3	.307	4	.	.729	4	.024
	P4	.151	4	.	.993	4	.972
	P5	.250	4	.	.945	4	.683

a. Lilliefors Significance Correction

2. Uji *Kruskal Wallis* Data Asupan Pakan Tikus antar Masing – Masing Kelompok Penelitian

Test Statistics^{a,b}

	Asupan Pakan Tikus
Chi-Square	15.408
df	6
Asymp. Sig.	.017

a. Kruskal Wallis Test

b. Grouping Variable: Perlakuan

3. Uji *Post- Hoc* Mann-Whitney Data Asupan Pakan Tikus antar Masing – Masing Kelompok Penelitian

Ranks

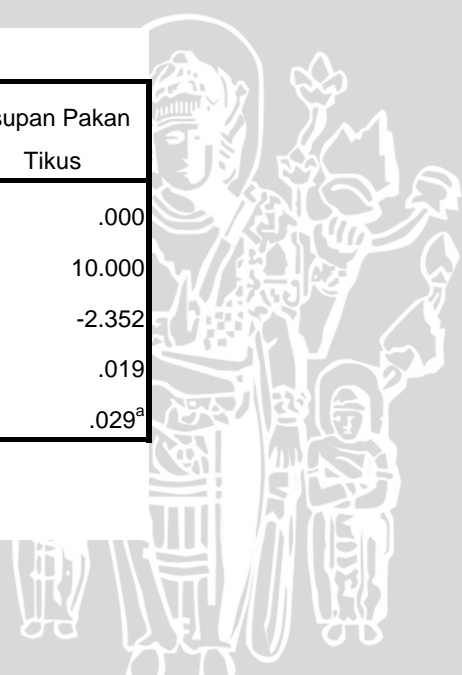
Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	Kp	4	2.50	10.00
Total		8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

b. Grouping Variable: Perlakuan



Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	P1	4	2.50	10.00
	Total	8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

b. Grouping Variable: Perlakuan

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	P2	4	2.50	10.00
	Total	8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.397
Asymp. Sig. (2-tailed)	.017
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.



Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.397
Asymp. Sig. (2-tailed)	.017
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

b. Grouping Variable: Perlakuan

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	P3	4	2.50	10.00
	Total	8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.366
Asymp. Sig. (2-tailed)	.018
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

b. Grouping Variable: Perlakuan

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	P4	4	2.50	10.00



Ranks

Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	P4	4	2.50	10.00
Total		8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.337
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

b. Grouping Variable: Perlakuan

Ranks

Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kn	4	6.50	26.00
Tikus	P5	4	2.50	10.00
Total		8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

b. Grouping Variable: Perlakuan



Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	.000
Wilcoxon W	10.000
Z	-2.352
Asymp. Sig. (2-tailed)	.019
Exact Sig. [2*(1-tailed Sig.)]	.029 ^a

a. Not corrected for ties.

Ranks

Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kp	4	5.12	20.50
Tikus	P1	4	3.88	15.50
Total		8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	5.500
Wilcoxon W	15.500
Z	-.764
Asymp. Sig. (2-tailed)	.445
Exact Sig. [2*(1-tailed Sig.)]	.486 ^a

a. Not corrected for ties.

b. Grouping Variable: Kelompok

Ranks

Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kp	4	4.62	18.50
Tikus	P2	4	4.38	17.50
Total		8		



Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	7.500
Wilcoxon W	17.500
Z	-.158
Asymp. Sig. (2-tailed)	.874
Exact Sig. [2*(1-tailed Sig.)]	.886 ^a

a. Not corrected for ties.

b. Grouping Variable: Kelompok

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Asupan Pakan Tikus	Kp	4	5.50	22.00
	P3	4	3.50	14.00
	Total	8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	4.000
Wilcoxon W	14.000
Z	-1.222
Asymp. Sig. (2-tailed)	.222
Exact Sig. [2*(1-tailed Sig.)]	.343 ^a

a. Not corrected for ties.

b. Grouping Variable: Kelompok

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Asupan Pakan	Kp	4	4.25	17.00
Tikus	P4	4	4.75	19.00



Ranks

Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kp	4	4.25	17.00
Tikus	P4	4	4.75	19.00
Total		8		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	7.000
Wilcoxon W	17.000
Z	-.300
Asymp. Sig. (2-tailed)	.765
Exact Sig. [2*(1-tailed Sig.)]	.886 ^a

a. Not corrected for ties.

b. Grouping Variable: Kelompok

Ranks

Kelompok		N	Mean Rank	Sum of Ranks
Asupan Pakan	Kp	4	4.88	19.50
Tikus	P5	3	2.83	8.50
Total		7		

Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	2.500
Wilcoxon W	8.500
Z	-1.310
Asymp. Sig. (2-tailed)	.190
Exact Sig. [2*(1-tailed Sig.)]	.229 ^a

a. Not corrected for ties.

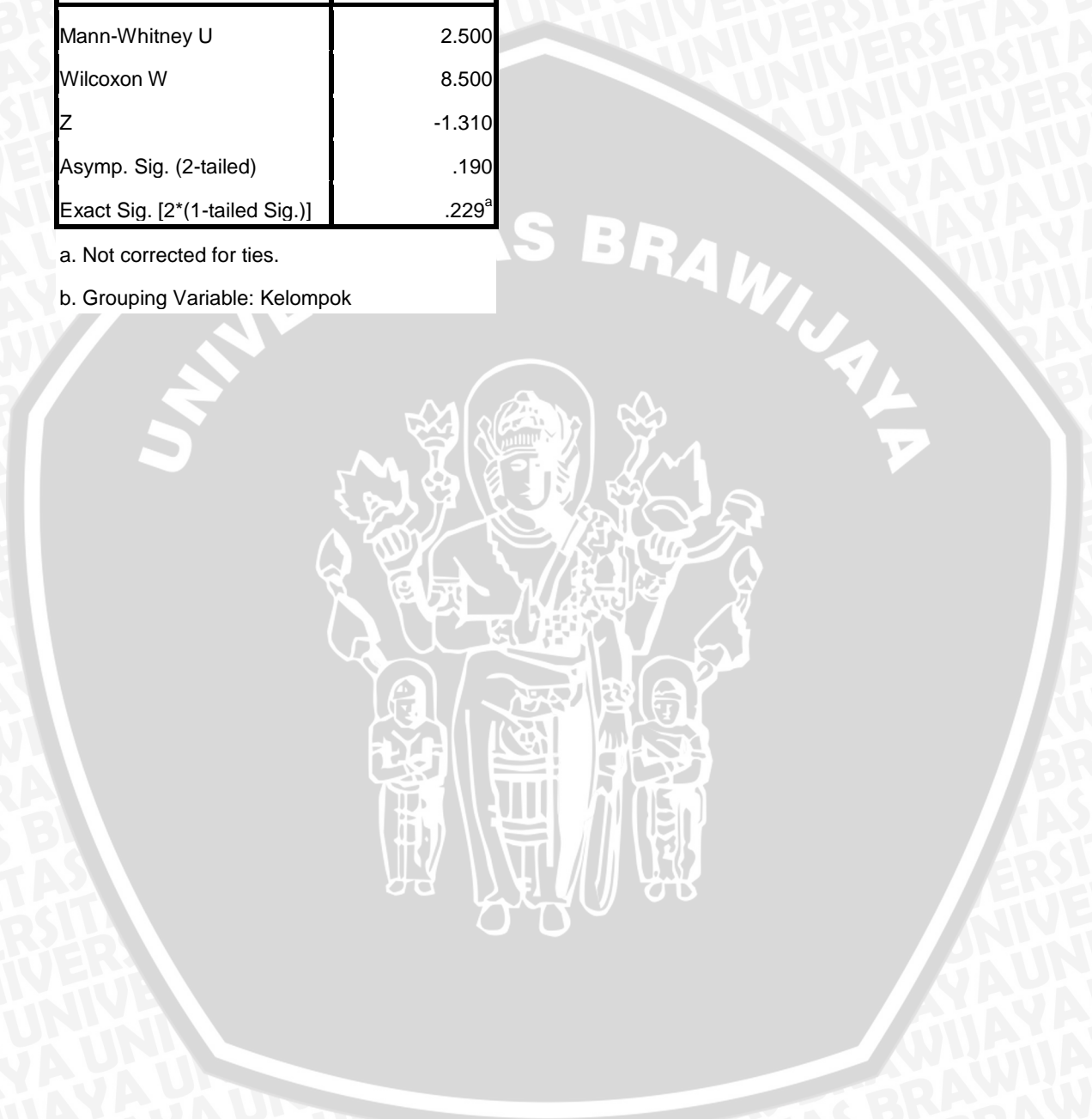


Test Statistics^b

	Asupan Pakan Tikus
Mann-Whitney U	2.500
Wilcoxon W	8.500
Z	-1.310
Asymp. Sig. (2-tailed)	.190
Exact Sig. [2*(1-tailed Sig.)]	.229 ^a

a. Not corrected for ties.

b. Grouping Variable: Kelompok



Lampiran 5. Analisa Data Kenaikan Berat Badan Tikus antar Masing-Masing Kelompok Penelitian

1. Uji Normalitas Data Kenaikan Berat Badan Tikus antar Masing - Masing Kelompok Penelitian

Tests of Normality

Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Kn	.147	4	.	.996	4	.984
Kp	.221	4	.	.948	4	.702
P1	.293	4	.	.830	4	.167
P2	.266	4	.	.905	4	.458
P3	.155	4	.	.998	4	.995
P4	.214	4	.	.963	4	.798
P5	.298	4	.	.849	4	.224

a. Lilliefors Significance Correction

2. Uji Normalitas Data Kenaikan Berat Badan Tikus antar Masing - Masing Kelompok Penelitian

Test of Homogeneity of Variances

Kenaikan_BB

Levene Statistic	df1	df2	Sig.
4.383	6	21	.005

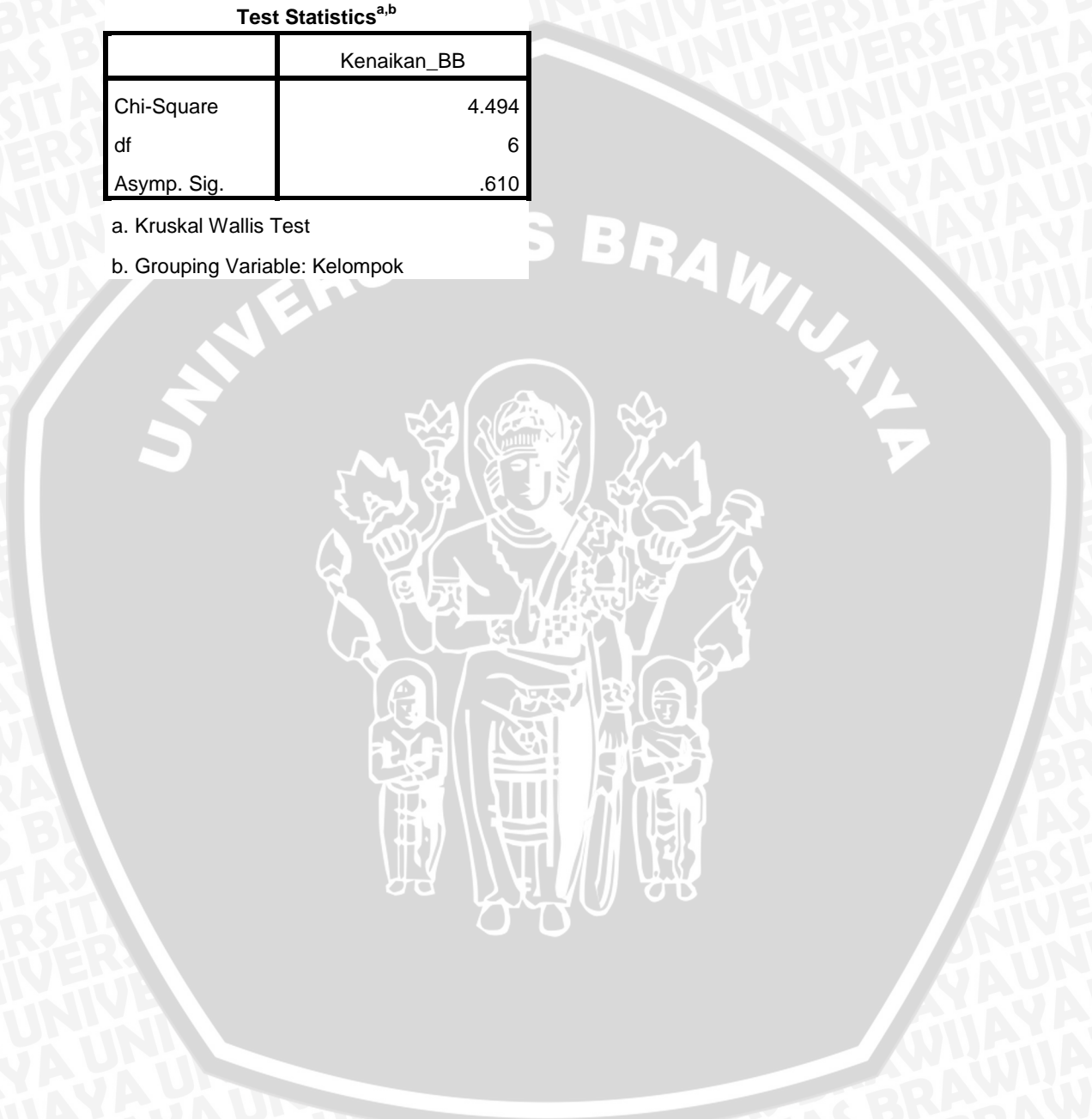
3. Uji Kruskal Wallis Data Kenaikan Berat Badan Tikus antar Masing - Masing Kelompok Penelitian

Test Statistics^{a,b}

	Kenaikan_BB
Chi-Square	4.494
df	6
Asymp. Sig.	.610

a. Kruskal Wallis Test

b. Grouping Variable: Kelompok



Lampiran 6. Analisis Aktivasi NF-kB

1. Uji Normalitas Data Aktivasi NF-kB antar Masing - Masing Kelompok Penelitian

Tests of Normality

Kelompok	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Aktivasi NF-kB Kp	.217	4	.	.978	4	.890
Kn	.277	4	.	.874	4	.312
P1	.230	4	.	.944	4	.678
P2	.269	4	.	.950	4	.713
P3	.182	4	.	.993	4	.974
P4	.202	4	.	.969	4	.838
P5	.261	3	.	.957	3	.601

a. Lilliefors Significance Correction

2. Uji Homogenitas Aktivasi NF-kB antar Masing – Masing Kelompok Penelitian

Test of Homogeneity of Variances

Aktivasi NF-kB

Levene Statistic	df1	df2	Sig.
1.036	6	20	.432



3. Uji *One-Way* ANOVA Aktivasi NF-kB antar Masing – Masing Kelompok Penelitian

ANOVA					
Aktivasi NF-kB	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.409	6	.068	61.588	.000
Within Groups	.022	20	.001		
Total	.431	26			

4. Uji Post-Hoc Tukey Aktivasi NF-kB antar Masing – Masing Kelompok Penelitian

Multiple Comparisons						
Aktivasi NF-kB						
Tukey HSD						
(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kp	Kn	.41750*	.02353	.000	.3406	.4944
	P1	.22700*	.02353	.000	.1501	.3039
	P2	.23650*	.02353	.000	.1596	.3134
	P3	.29175*	.02353	.000	.2149	.3686
	P4	.34625*	.02353	.000	.2694	.4231
	P5	.24300*	.02541	.000	.1600	.3260
Kn	Kp	-.41750*	.02353	.000	-.4944	-.3406
	P1	-.19050*	.02353	.000	-.2674	-.1136
	P2	-.18100*	.02353	.000	-.2579	-.1041
	P3	-.12575*	.02353	.001	-.2026	-.0489
	P4	-.07125	.02353	.081	-.1481	.0056
	P5	-.17450*	.02541	.000	-.2575	-.0915
P1	Kp	-.22700*	.02353	.000	-.3039	-.1501
	Kn	.19050*	.02353	.000	.1136	.2674

	P2	.00950	.02353	1.000	-.0674	.0864
	P3	.06475	.02353	.136	-.0121	.1416
	P4	.11925*	.02353	.001	.0424	.1961
	P5	.01600	.02541	.995	-.0670	.0990
P2	Kp	-.23650*	.02353	.000	-.3134	-.1596
	Kn	.18100*	.02353	.000	.1041	.2579
	P1	-.00950	.02353	1.000	-.0864	.0674
	P3	.05525	.02353	.270	-.0216	.1321
	P4	.10975*	.02353	.002	.0329	.1866
	P5	.00650	.02541	1.000	-.0765	.0895
P3	Kp	-.29175*	.02353	.000	-.3686	-.2149
	Kn	.12575*	.02353	.001	.0489	.2026
	P1	-.06475	.02353	.136	-.1416	.0121
	P2	-.05525	.02353	.270	-.1321	.0216
	P4	.05450	.02353	.284	-.0224	.1314
	P5	-.04875	.02541	.492	-.1318	.0343
P4	Kp	-.34625*	.02353	.000	-.4231	-.2694
	Kn	.07125	.02353	.081	-.0056	.1481
	P1	-.11925*	.02353	.001	-.1961	-.0424
	P2	-.10975*	.02353	.002	-.1866	-.0329
	P3	-.05450	.02353	.284	-.1314	.0224
	P5	-.10325*	.02541	.009	-.1863	-.0202
P5	Kp	-.24300*	.02541	.000	-.3260	-.1600
	Kn	.17450*	.02541	.000	.0915	.2575
	P1	-.01600	.02541	.995	-.0990	.0670
	P2	-.00650	.02541	1.000	-.0895	.0765
	P3	.04875	.02541	.492	-.0343	.1318
	P4	.10325*	.02541	.009	.0202	.1863

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

Aktivasi NF-kB

Tukey HSD

Kelompok	N	Subset for alpha = 0.05			
		1	2	3	4
Kn	4	.2605			
P4	4	.3318	.3318		
P3	4		.3863	.3863	
P5	3			.4350	
P2	4			.4415	
P1	4			.4510	
Kp	4				.6780
Sig.		.092	.308	.152	1.000

Means for groups in homogeneous subsets are displayed.

5. Uji Korelasi Data Aktivasi NF-kB antar Masing - Masing Kelompok Penelitian

Correlations

		Aktivasi NF-kB	Kelompok
Aktivasi NF-kB	Pearson Correlation	1	-.837**
	Sig. (2-tailed)		.000
	N	16	16
Kelompok	Pearson Correlation	-.837**	1
	Sig. (2-tailed)	.000	
	N	16	16

** . Correlation is significant at the 0.01 level (2-tailed).

Lampiran 7. Rancangan Acak Kelompok

Adapun prosedur pengambilan sampel menggunakan Rancangan Acak Kelompok (RAK) sebagai berikut: dari jumlah 28 tekor tikus ini dilakukan sistem *lotree*, sebanyak 2 kali. *Lotree* pertama menentukan kelompok yang akan diambil terlebih dahulu, sedangkan *lotree* ke dua untuk mengelompokkan tikus.

Tabel 4.1 Randomisasi Acak Kelompok

Kelompok	Nomor Urut Tikus	Pengelompokan
Kn	18	Kn C
	6	Kn A
	10	Kn B
	22	Kn D
Kp	5	Kp A
	20	Kp C
	9	Kp B
	28	Kp D
P1	1	P1 A
	17	P1 D
	4	P1 C
	2	P1 B
P2	27	P2 D
	21	P2 C
	3	P2 A
	7	P2 B

P3	19	P3 D
	11	P3 B
	8	P3 A
	13	P3 C
P4	12	P4 A
	15	P4 B
	24	P4 D
	23	P4 C
P5	14	P5 A
	16	P5 B
	25	P5 D
	22	P5 C

Lampiran 8. Dokumentasi Penelitian



Gambar 1. Penggantian Sekam



Gambar 2. Pengisian Air Minum



Gambar 3. Pencucian Botol Minum



Gambar 4. Pemberian Pakan



Gambar 5. Penggerusan Vitamin



Gambar 6. Penggerusan PTU



Gambar 7. Pengadukan Bahan Diet Atero



Gambar 8. Pencampuran Bahan dengan mixer



Gambar 9. Pakan diet Aterogenik



Gambar 10. Pakan Diet Normal



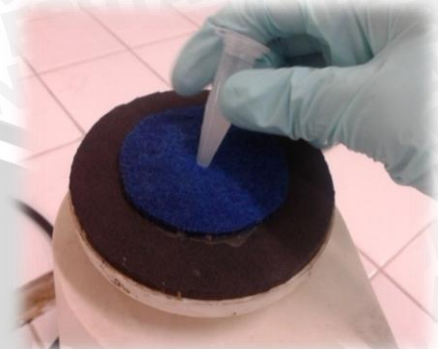
Gambar 11. Penyimpanan Adonan di freezer



Gambar 12. Penempatan Tikus



Gambar 13. Preparasi LOX-1 di LAF



Gambar 14. Homogenasi LOX-1 Dengan vortex



Gambar 15. Injeksi LOX-1



Lampiran 9. Pernyataan Keaslian Tulisan

PERNYATAAN KEASLIAN TULISAN

Saya yang bertanda tangan di bawah ini:

Peneliti : Ardina Pramesti Putri

NIM : 105070501111009

Judul : Pemberian *Lectin-Like Oxidized LDL Receptor 1*
Menurunkan Aktivasi Nuclear Factor Kappa B Pada
Rattus norvegicus Wistar Dengan Diet Aterogenik

Unit / Lembaga : Program Studi Farmasi, Fakultas Kedokteran Universitas
Brawijaya.

menyatakan dengan sebenarnya bahwa Tugas Akhir yang saya tulis ini benar – benar hasil karya sendiri, bukan merupakan pengambilalihan tulisan atau pikiran orang lain yang saya akui sebagai tulisan atau pikiran saya sendiri. Apabila dikemudian hari dapat dibuktikan bahwa Tugas Akhir ini adalah hasil jiplakan, maka saya bersedia menerima sanksi atas perbuatan tersebut.

Malang, 26 Juni 2014

Ardina Pramesti Putri

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