

LAMPIRAN A
PERHITUNGAN VOLUME PEMBERIAN

$$\text{volume pemberian} = \frac{\text{Dosis}}{\text{konsentrasi senyawa uji}} \times \frac{\text{berat badan Tikus}}{1000\text{g}}$$

Perhitungan volume pemberian senyawa uji*

1. Dosis 10mg/kgBB
untuk tikus berat 200g

$$\text{volume pemberian} = \frac{10\text{mg/kgbb}}{1\text{mg/ml}} \times \frac{200\text{g}}{1000\text{g}} = 2\text{ml}$$

2. Dosis 20mg/kgBB
untuk tikus berat 200g

$$\text{volume pemberian} = \frac{20\text{mg/kgbb}}{2\text{mg/ml}} \times \frac{200\text{g}}{1000\text{g}} = 2\text{ml}$$

3. Dosis 40mg/kgBB
untuk tikus berat 200g

$$\text{volume pemberian} = \frac{40 \text{ mg/kgBB}}{4 \text{ mg/ml}} \times \frac{200 \text{ g}}{1000 \text{ g}} = 2 \text{ ml}$$

4. Dosis 60mg/kgBB
untuk tikus berat 200g

$$\text{volume pemberian} = \frac{60 \text{ mg/kgBB}}{6 \text{ mg/ml}} \times \frac{200 \text{ g}}{1000 \text{ g}} = 2 \text{ ml}$$

Senyawa uji* adalah N-benzoil-N'-feniltiourea, N-(4-korobenzoil)-N-feniltiourea, N-(p-tolilbenzoi)-N-feniltiourea dan N-(4klorobenzoi)-N-(p-tolil)tiourea.

LAMPIRAN B

PERHITUNGAN ANAVA SENYAWA N-BENZOIL-N'-FENILTIOUREA PADA MENIT KE 90, 150, 210 DAN 270.

Menit ke 90:

ANOVA

vol90	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.701	6	.284	7E+031	.000
Within Groups	.000	28	.000		
Total	1.701	34			

Menit ke 150:

ANOVA

vol150	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.402	6	.567	1E+032	.000
Within Groups	.000	28	.000		
Total	3.402	34			

Menit ke 210:

ANOVA

vol210

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.169	6	1.028	60.444	.000
Within Groups	.476	28	.017		
Total	6.645	34			

Menit ke 270:

ANOVA

vl270

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.804	6	1.134	2E+033	.000
Within Groups	.000	28	.000		
Total	6.804	34			

F hitung > F tabel Ada perbedaan bermakna antara kelompok senyawa uji dengan kelompok kontrol.

LAMPIRAN C

PERHITUNGAN ANAVA SENYAWA N-(p-KLOROBENZOIL)-N'-FENILTIOUREA PADA MENIT KE 90, 150, 210 DAN 270.

Menit ke 90:

ANOVA

vol90

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.035	6	.839	49.333	.000
Within Groups	.476	28	.017		
Total	5.511	34			

Menit ke 150:

ANOVA

vol150

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.097	6	1.349	79.333	.000
Within Groups	.476	28	.017		
Total	8.573	34			

Menit ke 210:

ANOVA

vol210

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.577	6	1.096	32.222	.000
Within Groups	.953	28	.034		
Total	7.530	34			

Menit ke 270:

ANOVA

vol270

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.804	6	1.134	2E+033	.000
Within Groups	.000	28	.000		
Total	6.804	34			

F hitung > F tabel. Ada perbedaan bermakna antara kelompok senyawa uji dengan kelompok kontrol.

LAMPIRAN D

PERHITUNGAN ANAVA SENYAWA N-(p-METILBENZOIL)-N'-FENILTIOUREA PADA MENIT KE 90, 150, 210 DAN 270.

Menit ke 90:

ANOVA

vol90

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.835	6	.473	1E+032	.000
Within Groups	.000	28	.000		
Total	2.835	34			

Menit ke 150:

ANOVA

vol150

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.035	6	.839	49.333	.000
Within Groups	.476	28	.017		
Total	5.511	34			

Menit ke 210:

ANOVA

vol210

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.577	6	1.096	21.481	.000
Within Groups	1.429	28	.051		
Total	8.006	34			

Menit ke 270:

ANOVA

vol270

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.804	6	1.134	2E+033	.000
Within Groups	.000	28	.000		
Total	6.804	34			

Fhitung > F tabel. Ada perbedaan bermakna antara kelompok senyawa uji dengan kelompok kontrol..

LAMPIRAN E

PERHITUNGAN ANAVA SENYAWA N-(p-KLOROBENZOIL)-N'-(p-TOLIL)TIOUREA PADA MENIT KE 90, 150, 210 DAN 270.

Menit ke 90:

ANOVA

vol90

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.495	6	.416	12.222	.000
Within Groups	.953	28	.034		
Total	3.447	34			

Menit ke 150:

ANOVA

vol150

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.099	6	1.183	104.333	.000
Within Groups	.318	28	.011		
Total	7.416	34			

Menit ke 210:

ANOVA

vol210

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.985	6	1.164	41.067	.000
Within Groups	.794	28	.028		
Total	7.779	34			

Menit ke 270:

ANOVA

vol270

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.804	6	1.134	2E+033	.000
Within Groups	.000	28	.000		
Total	6.804	34			

F hitung > F tabel. Ada perbedaan bermakna antara kelompok senyawa uji dengan kelompok kontrol.

LAMPIRAN F

PERHITUNGAN AUC

Rumus: $[AUC]_{t_{n-1}}^{t_n} = \frac{V_{n-1} + V_n}{2} (t_n - t_{n-1})$

Contoh: $[AUC]_0^{30} = \frac{2.51 + 2.51}{2} (30 - 0) = 75.30$

N-benzoil-N'-feniltiourea
Dosis 20mg/kgBB

N-benzoil-N'-feniltiourea			waktu	volume edema	[AUC]0-270
Dosis 10mg/kgBB			0	2.51	0
waktu	volume edema	[AUC]0-270	30	2.51	75.30
0	2.51	0	90	3.52	180.90
30	2.51	75.30	150	3.39	207.30
90	3.77	188.40	210	3.14	195.90
150	3.77	226.20	270	2.51	169.50
210	3.14	207.30	total		828.90
270	2.51	169.50			
total		866.70			

N-benzoil-N'-feniltiourea		
Dosis 40mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.77	188.40
150	3.14	207.30
210	2.51	169.50
270	2.51	150.60
total		791.10

N-benzoil-N'-feniltiourea			N-benzoil-N'-feniltiourea		
Dosis 60mg/kgBB			Dosis 20mg/kgBB		
waktu	volume edema	[AUC]0-270	waktu	volume edema	[AUC]0-270
0	2.51	0	0	2.51	0
30	2.51	75.30	30	2.51	75.30
90	3.14	169.50	90	3.14	169.50
150	3.14	188.40	150	3.14	188.40
210	3.14	188.40	210	2.76	177.00
270	2.51	169.50	270	2.51	158.00
total		791.10	total		768.30

N-(p-klorobenzoil)-N'-feniltiourea		
Dosis 40mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.14	169.50
150	2.76	177.00
210	2.51	158.10
270	2.51	150.60
total		730.50

N-(p-metilbenzoil)-N'- feniltiourea		
Dosis 10mg/kgBB		
waktu	volume edema	[AUC]0- 270
0	2.51	0
30	2.51	75.30
90	3.77	188.40
150	3.14	207.30
210	2.89	180.90
270	2.51	162.00
total		813.90

N-(p-klorobenzoil)-N'- feniltiourea		
Dosis 60mg/kgBB		
waktu	volume edema	[AUC]0- 270
0	2.51	0
30	2.51	75.30
90	2.76	158.10
150	2.51	158.10
210	2.51	150.60
270	2.51	150.60
total		692.70

N-(p-metilbenzoil)-N'- feniltiourea		
Dosis 40mg/kgBB		
waktu	volume edema	[AUC]0- 270
0	2.51	0
30	2.51	75.30
90	3.14	169.50
150	3.14	188.40
210	2.76	177.00
270	2.51	158.10

total	768.30
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N-(p-metilbenzoi)-N'-(p-tolil)tiourea		
Dosis 60mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.14	169.50
150	2.76	177.00
210	2.51	158.10
270	2.51	150.60
total		730.50

N-(p-klorobenzoi)-N'-(p-tolil)tiourea		
Dosis 10mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.39	177.00
150	3.14	195.90
210	3.14	188.40
270	2.51	169.50
total		806.10

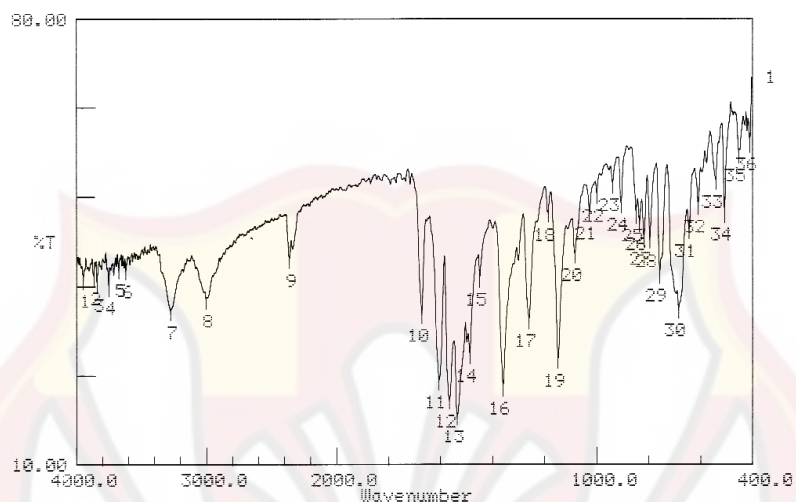
N-(p-klorobenzoi)-N'-(p-tolil)tiourea		
Dosis 20mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.39	177.00
150	3.01	192.00
210	2.64	169.50
270	2.51	154.50
total		768.30

N-(p-klorobenzoil)-N'-(p-tolil)tiourea		
Dosis 40mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.14	169.50
150	3.14	188.40
210	2.51	169.50
270	2.51	150.60
total		753.30

N-(p-klorobenzoil)-N'-(p-tolil)tiourea		
Dosis 60mg/kgBB		
waktu	volume edema	[AUC]0-270
0	2.51	0
30	2.51	75.30
90	3.14	169.50
150	2.51	169.50
210	2.51	150.60
270	2.51	150.60
total		715.50



LAMPIRAN G
HASIL IDENTIFIKASI IR TERDAHULU N-BENZOIL-N'-
FENILTIOUREA (Wijaya, P, 2006)



Condition
upper 80.00 lower 10.00 depth 2.00

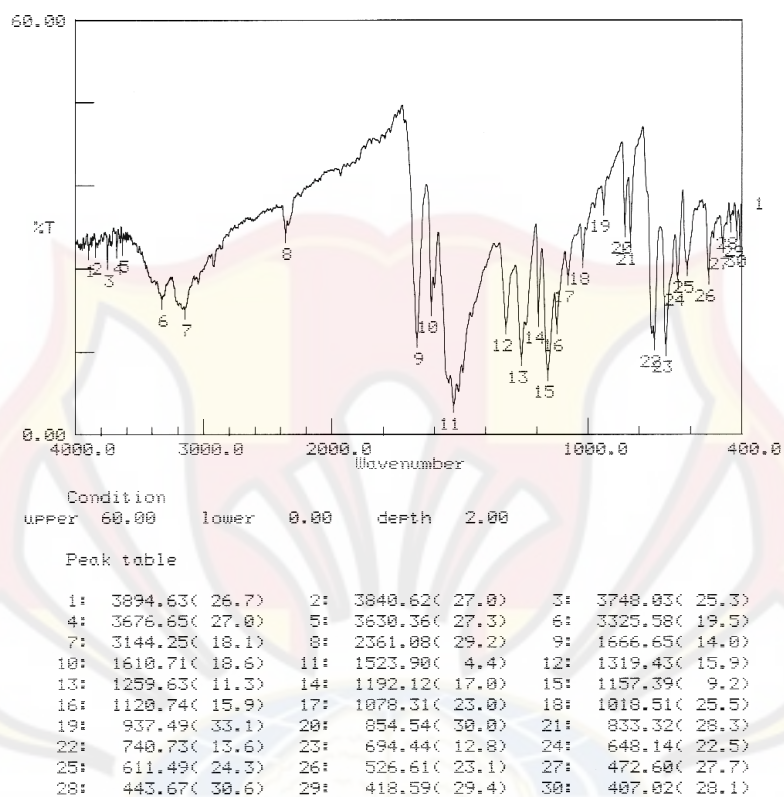
Peak table

1: 3944.78(39.2)	2: 3863.77(39.6)	3: 3838.69(38.6)
4: 3749.96(38.1)	5: 3672.80(41.0)	6: 3618.78(40.7)
7: 3277.35(34.3)	8: 3005.37(36.1)	9: 2363.01(42.4)
10: 1672.43(33.0)	11: 1604.92(23.4)	12: 1566.34(20.4)
13: 1535.40(18.0)	14: 1487.25(27.5)	15: 1448.67(39.5)
16: 1359.94(22.4)	17: 1259.63(33.0)	18: 1186.33(49.5)
19: 1147.75(26.7)	20: 1082.16(43.3)	21: 1028.15(49.8)
22: 999.22(52.5)	23: 937.49(54.2)	24: 904.70(51.1)
25: 846.83(49.5)	26: 833.32(40.1)	27: 815.96(45.8)
28: 794.74(45.4)	29: 756.16(40.0)	30: 682.86(34.6)

LAMPIRAN H

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SURABAYA

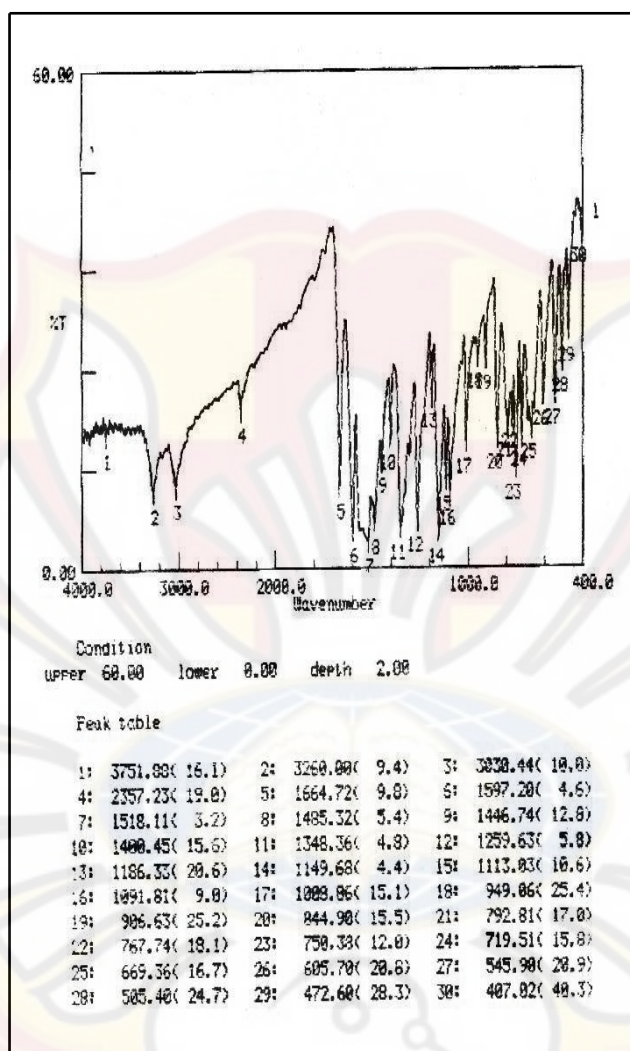
**HASIL IDENTIFIKASI IR TERDAHULU N-(p-METILBENZOIL)-
N'-FENILTIOUREA (Wijaya P, 2006)**



LAMPIRAN I

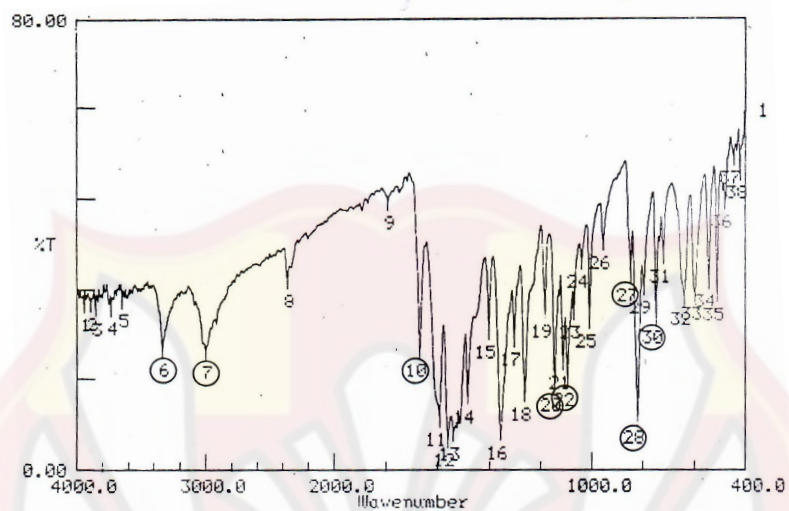
UNIVERSITAS KATOLIK WIDYA MANDALA
SURABAYA

**HASIL IDENTIFIKASI IR TERDAHULU N-(p-KLOROBENZOIL)-
N'-FENILTIOUREA (Nobrina L, 2006)**



LAMPIRAN J

**HASIL IDENTIFIKASI IR TERDAHULU N-(p-KLOROBENZOIL)-
N'-(p-TOLIL)TIOUREA (Setiawati S, 2006)**



Condition
upper 80.00 lower 0.00 depth 2.00

Peak table

1: 3942.85(29.8)	2: 3892.70(29.8)	3: 3854.12(28.8)
4: 3736.45(29.0)	5: 3649.65(30.4)	6: 3337.15(21.6)
7: 3001.51(21.2)	8: 2363.01(34.0)	9: 1792.03(47.7)
10: 1668.58(21.4)	11: 1591.42(9.3)	12: 1558.62(5.7)
13: 1539.33(6.8)	14: 1483.39(13.2)	15: 1400.45(24.7)
16: 1354.15(7.0)	17: 1302.07(23.4)	18: 1261.56(13.6)
19: 1182.47(28.3)	20: 1143.89(15.4)	21: 1111.10(19.3)
22: 1093.74(16.2)	23: 1068.66(28.2)	24: 1039.73(37.4)
25: 1008.86(26.6)	26: 954.85(40.7)	27: 846.83(34.9)
28: 819.82(9.7)	29: 796.67(32.7)	30: 748.45(27.3)

LAMPIRAN K

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SURABAYA

**HASIL PERHITUNGAN PERSAMAAN REGRESI LINEAR PADA
SIFAT FISIKA KIMIA SENYAWA TURUNAN BENZOIL TIOUREA
DENGAN BANTUAN PROGRAM SPSS 17.00.**

Nilai lipofilik:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736 ^a	.542	.313	.23165

a. Predictors: (Constant), phi

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.127	1	.127	2.364	.264 ^a
	Residual	.107	2	.054		
	Total	.234	3			

a. Predictors: (Constant), phi

b. Dependent Variable: LogEd50

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.520	.200		-7.612	.017
	phi	.394	.256	.736	1.538	.264

a. Dependent Variable: LogEd50

Persamaan: $y = 0.394\pi - 1.520$ (π vs $\log 1/ED_{50}$) $R=0.736$ $F=2.364$(1)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.865 ^a	.749	.246	.24268

a. Predictors: (Constant), phi2, phi

ANOVA ^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.175	2	.088	1.488	.501 ^a
	Residual	.059	1	.059		
	Total	.234	3			

a. Predictors: (Constant), phi2, phi

b. Dependent Variable: logP

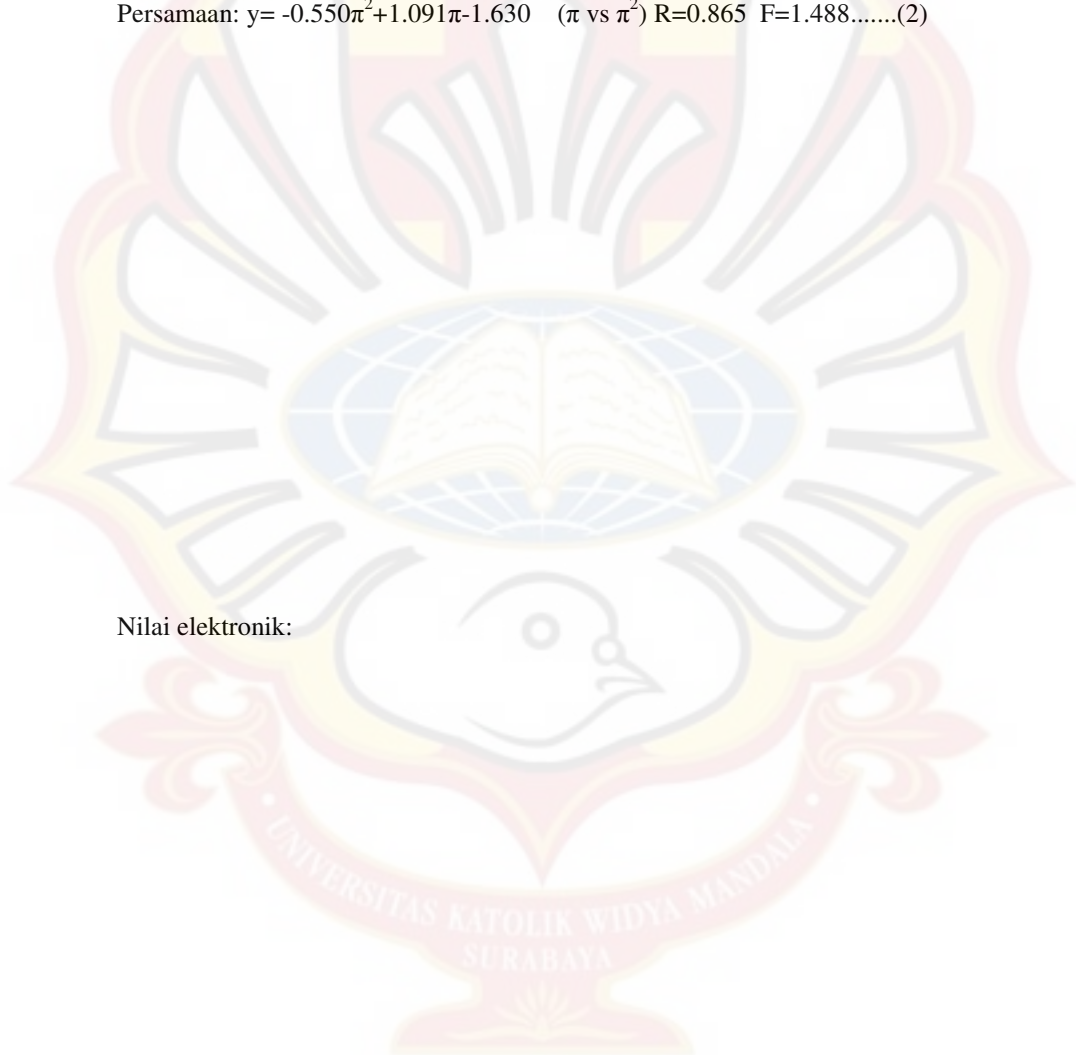
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.630	.242		-6.741	.094
	phi	1.091	.815	2.039	1.340	.408
	phi2	-.550	.607	-1.380	-.907	.531

a. Dependent Variable: logP

Persamaan: $y = -0.550\pi^2 + 1.091\pi - 1.630$ (π vs π^2) $R=0.865$ $F=1.488.....(2)$

Nilai elektronik:



Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.678 ^a	.459	.189	.25163

a. Predictors: (Constant), sigmap

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.108	1	.108	1.699	.322 ^a
	Residual	.127	2	.063		
	Total	.234	3			

a. Predictors: (Constant), sigmap

b. Dependent Variable: LogEd50

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.304	.129		-10.147	.010
	sigmap	1.147	.880	.678	1.303	.322

a. Dependent Variable: LogEd50

Persamaan: $y = 1,147\sigma_p - 1,340$ (σ_p vs $\log 1/ED_{50}$) $R=0.678$ $F=1.699$(3)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.752 ^a	.565	-.304	.31904

a. Predictors: (Constant), sigmap2, sigmap

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.132	2	.066	.650	.659 ^a
	Residual	.102	1	.102		
	Total	.234	3			

a. Predictors: (Constant), sigmap2, sigmap

b. Dependent Variable: logP

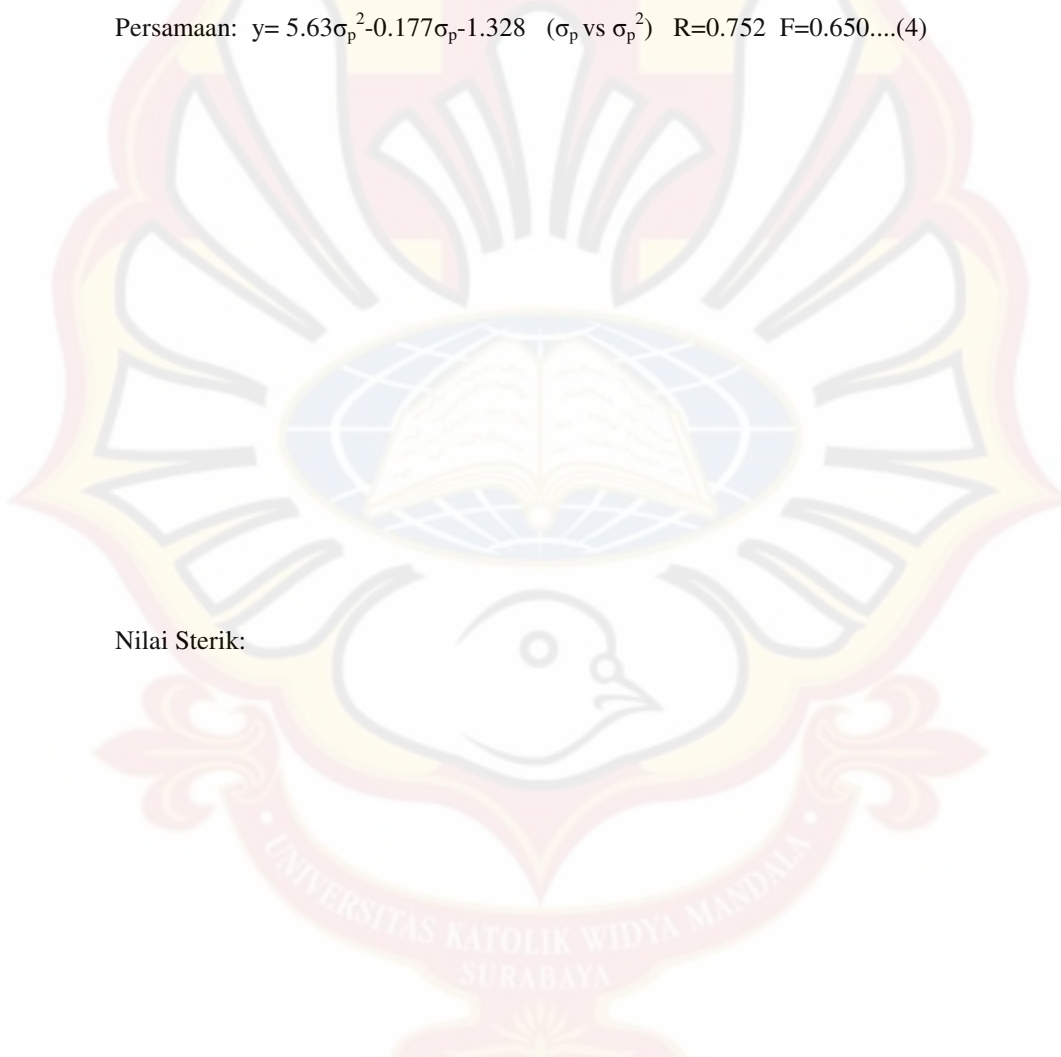
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.328	.310		-4.286	.146
	sigmap	-.177	.341	-.393	-.518	.696
	sigmap2	5.631	9.003	.475	.626	.644

a. Dependent Variable: logP

Persamaan: $y = 5.63\sigma_p^2 - 0.177\sigma_p - 1.328$ (σ_p vs σ_p^2) $R=0.752$ $F=0.650....(4)$

Nilai Sterik:



Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669 ^a	.447	.171	.25445

a. Predictors: (Constant), Es

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.105	1	.105	1.617	.331 ^a
	Residual	.129	2	.065		
	Total	.234	3			

a. Predictors: (Constant), Es

b. Dependent Variable: LogEd50

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.117	.175		-6.391	.024
	Es	-.343	.270	-.669	-1.272	.331

a. Dependent Variable: LogEd50

Persamaan: $y = -0.343Es - 1.117$ (Es vs $\log 1/ED_{50}$) $R=0.669$ $F=1.617....(5)$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961 ^a	.923	.769	.13435

a. Predictors: (Constant), ES2, Es

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.216	2	.108	5.988	.278 ^a
	Residual	.018	1	.018		
	Total	.234	3			

a. Predictors: (Constant), ES2, Es

b. Dependent Variable: logP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.360	.134		-10.123	.063
	Es	1.481	.748	2.889	1.981	.298
	ES2	-1.355	.545	-3.624	-2.485	.244

a. Dependent Variable: logP

Persamaan: $y = -1.355Es^2 + 1.481Es - 1.360$ (Es vs Es^2) $R=0.961$ $F=5.988....(6)$

Nilai lipofilik dan elektronik:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.891 ^a	.793	.380	.22000

a. Predictors: (Constant), sigmap, phi

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.186	2	.093	1.919	.455 ^a
	Residual	.048	1	.048		
	Total	.234	3			

a. Predictors: (Constant), sigmap, phi

b. Dependent Variable: LogEd50

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.500	.191		-7.873	.080
	phi	.321	.252	.599	1.271	.424
	sigmap	.880	.797	.520	1.103	.469

a. Dependent Variable: LogEd50

Persamaan: $y = 0.321\pi + 0.880\sigma_p - 1.500$ (π vs σ_p) $R=0.891$ $F=1.919$(7)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.971 ^a	.943	.828	.11588

a. Predictors: (Constant), sigmap2, phi2

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.221	2	.110	8.220	.239 ^a
	Residual	.013	1	.013		
	Total	.234	3			

a. Predictors: (Constant), sigmap2, phi2

b. Dependent Variable: logP

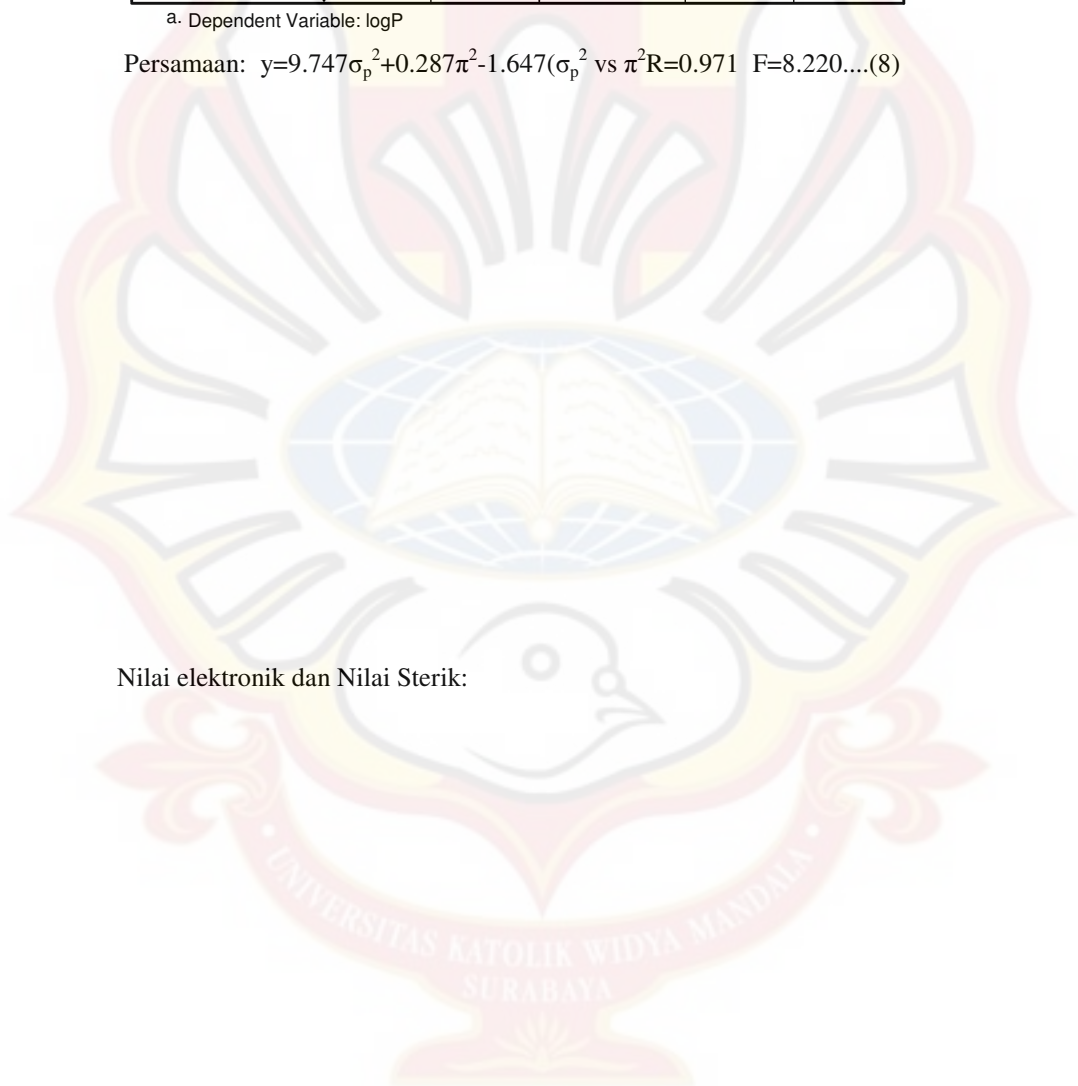
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.647	.110		-15.004	.042
	phi2	.287	.098	.719	2.935	.209
	sigmap2	9.747	2.905	.822	3.355	.184

a. Dependent Variable: logP

Persamaan: $y = 9.747\sigma_p^2 + 0.287\pi^2 - 1.647$ (σ_p^2 vs $\pi^2 R = 0.971$ $F = 8.220 \dots (8)$)

Nilai elektronik dan Nilai Sterik:



Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.999 ^a	.998	.995	.01911

a. Predictors: (Constant), Es, sigmap

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.234	2	.117	320.154	.039 ^a
	Residual	.000	1	.000		
	Total	.234	3			

a. Predictors: (Constant), Es, sigmap

b. Dependent Variable: LogEd50

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.140	.013		-86.440	.007
	sigmap	1.262	.067	.746	18.804	.034
	Es	-.378	.020	-.737	-18.595	.034

a. Dependent Variable: LogEd50

Persamaan: $y = 1.262\sigma_p - 0.378Es - 1.140$ (σ_p vs Es) $R = 0.999$ $F = 320.154$(9)

Nilai lipofilik & Nilai sterik:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.799 ^a	.638	-.086	.29122

a. Predictors: (Constant), ES2, phi2

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.149	2	.075	.881	.602 ^a
	Residual	.085	1	.085		
	Total	.234	3			

a. Predictors: (Constant), ES2, phi2

b. Dependent Variable: logP

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.198	.294		-4.081	.153
	phi2	.063	.288	.158	.219	.863
	ES2	-.262	.270	-.700	-.970	.510

a. Dependent Variable: logP

Persamaan: $y = -0.262Es^2 + 0.063\sigma_p^2 - 1.198(\sigma_p^2 \text{ vs } Es^2) R = 0.799 \text{ F} = 0.881 \dots (10)$