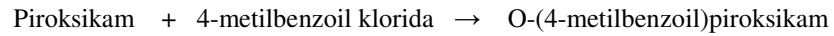


LAMPIRAN A
PERHITUNGAN PROSENTASE HASIL

Reaksi:



$$\text{M : } \quad 0,010 \text{ mol} \qquad \qquad 0,017 \text{ mol} \qquad \qquad -$$

$$\text{B : } \quad 0,010 \text{ mol} \qquad \qquad 0,010 \text{ mol} \qquad \qquad 0,010 \text{ mol}$$

$$\text{S : } \quad - \qquad \qquad 0,007 \text{ mol} \qquad \qquad 0,010 \text{ mol}$$

$$\text{BM O-(4-metilbenzoil)piroksikam} \qquad \qquad = 449.48$$

$$\text{Berat teoritis O-(4-metilbenzoil)piroksikam} \qquad = 0,010 \text{ mol} \times 449.48$$

$$= 4.4948 \text{ gram}$$

$$\text{Hasil O-(4-metilbenzoil)piroksikam yang didapat} \qquad = 2.0137 \text{ gram}$$

$$\text{Jadi, persentase hasil} = \frac{\text{Berat senyawa hasil sintesis}}{\text{Berat senyawa secara teoritis}} \times 100\%$$

$$= \frac{2.0137}{4.4948} \times 100\%$$

$$= 44,8 \%$$

LAMPIRAN B
PERHITUNGAN BERAT

Piroksikam	= mol x BM
	= 0.010 mol x 331.4
	= 3.314 gram
4-metilbenzoil klorida	= mol x BM
	= 0.017 mmol x 154.5
	= 2.6265 gram
Volume 4-metilbenzoil klorida	= $\frac{\text{berat}}{\rho}$
	= $\frac{2.6265}{1,17}$
	= 2.2 ml \approx 2 ml
Piridin	= mol x BM
	= 0.025 mol x 79,10
	= 1,9775 gram
Volume piridin	= $\frac{\text{berat}}{\rho}$
	= $\frac{1,9775}{0,9827}$
	= 2,0123 ml \approx 2 ml

LAMPIRAN C

PERHITUNGAN % HAMBATAN NYERI SENYAWA UJI O-(4-METILBENZOIL)PIROKSIKAM DAN SENYAWA PEMBANDING PIROKSIKAM

Perhitungan :

Piroksikam	O-(4-metilbenzoil)piroksikam
Dosis 1 mg/kg BB	Dosis 1 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{91 - 71}{91} \times 100\%$ $= 21,80 \%$	$\% \text{ Hambatan nyeri} = \frac{91 - 69,6}{91} \times 100\%$ $= 23,52 \%$
Dosis 2 mg/kg BB	Dosis 2 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{91 - 61,4}{91} \times 100\%$ $= 32,53 \%$	$\% \text{ Hambatan nyeri} = \frac{91 - 59,4}{91} \times 100\%$ $= 34,73 \%$
Dosis 3 mg/kg BB	Dosis 3 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{91 - 50,4}{91} \times 100\%$ $= 44,62 \%$	$\% \text{ Hambatan nyeri} = \frac{91 - 47,8}{91} \times 100\%$ $= 47,47 \%$
Dosis 4 mg/kg BB	Dosis 4 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{91 - 40}{91} \times 100\%$ $= 56,04 \%$	$\% \text{ Hambatan nyeri} = \frac{91 - 37,6}{91} \times 100\%$ $= 58,68 \%$
Dosis 5 mg/kg BB	Dosis 5 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{91 - 28,6}{91} \times 100\%$ $= 68,57 \%$	$\% \text{ Hambatan nyeri} = \frac{91 - 27}{91} \times 100\%$ $= 77,33 \%$

LAMPIRAN D
HASIL UJI HSD ANTARA KELOMPOK SENYAWA UJI O-(4-
METILBENZOIL)PIROKSIKAM, SENYAWA PEMBANDING
PIROKSIKAM, DAN KONTROL CMC-NA 0,5%

Post Hoc Tests

Multiple Comparisons

Dependent Variable: GELIAT

Tukey HSD

(I)Dosis	(J)Dosis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	9.60000*	3.07778	.097	-.8429	20.0429
	3	20.60000*	3.07778	.000	10.1571	31.0429
	4	31.00000*	3.07778	.000	20.5571	41.4429
	5	42.40000*	3.07778	.000	31.9571	52.8429
	6	1.40000	3.07778	1.000	-9.0429	11.8429
	7	11.60000*	3.07778	.019	1.1571	22.0429
	8	23.20000*	3.07778	.000	12.7571	33.6429
	9	33.40000*	3.07778	.000	22.9571	43.8429
	10	44.00000*	3.07778	.000	33.5571	54.4429
	11	-20.00000*	3.07778	.000	-30.4429	-9.5571
2	1	-9.60000*	3.07778	.097	-20.0429	.8429
	3	11.00000*	3.07778	.031	.5571	21.4429
	4	21.40000*	3.07778	.000	10.9571	31.8429
	5	32.80000*	3.07778	.000	22.3571	43.2429
	6	-8.20000*	3.07778	.249	-18.6429	2.2429
	7	2.00000	3.07778	1.000	-8.4429	12.4429
	8	13.60000*	3.07778	.003	3.1571	24.0429
	9	23.80000*	3.07778	.000	13.3571	34.2429
	10	34.40000*	3.07778	.000	23.9571	44.8429
	11	-29.60000*	3.07778	.000	-40.0429	-19.1571

3	1	-20.60000 [*]	3.07778	.000	-31.0429	-10.1571
	2	-11.00000 [*]	3.07778	.031	-21.4429	-.5571
	4	10.40000 [*]	3.07778	.052	-.0429	20.8429
	5	21.80000 [*]	3.07778	.000	11.3571	32.2429
	6	-19.20000 [*]	3.07778	.000	-29.6429	-8.7571
	7	-9.00000 [*]	3.07778	.149	-19.4429	1.4429
	8	2.60000	3.07778	.999	-7.8429	13.0429
	9	12.80000 [*]	3.07778	.006	2.3571	23.2429
	10	23.40000 [*]	3.07778	.000	12.9571	33.8429
	11	-40.60000 [*]	3.07778	.000	-51.0429	-30.1571
	4	1	-31.00000 [*]	3.07778	.000	-41.4429
2		-21.40000 [*]	3.07778	.000	-31.8429	-10.9571
3		-10.40000 [*]	3.07778	.052	-20.8429	.0429
5		11.40000 [*]	3.07778	.022	.9571	21.8429
6		-29.60000 [*]	3.07778	.000	-40.0429	-19.1571
7		-19.40000 [*]	3.07778	.000	-29.8429	-8.9571
8		-7.80000 [*]	3.07778	.314	-18.2429	2.6429
9		2.40000	3.07778	.999	-8.0429	12.8429
10		13.00000 [*]	3.07778	.005	2.5571	23.4429
11		-51.00000 [*]	3.07778	.000	-61.4429	-40.5571
5		1	-42.40000 [*]	3.07778	.000	-52.8429
	2	-32.80000 [*]	3.07778	.000	-43.2429	-22.3571
	3	-21.80000 [*]	3.07778	.000	-32.2429	-11.3571
	4	-11.40000 [*]	3.07778	.022	-21.8429	-.9571
	6	-41.00000 [*]	3.07778	.000	-51.4429	-30.5571
	7	-30.80000 [*]	3.07778	.000	-41.2429	-20.3571
	8	-19.20000 [*]	3.07778	.000	-29.6429	-8.7571
	9	-9.00000 [*]	3.07778	.149	-19.4429	1.4429
	10	1.60000	3.07778	1.000	-8.8429	12.0429
	11	-62.40000 [*]	3.07778	.000	-72.8429	-51.9571
	6	1	-1.40000	3.07778	1.000	-11.8429
2		8.20000 [*]	3.07778	.249	-2.2429	18.6429

	3	19.20000*	3.07778	.000	8.7571	29.6429
	4	29.60000*	3.07778	.000	19.1571	40.0429
	5	41.00000*	3.07778	.000	30.5571	51.4429
	7	10.20000*	3.07778	.061	-.2429	20.6429
	8	21.80000*	3.07778	.000	11.3571	32.2429
	9	32.00000*	3.07778	.000	21.5571	42.4429
	10	42.60000*	3.07778	.000	32.1571	53.0429
	11	-21.40000*	3.07778	.000	-31.8429	-10.9571
7	1	-11.60000*	3.07778	.019	-22.0429	-1.1571
	2	-2.00000	3.07778	1.000	-12.4429	8.4429
	3	9.00000*	3.07778	.149	-1.4429	19.4429
	4	19.40000*	3.07778	.000	8.9571	29.8429
	5	30.80000*	3.07778	.000	20.3571	41.2429
	6	-10.20000*	3.07778	.061	-20.6429	.2429
	8	11.60000*	3.07778	.019	1.1571	22.0429
	9	21.80000*	3.07778	.000	11.3571	32.2429
	10	32.40000*	3.07778	.000	21.9571	42.8429
	11	-31.60000*	3.07778	.000	-42.0429	-21.1571
8	1	-23.20000*	3.07778	.000	-33.6429	-12.7571
	2	-13.60000*	3.07778	.003	-24.0429	-3.1571
	3	-2.60000	3.07778	.999	-13.0429	7.8429
	4	7.80000*	3.07778	.314	-2.6429	18.2429
	5	19.20000*	3.07778	.000	8.7571	29.6429
	6	-21.80000*	3.07778	.000	-32.2429	-11.3571
	7	-11.60000*	3.07778	.019	-22.0429	-1.1571
	9	10.20000*	3.07778	.061	-.2429	20.6429
	10	20.80000*	3.07778	.000	10.3571	31.2429
	11	-43.20000*	3.07778	.000	-53.6429	-32.7571
9	1	-33.40000*	3.07778	.000	-43.8429	-22.9571
	2	-23.80000*	3.07778	.000	-34.2429	-13.3571
	3	-12.80000*	3.07778	.006	-23.2429	-2.3571
	4	-2.40000	3.07778	.999	-12.8429	8.0429

5		9.00000*	3.07778	.149	-1.4429	19.4429
6		-32.00000*	3.07778	.000	-42.4429	-21.5571
7		-21.80000*	3.07778	.000	-32.2429	-11.3571
8		-10.20000*	3.07778	.061	-20.6429	.2429
10		10.60000*	3.07778	.044	.1571	21.0429
11		-53.40000*	3.07778	.000	-63.8429	-42.9571
10	1	-44.00000*	3.07778	.000	-54.4429	-33.5571
	2	-34.40000*	3.07778	.000	-44.8429	-23.9571
	3	-23.40000*	3.07778	.000	-33.8429	-12.9571
	4	-13.00000*	3.07778	.005	-23.4429	-2.5571
	5	-1.60000	3.07778	1.000	-12.0429	8.8429
	6	-42.60000*	3.07778	.000	-53.0429	-32.1571
	7	-32.40000*	3.07778	.000	-42.8429	-21.9571
	8	-20.80000*	3.07778	.000	-31.2429	-10.3571
	9	-10.60000*	3.07778	.044	-21.0429	-.1571
	11	-64.00000*	3.07778	.000	-74.4429	-53.5571
11	1	20.00000*	3.07778	.000	9.5571	30.4429
	2	29.60000*	3.07778	.000	19.1571	40.0429
	3	40.60000*	3.07778	.000	30.1571	51.0429
	4	51.00000*	3.07778	.000	40.5571	61.4429
	5	62.40000*	3.07778	.000	51.9571	72.8429
	6	21.40000*	3.07778	.000	10.9571	31.8429
	7	31.60000*	3.07778	.000	21.1571	42.0429
	8	43.20000*	3.07778	.000	32.7571	53.6429
	9	53.40000*	3.07778	.000	42.9571	63.8429
	10	64.00000*	3.07778	.000	53.5571	74.4429

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

LAMPIRAN E

HASIL UJI ED₅₀ SENYAWA O-(4-METILBENZOIL)PIROKSIKAM

* * * * * P R O B I T A N A L Y S I S * * * * *

* * * *

Cell Counts and Residuals

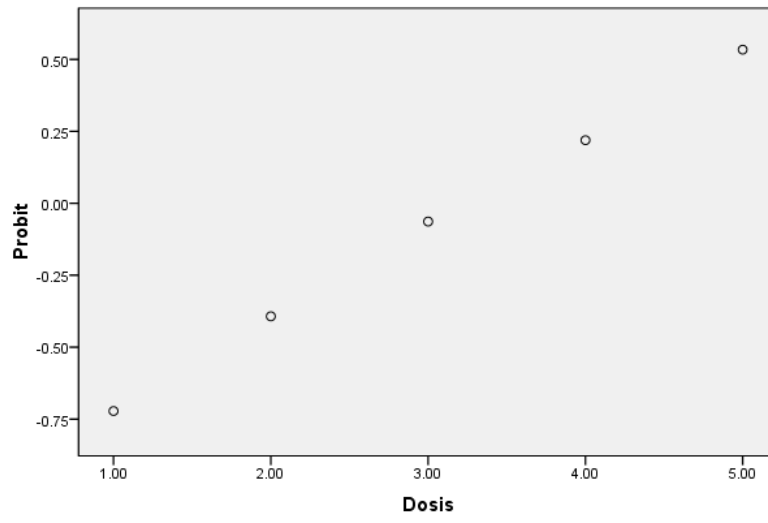
	Num.	Dosis	Number of Subjects	Observed Responses	Expected Responses	Residual	Prob.
PROBIT 1		1.000	100	24	23.934	-.414	.239
	2	2.000	100	35	34.590	.140	.346
	3	3.000	100	47	46.638	.832	.466
	4	4.000	100	59	59.004	-.324	.590
	5	5.000	100	70	70.529	-.199	.705

Confidence Limits

	Probability	95% Confidence Limits for Dosis		
		Estimate	Lower Bound	Upper Bound
PROBIT	0.01	-4.185	-6.822	-2.638
	0.02	-3.311	-5.638	-1.943
	0.03	-2.757	-4.888	-1.501
	0.04	-2.340	-4.324	-1.168
	0.05	-2.001	-3.866	-.897
	0.06	-1.712	-3.476	-.666
	0.07	-1.459	-3.134	-.463
	0.08	-1.233	-2.829	-.281
	0.09	-1.026	-2.551	-.115
	0.1	-.837	-2.296	.038
	0.15	-.051	-1.242	.674
	0.2	.573	-.410	1.185
	0.25	1.109	.296	1.631

0.3	1.590	.921	2.040
0.35	2.036	1.486	2.434
0.4	2.458	2.002	2.828
0.45	2.868	2.473	3.236
0.5	3.270	2.904	3.672
0.55	3.673	3.302	4.140
0.6	4.082	3.680	4.642
0.65	4.505	4.052	5.180
0.7	4.951	4.432	5.759
0.75	5.432	4.833	6.392
0.8	5.968	5.272	7.105
0.85	6.592	5.779	7.941
0.9	7.378	6.412	8.998
0.91	7.567	6.565	9.253
0.92	7.773	6.730	9.531
0.93	8.000	6.911	9.837
0.94	8.253	7.114	10.179
0.95	8.542	7.344	10.570
0.96	8.881	7.615	11.029
0.97	9.298	7.947	11.593
0.98	9.852	8.389	12.344
0.99	10.726	9.084	13.528

Probit Transformed Responses



LAMPIRAN F

HASIL UJI ED₅₀ SENYAWA PIROKSIKAM

* * * * * P R O B I T A N A L Y S I S * * * * *

* * * *

Cell Counts and Residuals

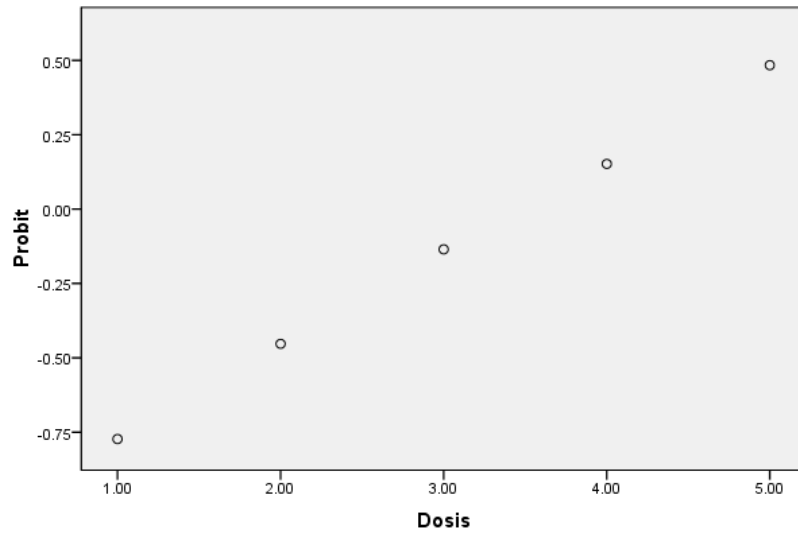
	Num.	Dosis	Number of Subjects	Observed Responses	Expected Responses	Residual	Prob.
PROBIT 1	1	1.000	100	22	22.120	-.140	.221
	2	2.000	100	33	32.398	.132	.324
	3	3.000	100	45	44.235	.385	.442
	4	4.000	100	56	56.614	-.574	.566
	5	5.000	100	69	68.371	.199	.684

Confidence Limits

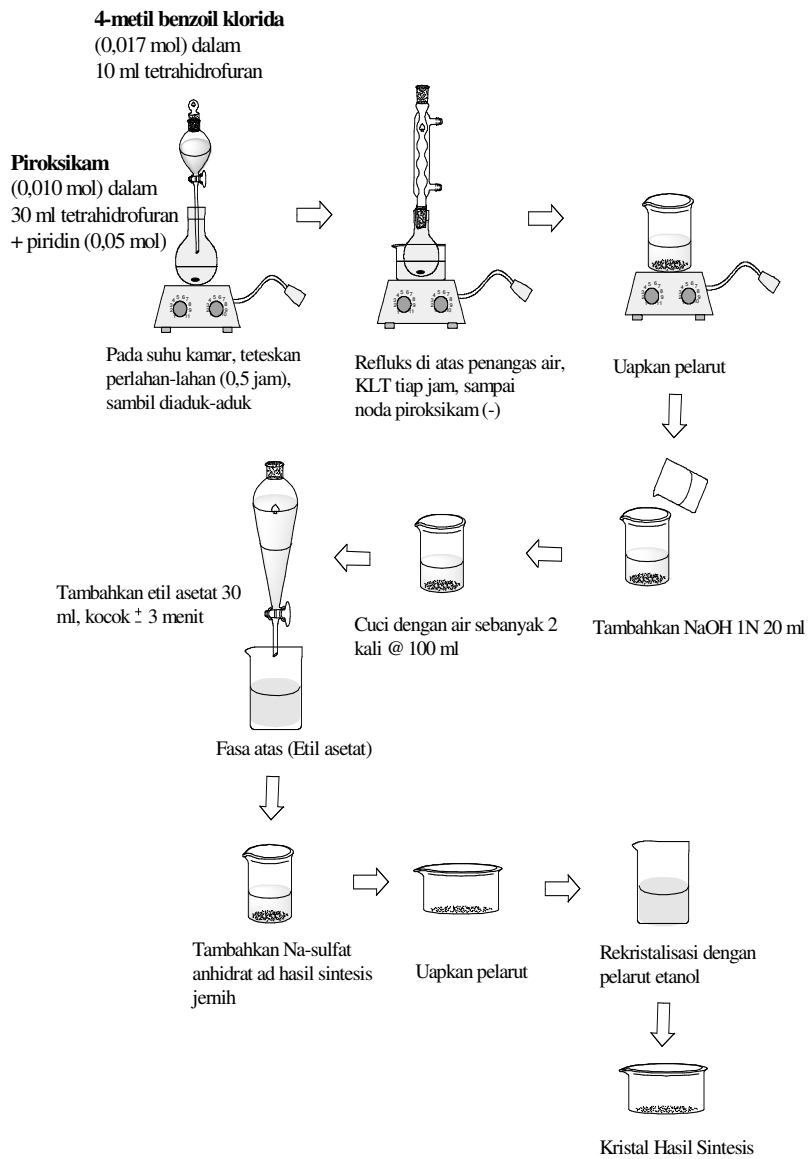
	Probability	95% Confidence Limits for Dosis		
		Estimate	Lower Bound	Upper Bound
PROBIT	0.01	-4.001	-6.596	-2.482
	0.02	-3.126	-5.409	-1.786
	0.03	-2.571	-4.656	-1.343
	0.04	-2.153	-4.091	-1.010
	0.05	-1.814	-3.632	-.738
	0.06	-1.525	-3.241	-.507
	0.07	-1.271	-2.898	-.304
	0.08	-1.044	-2.592	-.121
	0.09	-.838	-2.314	.045
	0.1	-.648	-2.058	.198
	0.15	.139	-1.003	.836
	0.2	.764	-.171	1.349
	0.25	1.301	.535	1.798

0.3	1.782	1.157	2.213
0.35	2.229	1.716	2.614
0.4	2.652	2.223	3.019
0.45	3.062	2.682	3.442
0.5	3.465	3.099	3.893
0.55	3.869	3.486	4.374
0.6	4.279	3.856	4.886
0.65	4.702	4.223	5.430
0.7	5.149	4.600	6.015
0.75	5.630	4.999	6.653
0.8	6.167	5.437	7.369
0.85	6.792	5.943	8.208
0.9	7.579	6.576	9.269
0.91	7.769	6.728	9.526
0.92	7.975	6.893	9.805
0.93	8.202	7.074	10.112
0.94	8.456	7.277	10.455
0.95	8.745	7.508	10.847
0.96	9.084	7.778	11.307
0.97	9.502	8.111	11.873
0.98	10.057	8.552	12.626
0.99	10.932	9.247	13.814

Probit Transformed Responses



LAMPIRAN G
SKEMA SINTESIS O-(4-METILBENZOIL)PIROKSIKAM



LAMPIRAN H
SERTIFIKAT ANALISIS PIROKSIKAM

南通精华制药股份有限公司检验报告
NANTONG JINGHUA PHARMACEUTICAL CO. LTD.
CERTIFICATE OF ANALYSIS
APIs.ADD:43 Yaogang Road,Nantong Jiangsu China
Tel:86-513-85609405/85609406

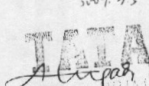
吡罗昔康
PIROXICAM MICRONIZED

Batch No.	PRX2009005M	Manufacture Date	2009.3.4
Total Quantity	200.0KG	Report Date	2009.3.5
Commercial Quantity	200.0KG	Re-test Date	2012.3.3
Inspection No.	09030020		

TEST	SPECIFICATIONS (USP)	RESULTS
Characteristics	off-white to light tan or light yellow odorless powder	Complies
Identification	A. IR B. UV C. TLC	Complies
Water	≤0.5%	0.32%
Residue on ignition	≤0.3%	0.14%
Heavy metals	≤0.005%	<0.005%
Organic volatile impurities	complies	Complies
Residual solvents	Ethanol ≤0.5%	<0.5%
Particle size	100%≤1000mesh	Complies
Assay	97.0-103.0%	99.46%

Conclusion The product meets the requirements of USP 31 and the additional items defined by customer

Analyst	Supervisor	Chief of Laboratory	QA Release Date
<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	2009.3.5


 PT. JAH PHARMACEUTICAL

LAMPIRAN I
SERTIFIKAT HEWAN COBA MENCIT (*MUS MUSCULUS*)

CV. SURABAYA MOUSE SERVICE
WEDORO MASJID NO. 20-E RT. 01 RW.05 WEDORO
KECAMATAN WARU SIDOARJO
TELP. 081938310682 – 03170259110

Yang bertanda tangan di bawah ini:

Nama : M. Syamsul Bahri, S.Kom

Selaku penanggung jawab Pengembangan Hewan Percobaan

Menerangkan bahwa yang digunakan pada penelitian:

Judul : Sintesis O-(4-Metil Benzoil) Piroksikam dan Uji Aktivitas Analgesik terhadap Mencit (*Mus Musculus*).
Peneliti : Sazkia Dian Rizkyana.
Institusi : Fakultas Farmasi Universitas Katolik Widya Mandala Surabaya
NRP : 2443006075

Merupakan hewan uji dengan spesifikasi:

Mencit galur : Swiss Webster
Umur : 2 – 3 bulan
Jenis kelamin : Jantan
Jumlah : 55 ekor

Demikian surat keterangan ini dibuat untuk dapat digunakan sebaik-baiknya.

Sidoarjo, 30 Maret 2010



(M. Syamsul Bahri, S.Kom)