

LAMPIRAN A
PERHITUNGAN PERSENTASE HASIL SINTESIS SENYAWA 4-
METOKSIBENZOIL PIROKSIKAM

Reaksi :

	Piroksikam	+	4-metoksibenzoil klorida	→	4-metoksibenzoil piroksikam
Mula :	0,010mol		0,017 mol		
Bereaksi :	0,010mol		0,010 mol		0,010mol
Sisa :	-		0,007 mol		0,010mol

Perhitungan berat teoritis senyawa 4-metoksibenzoil piroksikam :

$$\begin{aligned}
 \text{BM 4-metoksibenzoil piroksikam} &= 121,49 \\
 \text{Berat 4-metoksibenzoil piroksikam} &= 0,010 \text{ mol} \times \text{BM senyawa} \\
 &= 0,010 \text{ mol} \times 121,49 \\
 &= 1,2149 \text{ gram}
 \end{aligned}$$

Berat senyawa hasil sintesis yang diperoleh = 1,256 gram

Perhitungan persentase hasil :

$$\begin{aligned}
 \% \text{ hasil} &= \frac{\text{berat senyawa hasil sintesis}}{\text{berat senyawa secara teoritis}} \times 100\% \\
 &= \frac{1,256}{1,2149} \times 100 \% \\
 &= 103,383 \%
 \end{aligned}$$

LAMPIRAN B
PERHITUNGAN BERAT

Piroksikam	$\begin{aligned} &= \text{mol} \times \text{BM} \\ &= 0,010 \text{ mol} \times 84,76 \\ &= 0,8476 \text{ gram} \end{aligned}$
4-metoksibenzoil klorida	$\begin{aligned} &= \text{mol} \times \text{BM} \\ &= 0,017 \text{ mmol} \times 121,49 \\ &= 2,06533 \text{ gram} \end{aligned}$
Piridin	$\begin{aligned} &= \text{mol} \times \text{BM} \\ &= 0,025 \text{ mol} \times 79,10 \\ &= 1,9775 \text{ gram} \end{aligned}$
Volume piridin	$\begin{aligned} &= \frac{\text{berat}}{\rho} \\ &= \frac{1,9775}{0,9827} \\ &= 2,0123 \text{ ml} \approx 2 \text{ ml} \end{aligned}$

LAMPIRAN C

PERHITUNGAN % HAMBATAN NYERI SENYAWA UJI 4-

METOKSIBENZOIL PIROKSIKAM DAN SENYAWA

PEMBANDING PIROKSIKAM

$$\% \text{ hambatan nyeri} = \frac{f_K - f_T}{f_K} \times 100 \%$$

f_T = frekuensi geliat rata-rata pada kelompok uji atau kelompok pembanding

f_K = frekuensi geliat rata-rata pada kelompok kontrol

Piroksikam	4-metoksibenzoil piroksikam
Dosis 1 mg/kg BB	Dosis 1 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{90,4 - 44,0}{90,4} \times 100\%$ $= 51,3 \%$	$\% \text{ Hambatan nyeri} = \frac{90,4 - 23,5}{90,4} \times 100\%$ $= 74 \%$
Dosis 3 mg/kg BB	Dosis 3 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{90,4 - 65,9}{90,4} \times 100\%$ $= 27,1 \%$	$\% \text{ Hambatan nyeri} = \frac{90,4 - 43,4}{90,4} \times 100\%$ $= 52 \%$
Dosis 5 mg/kg BB	Dosis 5 mg/kg BB
$\% \text{ Hambatan nyeri} = \frac{90,4 - 76,8}{90,4} \times 100\%$ $= 15 \%$	$\% \text{ Hambatan nyeri} = \frac{90,4 - 67,0}{90,4} \times 100\%$ $= 25,9 \%$

LAMPIRAN D

HASIL UJI HSD ANTARA KELOMPOK SENYAWA UJI 4-

METOKSIBENZOIL PIROKSIKAM, SENYAWA PEMBANDING

PIROKSIKAM

DAN KONTROL CMC-Na 0,5%

Post Hoc Tests

Multiple Comparisons

Dependent Variable: frekuensi_geliat
Tukey HSD

(I) dosis	(J) dosis	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
		Lower Bound	Upper Bound	Lower Bound	Upper Bound	Lower Bound
k	su1	21.200(*)	2.389	.000	13.62	28.78
	su3	39.200(*)	2.389	.000	31.62	46.78
	su5	60.600(*)	2.389	.000	53.02	68.18
	p1	39.800(*)	2.389	.000	32.22	47.38
	p3	59.600(*)	2.389	.000	52.02	67.18
su1	p5	69.400(*)	2.389	.000	61.82	76.98
	k	-21.200(*)	2.389	.000	-28.78	-13.62
	su3	18.000(*)	2.389	.000	10.42	25.58
	su5	39.400(*)	2.389	.000	31.82	46.98
	p1	18.600(*)	2.389	.000	11.02	26.18
su3	p3	38.400(*)	2.389	.000	30.82	45.98
	p5	48.200(*)	2.389	.000	40.62	55.78
	k	-39.200(*)	2.389	.000	-46.78	-31.62
	su1	-18.000(*)	2.389	.000	-25.58	-10.42
	su5	21.400(*)	2.389	.000	13.82	28.98
su5	p1	.600	2.389	1.000	-6.98	8.18
	p3	20.400(*)	2.389	.000	12.82	27.98
	p5	30.200(*)	2.389	.000	22.62	37.78
	k	-60.600(*)	2.389	.000	-68.18	-53.02
	su1	-39.400(*)	2.389	.000	-46.98	-31.82

p1	su3	-21.400(*)	2.389	.000	-28.98	-13.82
	p1	-20.800(*)	2.389	.000	-28.38	-13.22
	p3	-1.000	2.389	1.000	-8.58	6.58
	p5	8.800(*)	2.389	.015	1.22	16.38
	k	-39.800(*)	2.389	.000	-47.38	-32.22
p3	su1	-18.600(*)	2.389	.000	-26.18	-11.02
	su3	-.600	2.389	1.000	-8.18	6.98
	su5	20.800(*)	2.389	.000	13.22	28.38
	p3	19.800(*)	2.389	.000	12.22	27.38
	p5	29.600(*)	2.389	.000	22.02	37.18
p5	k	-59.600(*)	2.389	.000	-67.18	-52.02
	su1	-38.400(*)	2.389	.000	-45.98	-30.82
	su3	-20.400(*)	2.389	.000	-27.98	-12.82
	su5	1.000	2.389	1.000	-6.58	8.58
	p1	-19.800(*)	2.389	.000	-27.38	-12.22
p5	p5	9.800(*)	2.389	.005	2.22	17.38
	k	-69.400(*)	2.389	.000	-76.98	-61.82
	su1	-48.200(*)	2.389	.000	-55.78	-40.62
	su3	-30.200(*)	2.389	.000	-37.78	-22.62
	su5	-8.800(*)	2.389	.015	-16.38	-1.22
	p1	-29.600(*)	2.389	.000	-37.18	-22.02
	p3	-9.800(*)	2.389	.005	-17.38	-2.22

* The mean difference is significant at the .05 level.

LAMPIRAN E
HASIL UJI ED₅₀ SENYAWA PIROKSIKAM

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

* * * *

Cell Counts and Residuals

	N u m b e r	dosis	Numb er of Subje cts	Observ ed Respon ses	Expected Response s	Residual	Proba bility
PROB IT	1	1.000	100	23	23.150	.300	.231
	2	3.000	100	43	44.002	-.642	.440
	3	5.000	100	67	66.716	.314	.667

Confidence Limits

		95% Confidence Limits for dosis		
	Probability	Estimate	Lower Bound	Upper Bound
PROBIT	.010	-4.463	-8.042	-2.587
	.020	-3.528	-6.677	-1.871
	.030	-2.934	-5.812	-1.415
	.040	-2.488	-5.163	-1.071
	.050	-2.125	-4.635	-.791
	.060	-1.816	-4.186	-.552
	.070	-1.545	-3.793	-.342
	.080	-1.302	-3.441	-.153
	.090	-1.082	-3.122	.018
	.100	-.879	-2.828	.177
	.150	-.038	-1.619	.839
	.200	.631	-.667	1.375
	.250	1.204	.137	1.847

.300	1.719	.843	2.287
.350	2.196	1.474	2.717
.400	2.649	2.042	3.158
.450	3.087	2.551	3.624
.500	3.518	3.009	4.125
.550	3.949	3.428	4.665
.600	4.387	3.826	5.243
.650	4.840	4.216	5.860
.700	5.317	4.612	6.526
.750	5.832	5.029	7.255
.800	6.405	5.486	8.075
.850	7.073	6.011	9.037
.900	7.914	6.665	10.255
.910	8.117	6.822	10.550
.920	8.338	6.992	10.870
.930	8.580	7.180	11.223
.940	8.851	7.388	11.617
.950	9.160	7.626	12.067
.960	9.524	7.905	12.596
.970	9.970	8.248	13.247
.980	10.563	8.702	14.114
.990	11.498	9.417	15.480

LAMPIRAN F

HASIL UJI ED₅₀ SENYAWA 4-METOKSIBENZOIL PIROKSIKAM

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

* * * *

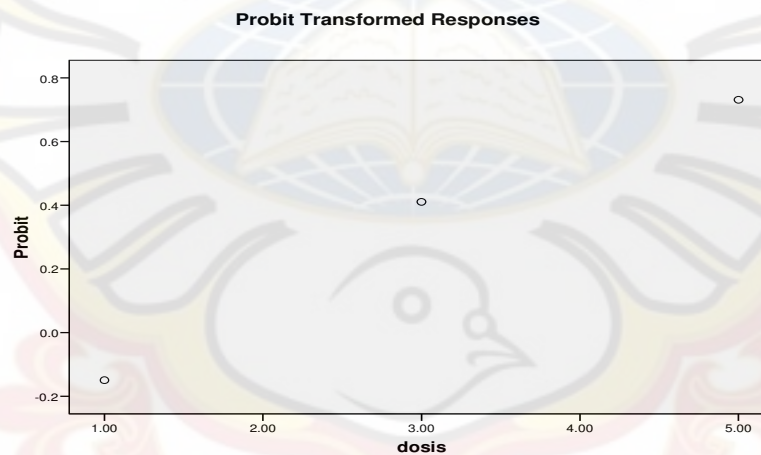
Cell Counts and Residuals

	Nu mbe r	dosis	Numb er of Subje cts	Obser ved Respo nses	Expecte d Respon ses	Residual	Probabi lity
PROB IT	1	1.000	100	44	45.510	-1.480	.455
	2	3.000	100	66	63.008	2.922	.630
	3	5.000	100	77	78.140	-1.370	.781

Confidence Limits

		95% Confidence Limits for dosis		
	Probability	Estimate	Lower Bound	Upper Bound
PROBIT	.010	-8.952	-17.305	-5.454
	.020	-7.726	-15.223	-4.581
	.030	-6.949	-13.902	-4.027
	.040	-6.364	-12.910	-3.610
	.050	-5.888	-12.102	-3.270
	.060	-5.483	-11.416	-2.980
	.070	-5.128	-10.814	-2.726
	.080	-4.810	-10.275	-2.498
	.090	-4.521	-9.785	-2.291
	.100	-4.255	-9.334	-2.100
	.150	-3.153	-7.471	-1.307
	.200	-2.277	-5.994	-.672
	.250	-1.525	-4.731	-.124
	.300	-.851	-3.602	.374

.350	-.225	-2.562	.842
.400	.368	-1.586	1.296
.450	.942	-.656	1.751
.500	1.507	.233	2.223
.550	2.072	1.079	2.739
.600	2.646	1.863	3.340
.650	3.239	2.563	4.070
.700	3.865	3.186	4.954
.750	4.539	3.775	5.992
.800	5.291	4.378	7.200
.850	6.167	5.047	8.643
.900	7.269	5.863	10.484
.910	7.535	6.058	10.931
.920	7.824	6.269	11.417
.930	8.142	6.500	11.952
.940	8.497	6.758	12.551
.950	8.902	7.050	13.234
.960	9.378	7.393	14.038
.970	9.963	7.814	15.028
.980	10.740	8.372	16.345
.990	11.966	9.248	18.423



LAMPIRAN G
SERTIFIKAT 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

17/7 '09 PD 1159 = 25 kg

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 


PT. TARA FARMA

LAMPIRAN H

SERTIFIKAT HEWAN COBA MENCIT (*MUS MUSCULUS*)

MENTIK SHOP

JAGIR SIDOSERMO 6 NO.82

SURABAYA

TELP. 08123068978 - 08121655548

Yang bertanda tangan dibawah ini :

Nama : Livia Devi Cahyono
Jabatan : Penanggung Jawab MenTik Shop

Menerangkan bahwa hewan yang digunakan pada penelitian :

Judul : Sintesis 4 – Metoksibenzoil Piroksikam
Peneliti : Ni Putu Dian N.
NRP : 2443002111

Merupakan hewan uji dengan spesifikasi :

Mencit galur : Swiss
Umur : 2 – 3 bulan
Jenis Kelamin : Jantan
Jumlah : 24 ekor

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

Surabaya, 23 Juni 2010

Penanggung Jawab

Mentik
Supplier Mencit - Tikus

Livia Devi Cahyono