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LAMPIRAN

1. Perhitungan Dosis berdasarkan luas permukaan tubuh (BSA) (Jang-Woo Shin, 2010)

Table 1. Conversion of Human Doses to Animal Doses Based on BSA.

Species	Body Weight (kg)	Working Weight Range (kg)	Body Surface Area (m ²)	km Factor	Conversion Factor
Human					
Adult	60	-	1.6	37	1.00
Child	20	-	0.8	25	1.48
Baboon	12	7-23	0.6	20	1.85
Dog	10	5-17	0.5	20	1.85
Monkey	3	1.4-4.9	0.24	12	3.08
Rabbit	1.8	0.9-3.0	0.15	12	3.08
Guinea pig	0.4	0.208-0.700	0.05	8	4.63
Rat	0.15	0.080-0.270	0.025	6	6.17
Hamster	0.08	0.047-0.157	0.02	5	7.40
Mouse	0.02	0.011-0.034	0.007	3	12.33

a. Dosis Tikus

$$\text{Dosis Tikus} = 100 \text{ mg/kgBB}$$

$$= 100 \text{ mg} \times 0,15$$

$$= 15 \text{ mg}$$

- Volume pemberian maksimal secara intravena pada tikus yaitu 1 ml/100 gram

$$V_p \text{ tikus (200 gram)} = \text{volume pemerian maksimal tikus} \times \text{Bobot Tikus}$$

$$= \frac{1 \text{ ml}}{100 \text{ gram}} \times 200 \text{ gram}$$

$$= 2 \text{ ml}$$

b. Dosis Marmut

$$\text{Dosis Marmut} = \text{Dosis Tikus} \times \frac{\text{KM Tikus}}{\text{KM Marmut}}$$

$$= 100 \text{ mg/kgBB} \times \frac{6}{8}$$

$$= 75 \text{ mg/kgBB Marmut}$$



$$= 75 \text{ mg} \times 0,4$$

$$= 30 \text{ mg}$$

- Volume pemberian maksimal secara intravena pada marmut yaitu 0,1 ml/250 gram

Vp marmut (400 gram) = volume pemerian maksimal marmut x Bobot marmut

$$= \frac{0,1 \text{ ml}}{250 \text{ gram}} \times 400 \text{ gram}$$

$$= 0,16 \text{ ml}$$

$$= 0,2 \text{ ml}$$

c. Dosis Kelinci

$$\text{Dosis Kelinci} = \text{Dosis Tikus} \times \frac{\text{KM Tikus}}{\text{KM Kelinci}}$$

$$= 100 \text{ mg/kgBB} \times \frac{6}{12}$$

$$= 50 \text{ mg} \times 1,8$$

$$= 90 \text{ mg}$$

- Volume pemberian maksimal secara intravena pada kelinci yaitu 5 ml/2,5 kg

Vp kelinci (1,5 kg) = volume pemerian maksimal kelinci x Bobot kelinci

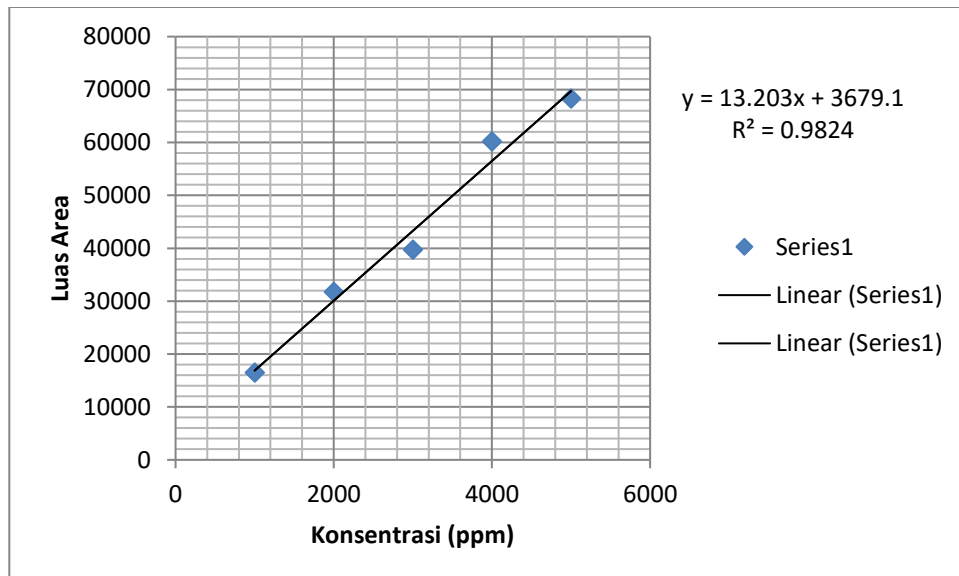
$$= \frac{5 \text{ ml}}{2,5 \text{ kg}} \times 1,5 \text{ kg}$$

$$= 3 \text{ ml}$$



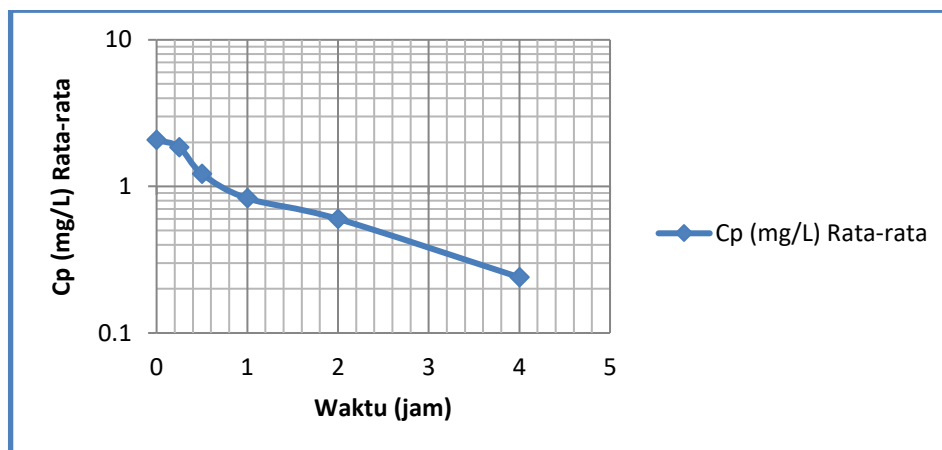
2. Kurva Baku THES (Muh Tang, 2018)

Konsentrasi (ppm)	Luas Area
1000	16.502
2000	31.731
3000	39.730
4000	60.192
5000	68.287



3. Penentuan Parameter Farmakokinetik THES (*Tetra Hydroxy Ethyl Disulphate*) pada hewan uji Marmot (*Cavia porcellus*)

No	Waktu (Jam)	Cp (mg/L) Rata-rata
1	0,25	1,85
2	0,50	1,22
3	1	0,83
4	2	0,60
5	4	0,24



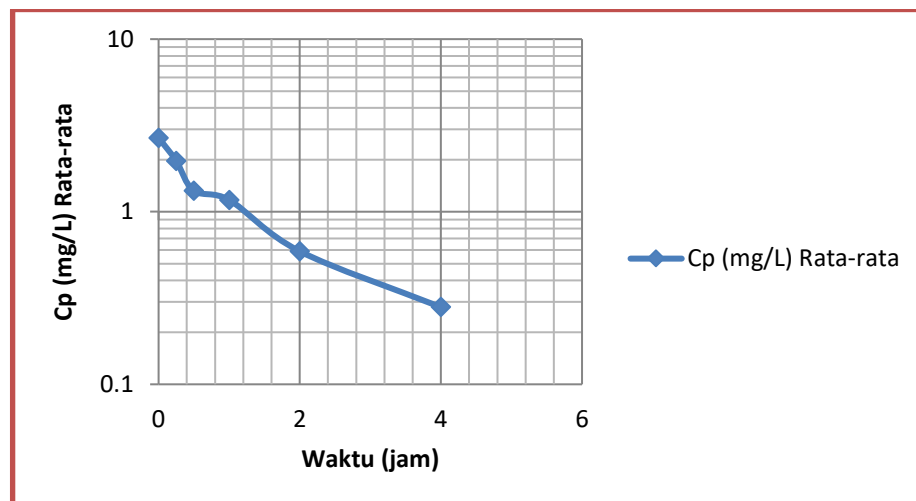
waktu sampling darah, t (jam)	Cp Rata-Rata	ΔvCp	Δ Time	AUC of Segment
0,25	1,85	1,54	0,25	0,38
0,5	1,22	1,03	0,5	0,51
1	0,83	0,72	1	0,72
2	0,6	0,42	2	0,84
4	0,24	0,12	-4	-0,48

Parameter Farmakokinetik			
$K_e(\text{Jam}^{-1})$	$t_{1/2}(\text{Jam})$	$V_d(\text{L})$	AUC (mg jam/L)
0,42	1,65	5,60	3,50



4. Penentuan Parameter Farmakokinetik THES (*Tetra Hydroxy Ethyl Disulphate*) pada hewan uji kelinci (*Oryctolagus cuniculus*)

No	Waktu (Jam)	Cp (mg/L) Rata-rata
1	0,25	1,97
2	0,50	1,32
3	1	1,17
4	2	0,59
5	4	0,28



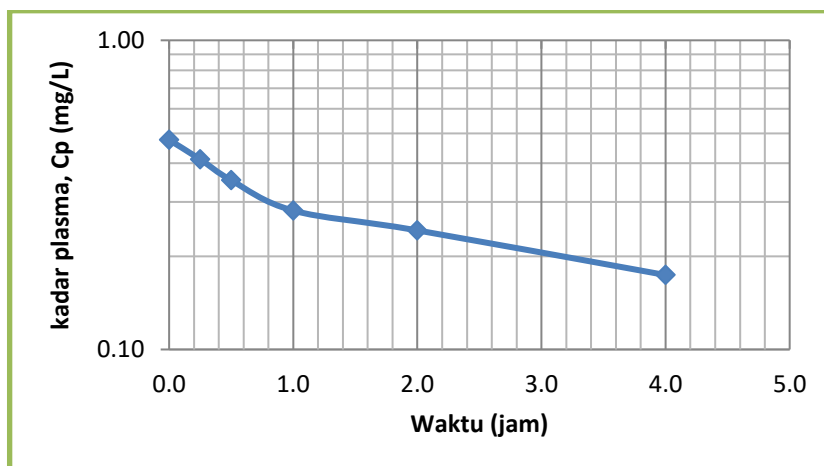
waktu sampling darah, t (jam)	Cp Rata-Rata	ΔvCp	Δ Time	AUC of Segment
0,25	1,97	1,65	0,25	0,41
0,5	1,32	1,25	0,5	0,62
1	1,17	0,88	1	0,88
2	0,59	0,44	2	0,87
4	0,28	0,14		

Parameter Farmakokinetik			
$K_e(\text{Jam}^{-1})$	$t_{1/2}(\text{Jam})$	$V_d(\text{L})$	AUC (mg jam/L)
0,51	1,37	12,31	3,92



5. Penentuan Parameter Farmakokinetik THES (*Tetra Hydroxy Ethyl Disulphate*) pada hewan uji tikus (*Rattus novergicus*)

No.	Waktu (jam)	Cp (mg/L) Rata-rata
1	0,25	0,41
2	0,50	0,35
3	1	0,28
4	2	0,24
5	4	0,17



waktu sampling darah, t (jam)	Cp Rata-Rata	ΔvCp	Δ Time	AUC of Segment
0,25	0,41	0,38	0,25	0,10
0,5	0,35	0,32	0,5	0,16
1	0,28	0,26	1	0,26
2	0,24	0,21	2	0,41
4	0,17	0,09		

Parameter Farmakokinetik Fisiologis			
K_e (Jam ⁻¹)	$t_{1/2}$ (Jam)	V_d (L)	AUC (mg jam/L)
0,07	10,10	9,95	3,28

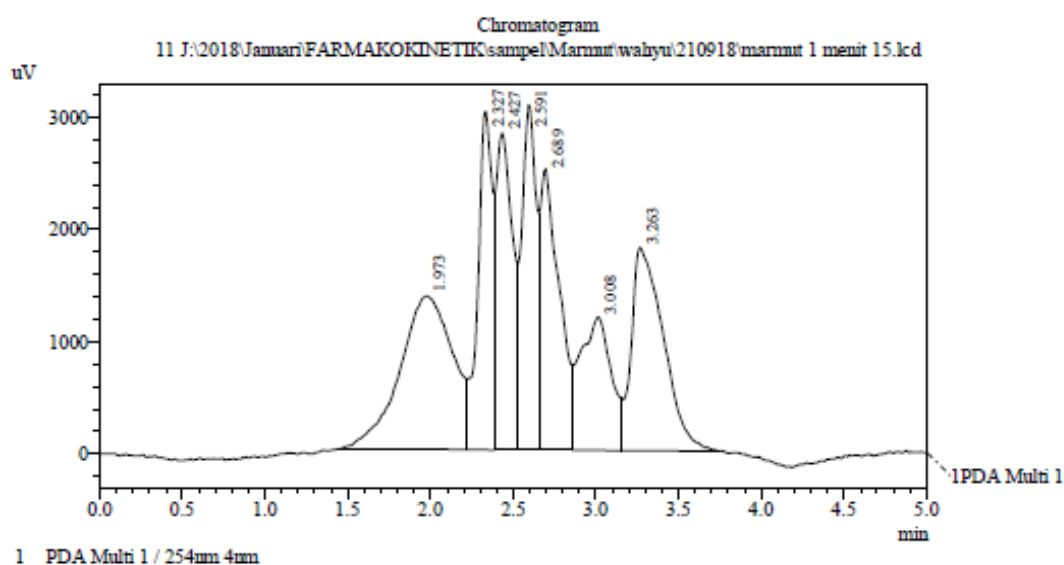


6. Hasil Kromatogram Sampel Plasma THES Marmut

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Fri21Sep092018

Pusat Penelitian Fakultas Farmasi
 lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PeakTable
 PDA Ch1 254mm 4mm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.973	30468	1368	20.674	8.658
2	2.327	19305	3020	13.099	19.118
3	2.427	19146	2828	12.992	17.903
4	2.591	18824	3077	12.773	19.482
5	2.689	19852	2506	13.471	15.865
6	3.008	15500	1186	10.517	7.512
7	3.263	24279	1810	16.474	11.462
Total		147374	15794	100.000	100.000

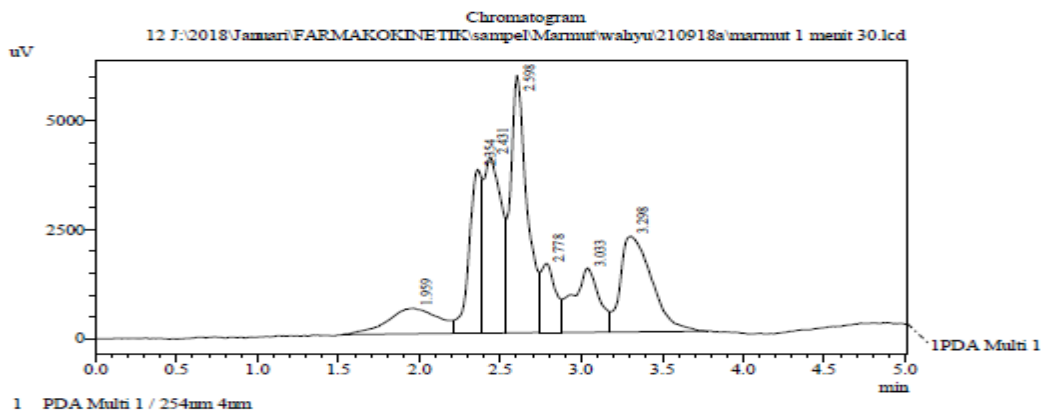
Gambar 14. Hasil Kromatogram Sampel Plasma Marmut 1 Menit Ke 15



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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Fri21Sep092018



PeakTable

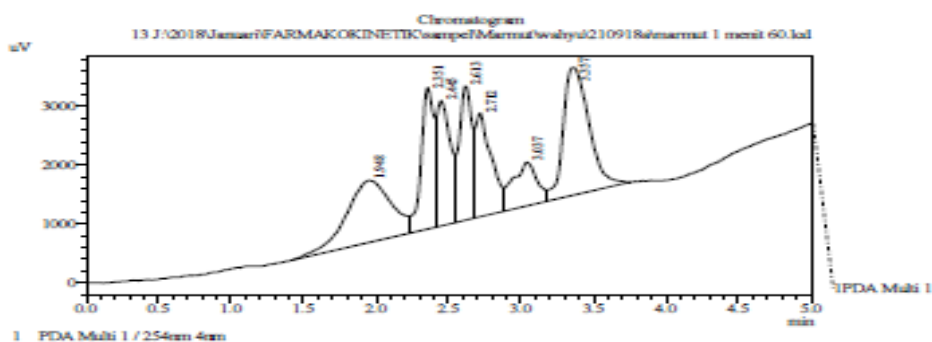
Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.959	12846	586	7.940	3.000
2	2.354	21372	3752	13.209	19.224
3	2.431	30601	4037	18.913	20.685
4	2.598	41044	5896	25.367	30.207
5	2.778	10013	1584	6.189	8.114
6	3.033	16544	1473	10.225	7.549
7	3.298	29379	2190	18.158	11.220
Total		161800	19517	100.000	100.000

Gambar 15. Hasil Kromatogram Sampel Plasma Marmut 1 Menit Ke 30

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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Fri21Sep092018



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.948	22837	3062	19.933	8.449
2	2.351	18024	2414	15.113	19.207
3	2.445	14033	2127	12.348	16.928
4	2.613	15780	2274	12.029	18.097
5	2.712	15218	1768	11.536	14.069
6	3.037	8768	746	7.653	5.936
7	3.357	26913	2176	23.490	17.313
Total		114573	12567	100.000	100.000

16. Hasil Kromatogram Sampel Plasma Marmut 1 Menit Ke 60

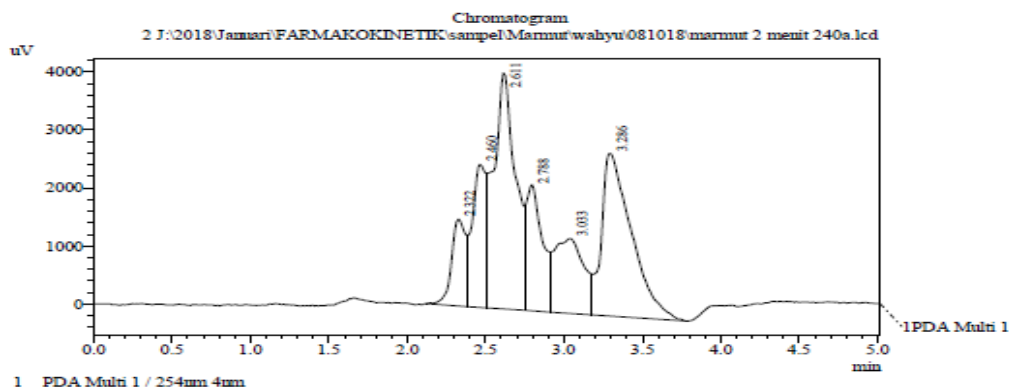


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Mon08Oct102018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PeakTable

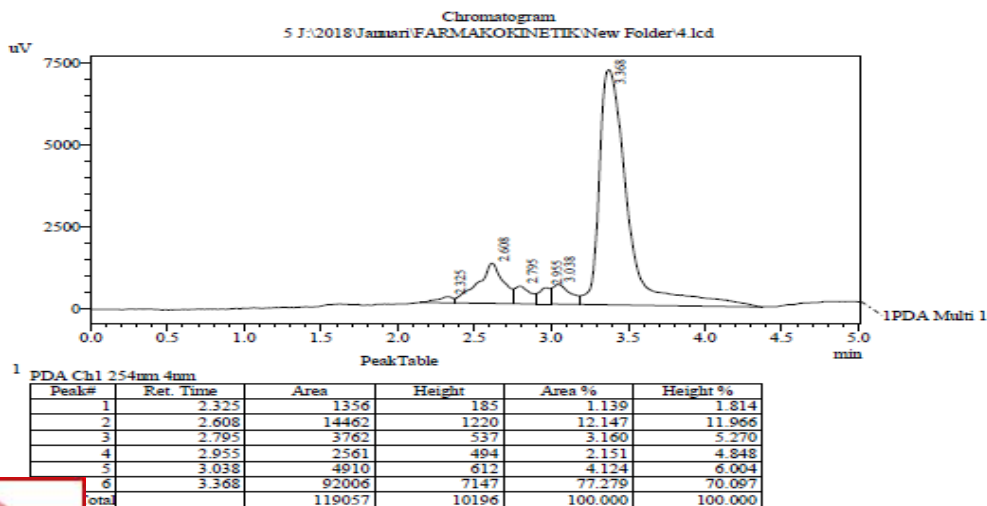
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.322	10091	1496	7.556	10.463
2	2.460	14611	2463	10.941	17.227
3	2.611	39903	4069	29.882	28.458
4	2.788	15085	2178	11.297	15.232
5	3.033	16858	1292	12.624	9.038
6	3.286	36990	2800	27.700	19.582
Total		133537	14297	100.000	100.000

Gambar 17. Hasil Kromatogram Sampel Plasma Marmut 1 Menit Ke 120

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Fri31Aug082018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



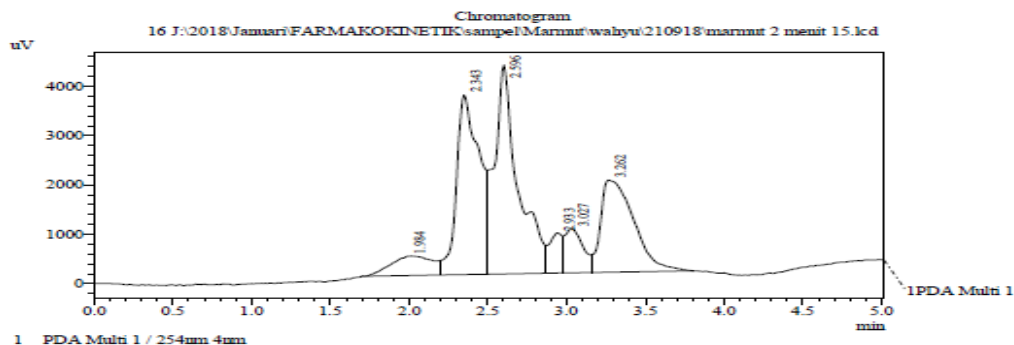
Gambar 18. Hasil Kromatogram Sampel Plasma Marmut 1 Menit Ke 240



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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Fri21Sep092018



PeakTable

PDA Ch1 254nm 4nm

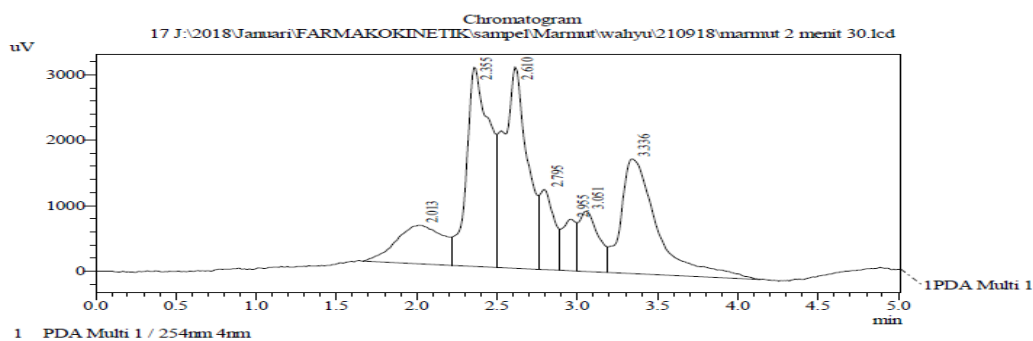
Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.984	7357	386	5.768	3.258
2	2.343	37316	3645	29.254	30.760
3	2.596	43710	4237	34.267	35.761
4	2.933	4614	810	3.617	6.839
5	3.027	7163	902	5.615	7.613
6	3.262	27396	1869	21.478	15.769
Total		127555	11849	100.000	100.000

Gambar 19. Hasil Kromatogram Sampel Plasma Marmut 2 Menit Ke 15

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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Fri21Sep092018



PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.013	12106	587	9.851	5.158
2	2.355	31103	3041	25.309	26.705
3	2.610	32454	3075	26.409	27.000
4	2.795	7312	1223	5.950	10.743
5	2.955	4655	787	3.788	6.911
6	3.051	7805	923	6.351	8.103
7	3.336	27457	1751	22.342	15.379
Total		122893	11388	100.000	100.000

20. Hasil Kromatogram Sampel Plasma Marmut 2 Menit Ke 30

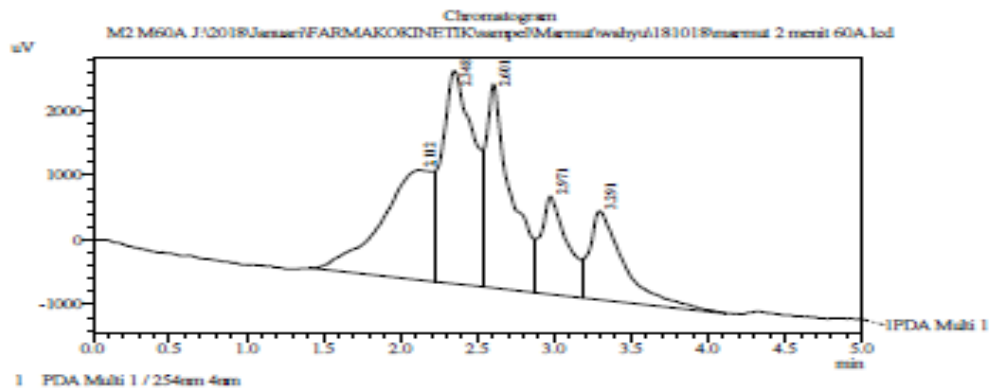


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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Thu18Oct102018



Peak Table

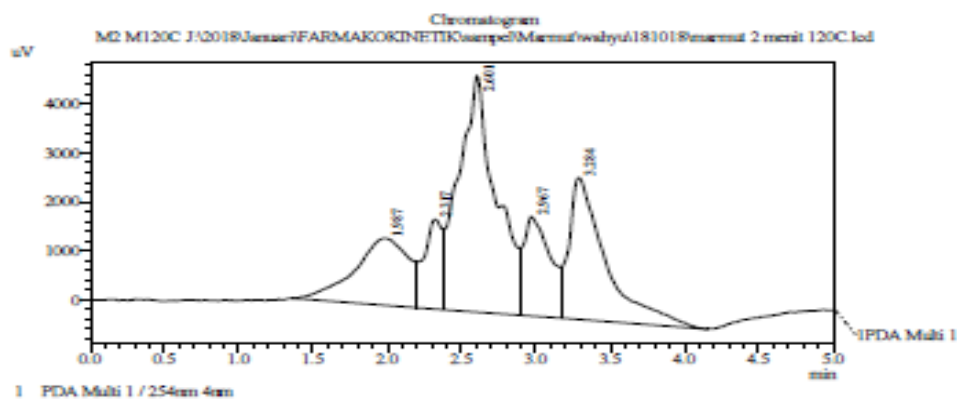
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.112	38856	1702	23.962	15.382
2	2.348	48349	3303	29.816	29.855
3	2.601	35242	3164	21.733	28.600
4	2.971	18647	1520	11.499	13.735
5	3.291	21062	1375	12.989	12.427
Total		162155	11063	100.000	100.000

Gambar 21. Hasil Kromatogram Sampel Plasma Marmut 2 Menit Ke 60

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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Thu18Oct102018



Peak Table

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.987	34524	1372	16.471	10.569
2	2.317	15616	1832	7.450	14.116
3	2.601	85255	4839	40.673	37.282
4	2.967	34463	2037	11.671	13.692
5	3.284	49751	2900	23.735	22.340
Total		209610	12979	100.000	100.000

22. Hasil Kromatogram Sampel Plasma Marmut 2 Menit Ke 120

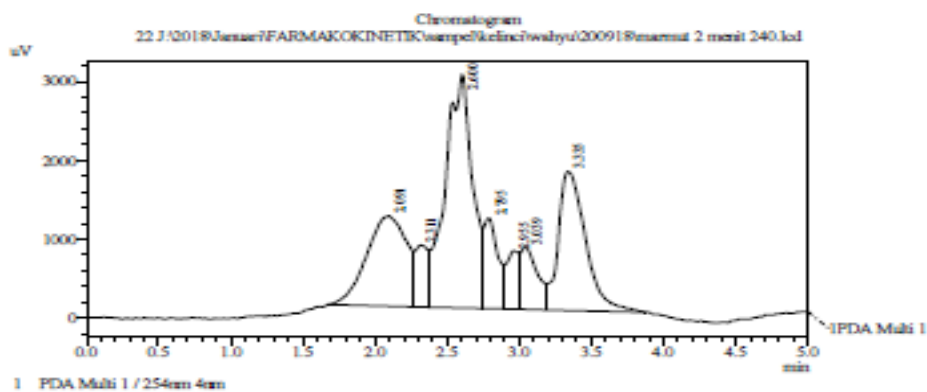


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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Keagihan Penelitian

Fri21Sep092018



PeakTable

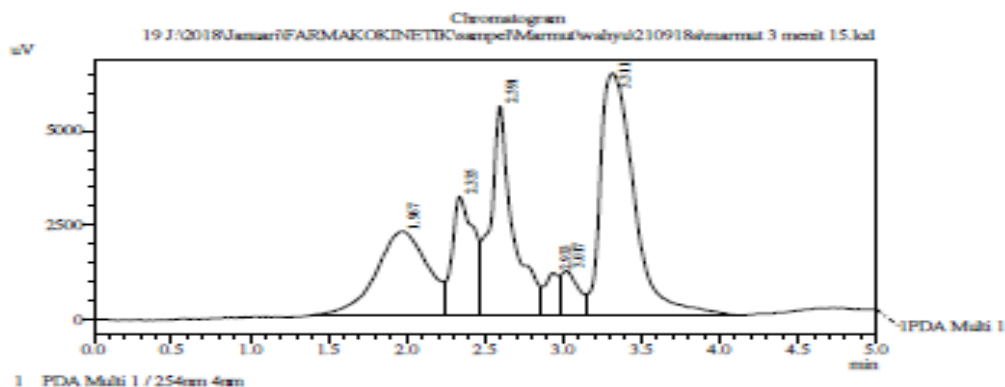
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.091	22256	1143	20.693	12.244
2	2.311	4811	782	4.473	8.376
3	2.600	39121	2067	36.373	31.775
4	2.795	7626	1143	7.091	12.269
5	2.955	4422	733	4.111	7.875
6	3.039	6150	796	5.718	8.530
7	3.335	23169	1768	21.541	18.932
Total		107555	9536	100.000	100.000

Gambar 23. Hasil Kromatogram Sampel Plasma Marmut 2 Menit Ke 240

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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Keagihan Penelitian

Fri21Sep092018



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.967	50633	2238	20.330	11.333
2	2.335	31351	3136	12.588	15.981
3	2.591	24721	5338	21.971	28.223
4	2.933	6846	1122	2.749	5.717
5	3.017	9152	1176	3.675	5.994
6	3.311	92159	6423	38.688	37.732
Total		249065	19624	100.000	100.000

24. Hasil Kromatogram Sampel Plasma Marmut 3 Menit Ke 15

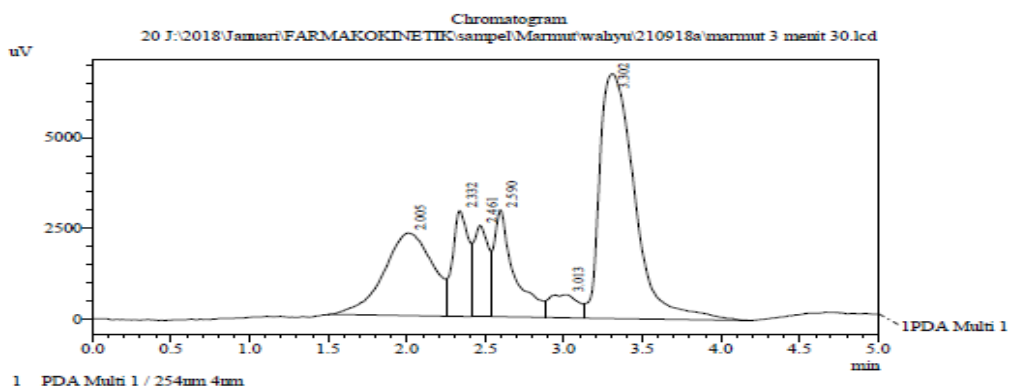


Optimization Software:
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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Fri21Sep092018



PeakTable

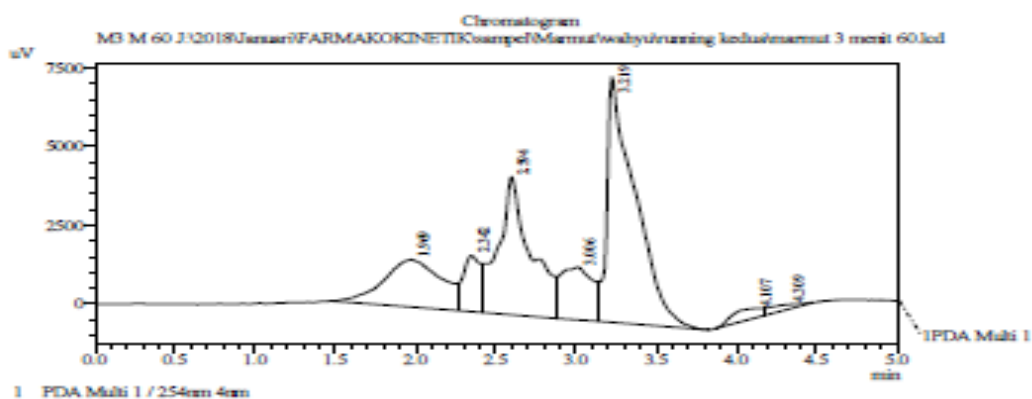
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.005	49401	2275	21.909	12.602
2	2.332	20715	2920	9.187	16.174
3	2.461	16739	2518	7.424	13.950
4	2.590	26127	2956	11.587	16.376
5	3.013	8037	632	3.564	3.502
6	3.302	104461	6751	46.328	37.397
Total		225480	18053	100.000	100.000

Gambar 25. Hasil Kromatogram Sampel Plasma Marmut 3 Menit Ke 30

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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed17Oct102018



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.969	37913	1511	15.919	8.563
2	2.342	14148	1786	5.990	10.124
3	2.594	61447	4383	25.800	24.841
4	3.006	22978	1675	9.522	9.492
5	3.219	94776	7808	39.794	44.355
6	4.107	4643	314	1.949	1.778
7	4.309	2565	167	1.077	0.948
Total		238168	17643	100.000	100.000

26. Hasil Kromatogram Sampel Plasma Marmut 3 Menit Ke 60

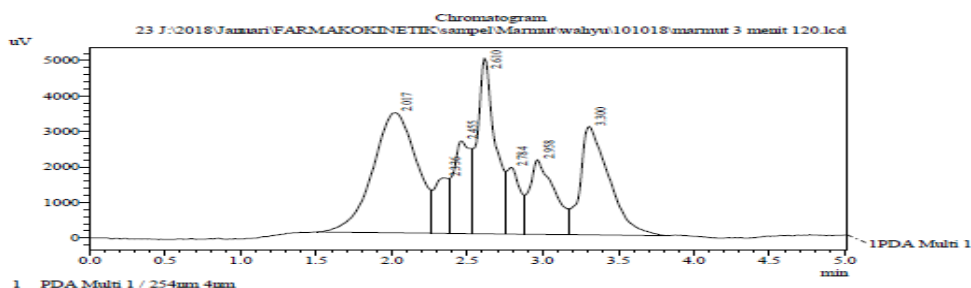


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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed10Oct102018



PeakTable

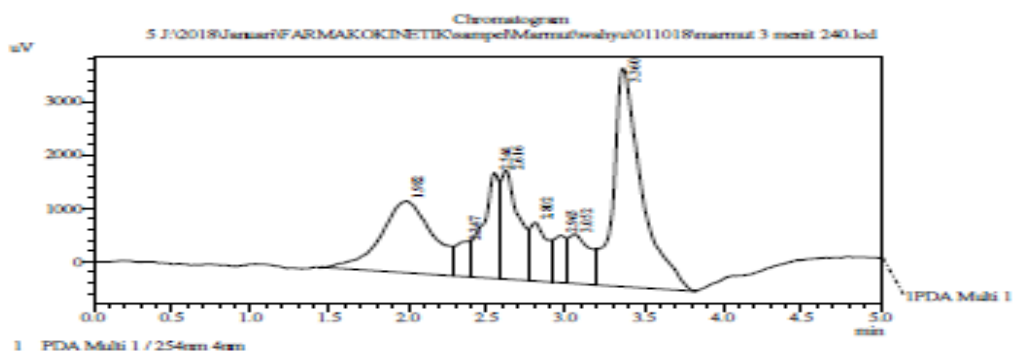
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.017	68497	3377	31.609	17.291
2	2.336	10272	1364	4.740	8.008
3	2.455	20158	2610	9.302	13.364
4	2.610	41323	4950	19.069	25.345
5	2.784	11774	1873	5.433	9.538
6	2.958	23885	2103	11.022	10.765
7	3.300	40791	3055	18.824	15.640
Total		216700	19532	100.000	100.000

Gambar 27. Hasil Kromatogram Sampel Plasma Marmut 3 Menit ke 120

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Pusat Penelitian Fakultas Farmasi
Lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Mon01Oct102018



PeakTable

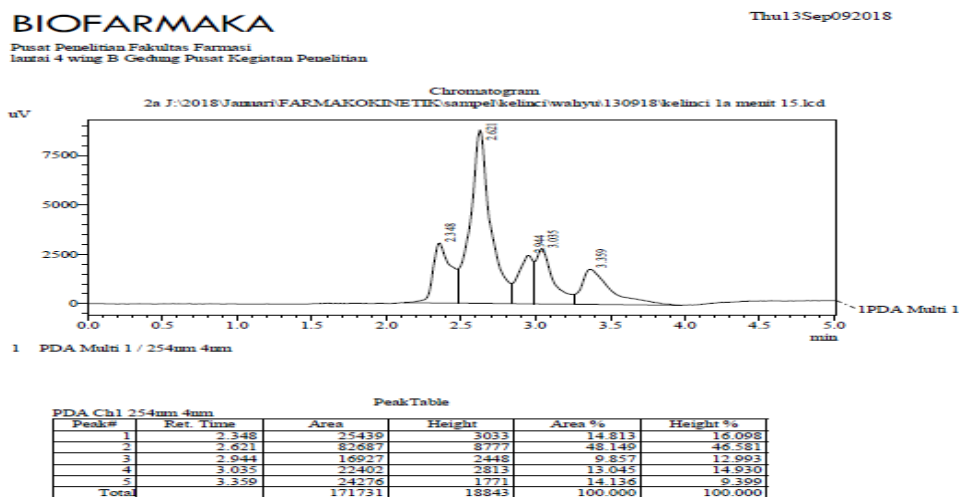
Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.982	31238	1347	27.540	10.324
2	2.347	4074	652	2.940	4.995
3	2.544	14262	1985	10.290	15.215
4	2.636	13936	2046	11.313	15.639
5	2.802	8308	1099	5.995	8.424
6	2.925	4801	851	3.356	6.828
7	3.052	9613	930	6.215	7.130
8	3.360	51238	4098	36.971	31.406
Total		138590	13047	100.000	100.000

Gambar 28. Hasil Kromatogram Sampel Plasma Marmut 3 Menit Ke 240

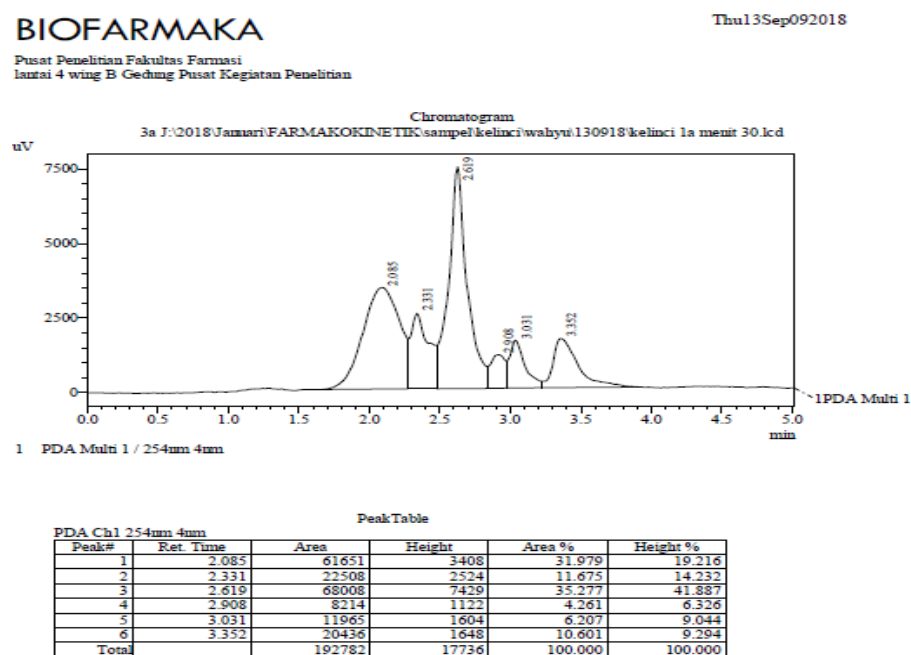


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7. Hasil Kromatogram Sampel Plasma THES Kelinci



Gambar 29. Hasil kromatogram Sampel Plasma Kelinci 1 Menit ke 15



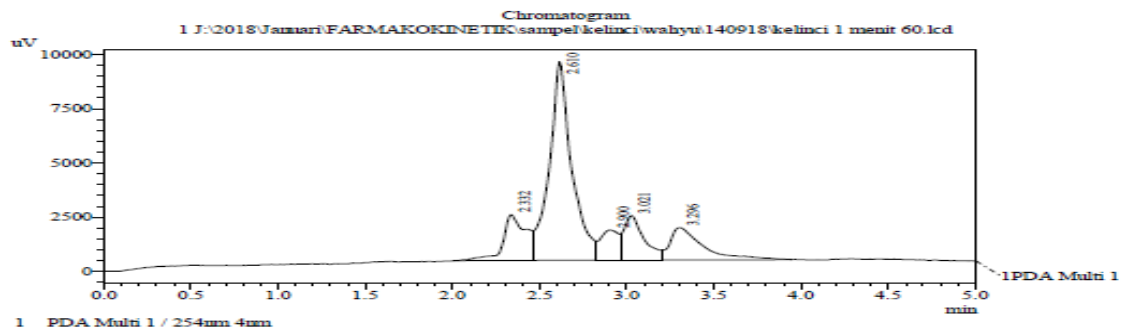
Gambar 30. Hasil Kromatogram Sampel Plasma Kelinci 1 Menit Ke 30



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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Fri14Sep092018



PeakTable					
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.332	19868	2126	13.440	13.096
2	2.610	81903	9175	55.407	56.511
3	2.900	10199	1391	6.900	8.567
4	3.021	16266	2058	11.004	12.673
5	3.296	19584	1486	13.249	9.153
Total		147820	16237	100.000	100.000

Gambar 31. Hasil Kromatogram Sampel Plasma Kelinci 1 Menit Ke 60

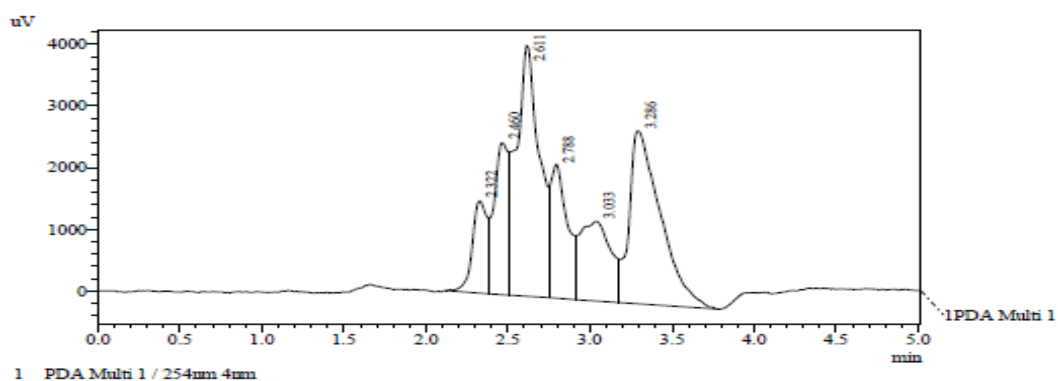
BIOFARMAKA

Mon08Oct102018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Chromatogram

2 J:\2018\Januari\FARMAKOKINETIK\sampel\kelinci\wahyu\081018\marmut 1 menit 120.lcd



PeakTable					
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.322	10091	1496	7.556	10.463
2	2.460	14611	2463	10.941	17.227
3	2.611	39903	4069	29.882	28.458
4	2.788	15085	2178	11.297	15.232
5	3.033	16858	1292	12.624	9.038
6	3.286	36990	2800	27.700	19.582
Total		133537	14297	100.000	100.000

32. Hasil Kromatogram Sampel Plasma Kelinci 1 Menit Ke 120

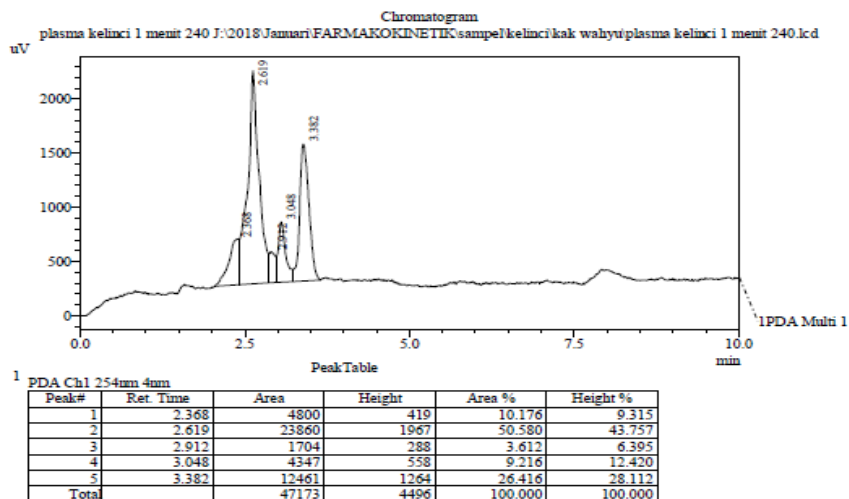


Optimization Software:
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Thu16Aug082018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

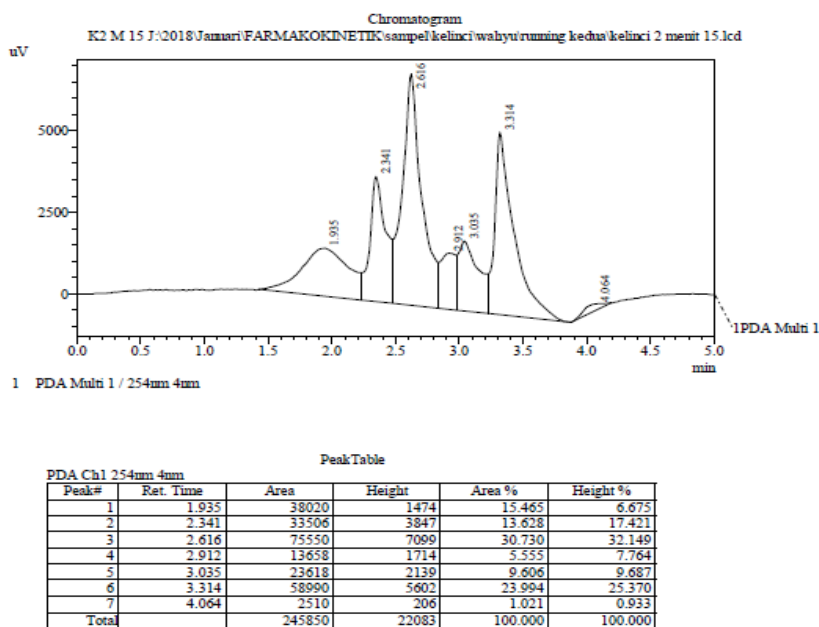


Gambar 33. Hasil Kromatogram Sampel Plasma Kelinci 1 Menit Ke 240

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Wed17Oct102018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



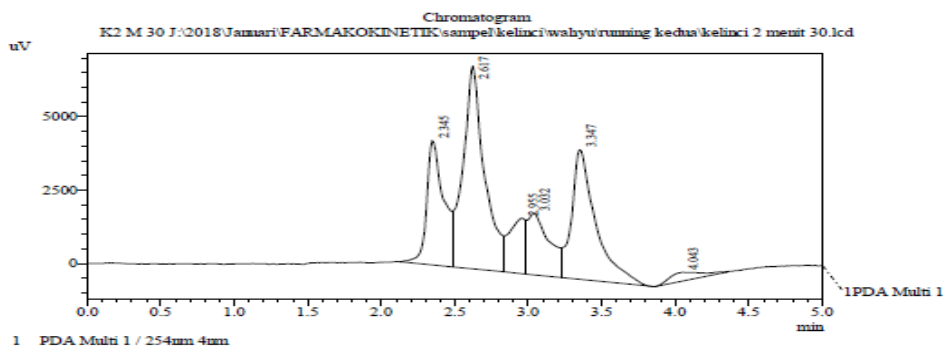
Gambar 34. Hasil Kromatogram Sampel Plasma Kelinci 2 Menit Ke 15



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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed17Oct102018



PeakTable

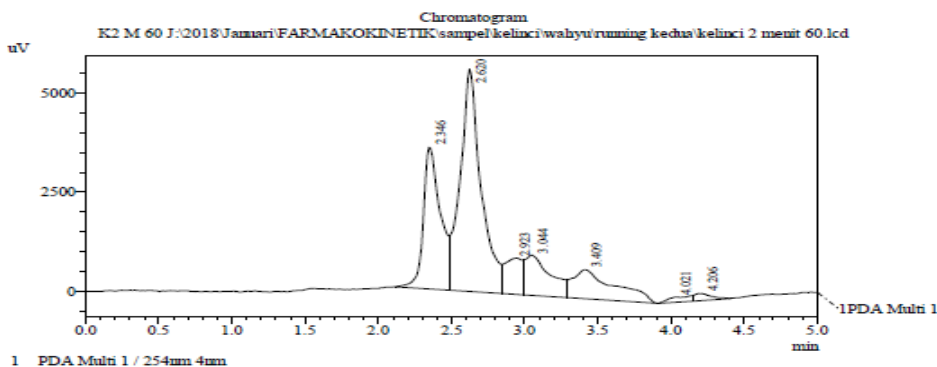
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.345	34537	4232	17.664	21.338
2	2.617	70487	6904	36.051	34.808
3	2.955	14619	1891	7.477	9.532
4	3.032	21736	2100	11.117	10.588
5	3.347	49680	4407	25.409	22.217
6	4.043	4463	301	2.282	1.517
Total		195522	19836	100.000	100.000

Gambar 35. Hasil Kromatogram Sampel Plasma Kelinci 2 Menit Ke 30

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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed17Oct102018



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.346	29277	3566	23.985	29.426
2	2.620	55789	5608	45.706	46.269
3	2.923	7696	898	6.305	7.406
4	3.044	11814	1014	9.679	8.365
5	3.409	14635	731	11.990	6.032
6	4.021	1440	127	1.179	1.048
7	4.206	1410	176	1.155	1.454
Total		122062	12120	100.000	100.000

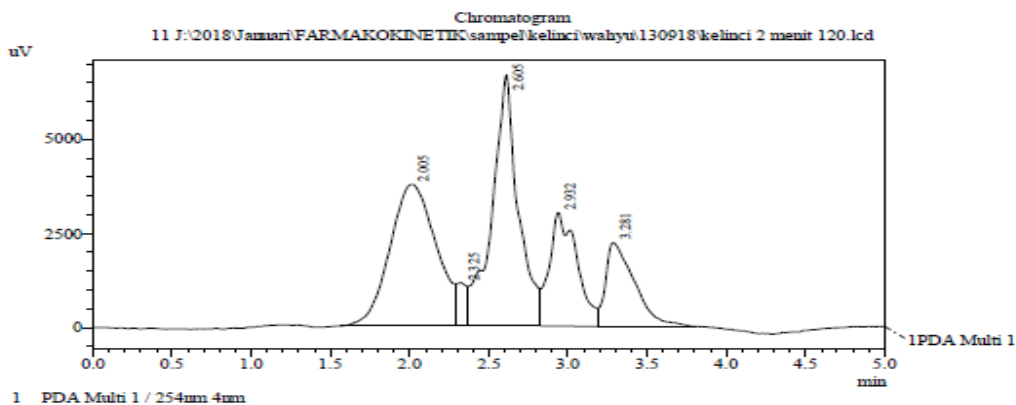
Gambar 36. Hasil Kromatogram Sampel Plasma Kelinci 2 Menit Ke 60



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Thu13Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



Peak Table

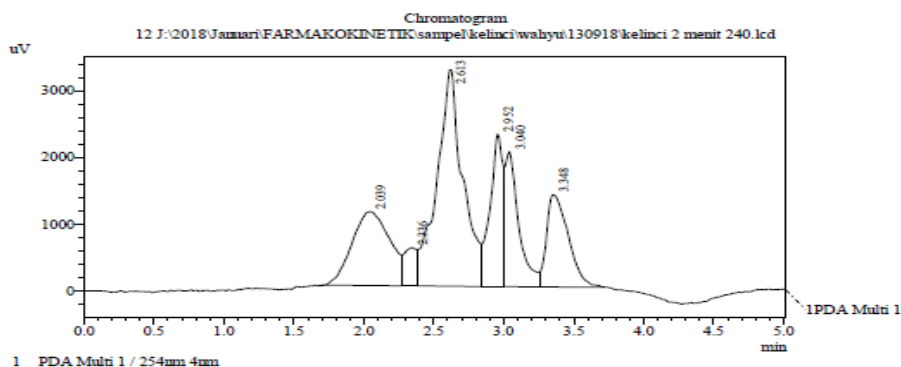
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.005	76588	3758	34.407	22.342
2	2.325	4987	1154	2.240	6.859
3	2.605	76732	6668	34.472	39.647
4	2.932	36383	3014	16.345	17.922
5	3.281	27904	2225	12.536	13.229
Total		222594	16819	100.000	100.000

Gambar 37. Hasil Kromatogram Sampel Plasma Kelinci 2 Menit Ke 120

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Thu13Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



Peak Table

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.039	20829	1104	19.034	10.411
2	2.336	3432	568	3.136	5.351
3	2.613	41884	3239	38.276	30.536
4	2.952	14428	2287	13.185	21.559
5	3.040	13865	2024	12.670	19.083
6	3.348	14990	1386	13.698	13.060
Total		109427	10608	100.000	100.000

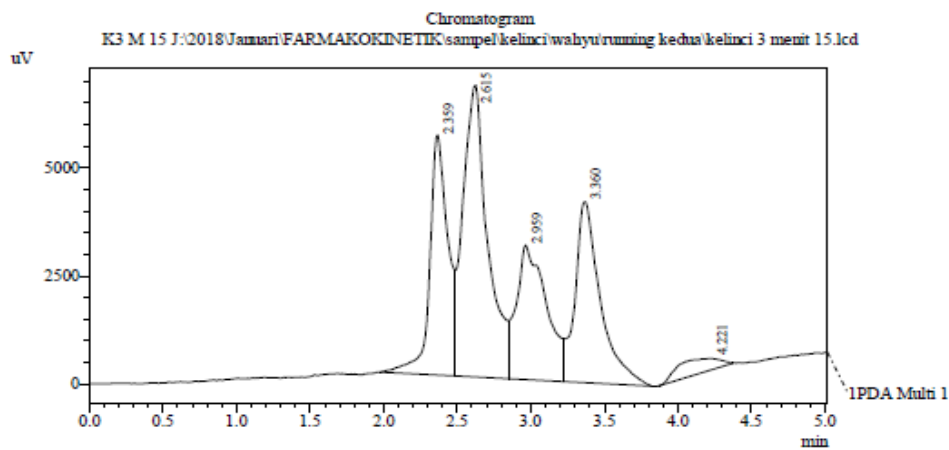
38. Hasil Kromatogram Sampel Plasma Kelinci Menit Ke 240



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Wed 17 Oct 10 2018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



Peak Table

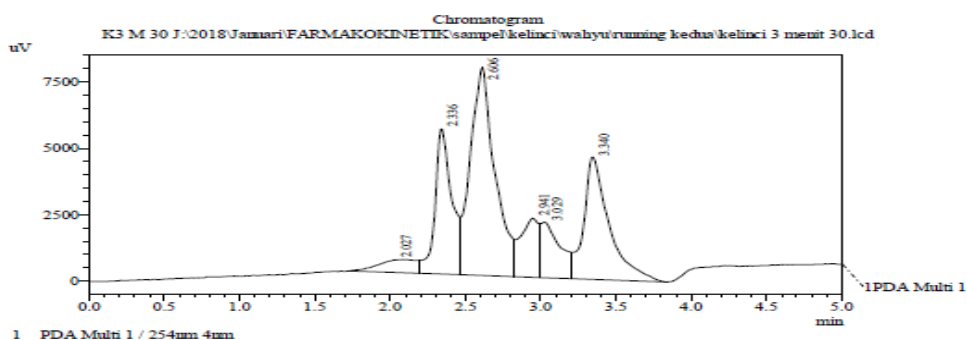
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.359	48494	5556	21.285	27.972
2	2.615	78295	6751	34.365	33.989
3	2.959	44191	3111	19.396	15.664
4	3.360	49906	4179	21.904	21.040
5	4.221	6948	265	3.050	1.336
Total		227833	19861	100.000	100.000

Gambar 39. Hasil Kromatogram Sampel Plasma Kelinci 3 Menit Ke 15

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Wed 17 Oct 10 2018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



Peak Table

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.027	8778	473	3.792	2.087
2	2.336	42478	5453	18.351	24.064
3	2.606	89497	7838	38.664	34.591
4	2.941	19099	2217	8.251	9.786
5	3.029	18526	2084	8.004	9.196
6	3.340	53095	4594	22.938	20.276
Total		231473	22659	100.000	100.000

40. Hasil Kromatogram Sampel Plasma Kelinci 3 Menit Ke 30

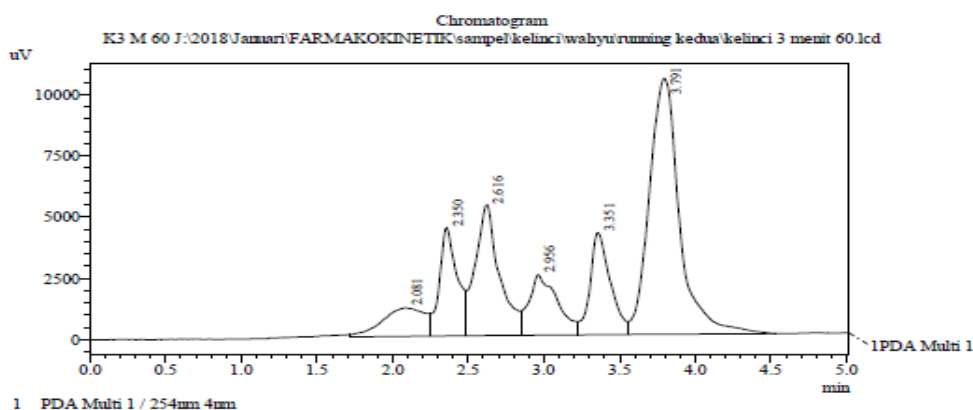


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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed17Oct102018



PeakTable

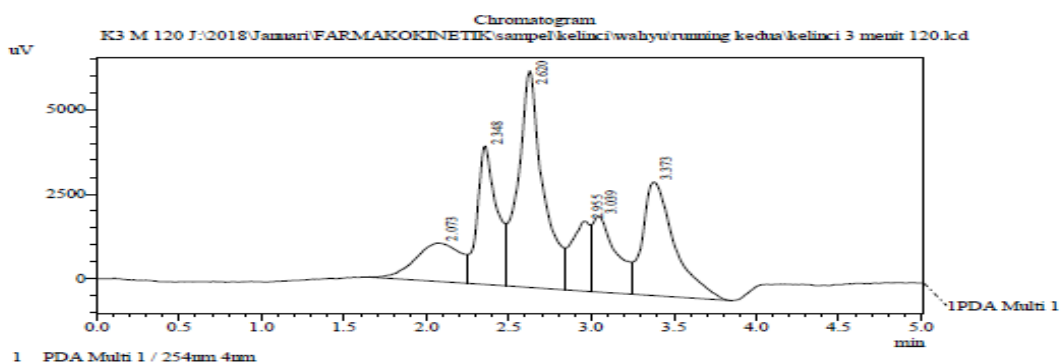
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.081	22979	1155	6.852	4.120
2	2.350	36619	4436	10.920	15.828
3	2.616	58930	5358	17.572	19.119
4	2.956	32288	2468	9.628	8.808
5	3.351	38986	4163	11.625	14.855
6	3.791	145551	10445	43.402	37.269
Total		335353	28024	100.000	100.000

Gambar 41. Hasil Kromatogram Sampel Plasma Kelinci 3 Menit Ke 60

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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed17Oct102018



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.073	21970	1136	10.601	5.901
2	2.348	34351	4084	16.575	21.206
3	2.620	66925	6398	32.293	33.224
4	2.955	16581	2060	8.001	10.696
5	3.039	22115	2253	10.671	11.595
6	3.373	45303	3346	21.860	17.377
Total		207245	19257	100.000	100.000

42. Hasil Kromatogram Sampel Plasma Kelinci 3 Menit Ke 120

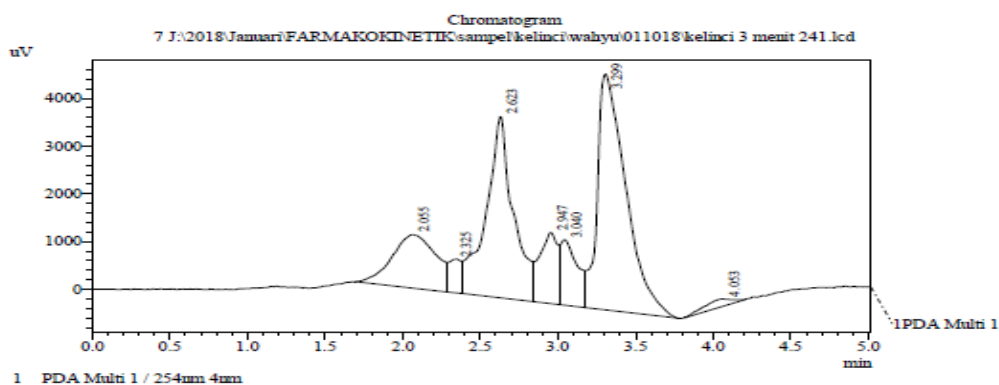


Optimization Software:
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Mon01Oct102018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.055	21905	1114	13.662	8.218
2	2.325	4312	693	2.690	5.113
3	2.623	46128	3790	28.769	27.960
4	2.947	12255	1480	7.643	10.992
5	3.040	10676	1372	6.659	10.117
6	3.299	62868	4937	39.210	36.418
7	4.053	2191	160	1.366	1.182
Totals		160335	13557	100.000	100.000

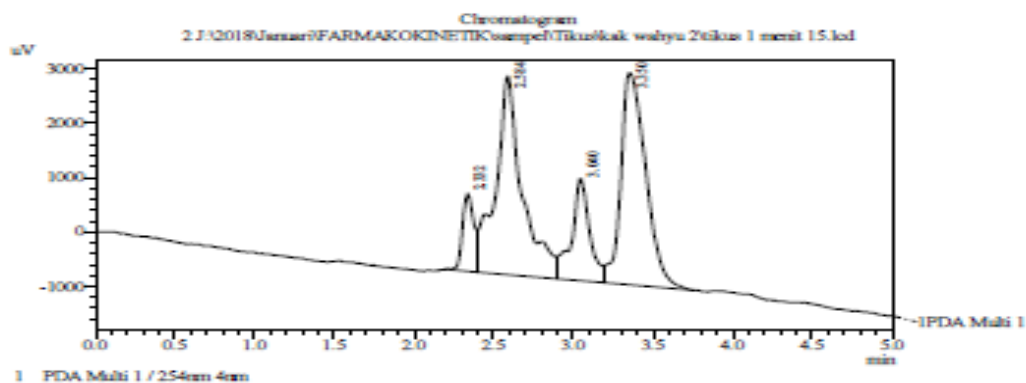
Gambar 43. Hasil Kromatogram Sampel Plasma Kelinci 3 Menit Ke 240

8. Hasil Kromatogram Sampel Plasma THES Tikus

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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.332	7155	1426	8.914	13.131
2	2.584	41835	3649	39.330	33.645
3	3.040	14875	1872	13.984	17.289
4	3.350	42306	3892	50.772	35.936
Totals		106371	10846	100.000	100.000

44. Hasil Kromatogram Sampel Plasma Tikus 1 Menit Ke 15



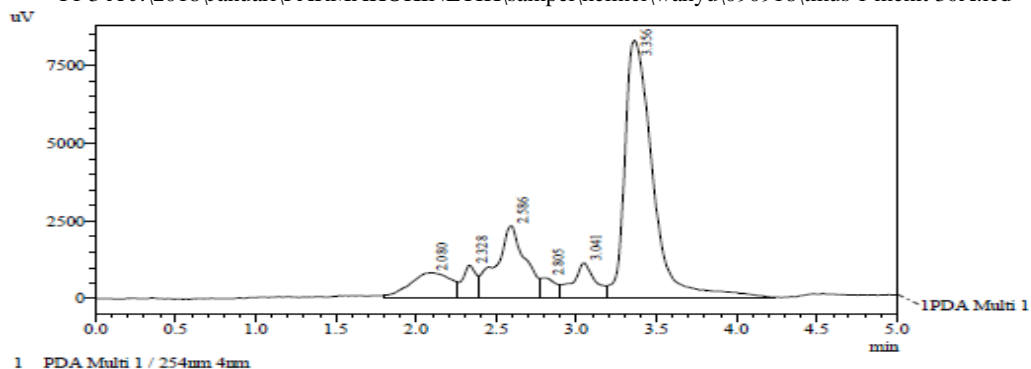
Optimization Software:
www.balesio.com

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Wed09Sep092018

Pusat Penelitian Fakultas Farmasi
 lantai 4 wing B Gedung Pusat Kegiatan Penelitian
 Chromatogram

T1 3 A J:\2018\Januari\FARMAKOKINETIK\sampel\kelinci\wahyu\090918\tikus 1 menit 30A.lcd



PDA Ch1 254nm 4um

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.080	14048	789	8.596	5.572
2	2.328	6007	1031	3.676	7.282
3	2.586	29089	2315	17.800	16.359
4	2.805	4035	627	2.469	4.434
5	3.041	10562	1106	6.463	7.817
6	3.356	99684	8285	60.997	58.537
Total		163425	14153	100.000	100.000

Gambar 45. Hasil Kromatogram Sampel Plasma Tikus 1 Menit Ke 30

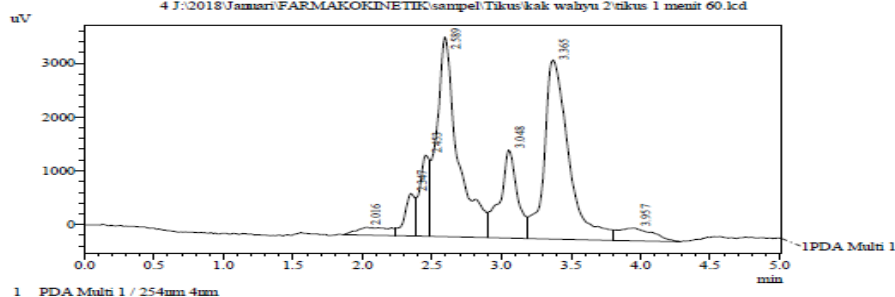
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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
 lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Chromatogram

4 J:\2018\Januari\FARMAKOKINETIK\sampel\Tikus\kak wahyu 2\tikus 1 menit 60.lcd



PDA Ch1 254nm 4um

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.016	2497	138	2.224	1.212
2	2.347	4449	793	3.962	6.986
3	2.453	7233	1513	6.442	13.330
4	2.589	39103	3710	34.826	32.692
5	3.048	14373	1637	12.801	14.422
6	3.365	40575	3324	36.137	29.285
7	3.957	4048	325	3.606	2.074
Total		112279	11349	100.000	100.000

46. Hasil Kromatogram Sampel Plasma Tikus 1 Menit Ke 60



Optimization Software:
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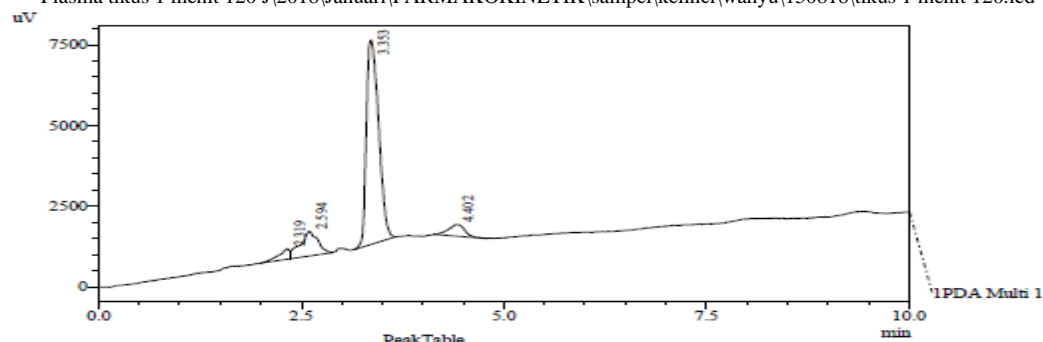
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Wed15Aug082018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Chromatogram

Plasma tikus 1 menit 120 J\2018\Januari\FARMAKOKINETIK\sampel\kelinci\wahyu\150818\tikus 1 menit 120.lcd



1 PDA Ch1 254nm 4mm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.319	3132	328	3.618	4.198
2	2.594	11601	772	13.402	9.890
3	3.353	66692	6344	77.047	81.286
4	4.402	5135	361	5.932	4.626
Total		86559	7804	100.000	100.000

Gambar 47. Hasil Kromatogram Sampel Plasma Tikus 1 Menit Ke 120

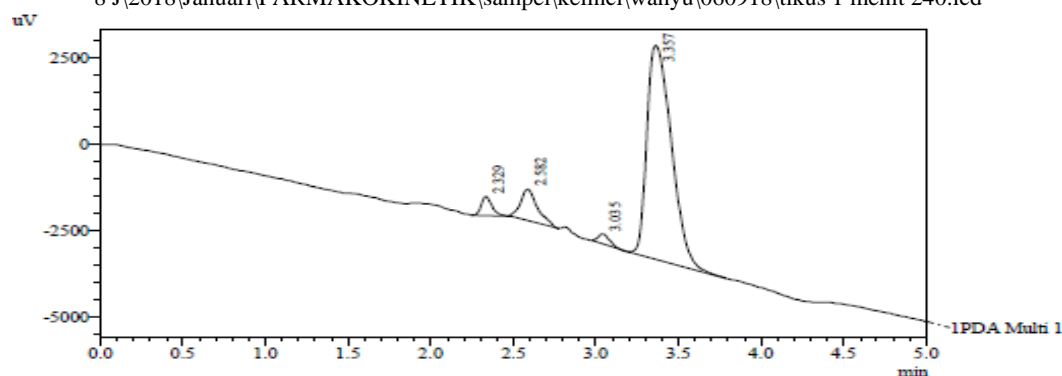
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Thu06Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Chromatogram

8 J\2018\Januari\FARMAKOKINETIK\sampel\kelinci\wahyu\060918\tikus 1 menit 240.lcd



1 PDA Multi 1 / 254nm 4mm

PDA Ch1 254nm 4mm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.329	2491	558	3.381	7.073
2	2.582	6343	898	8.608	11.381
3	3.035	1227	274	1.665	3.477
4	3.357	63626	6163	86.346	78.069
Total		73686	7895	100.000	100.000

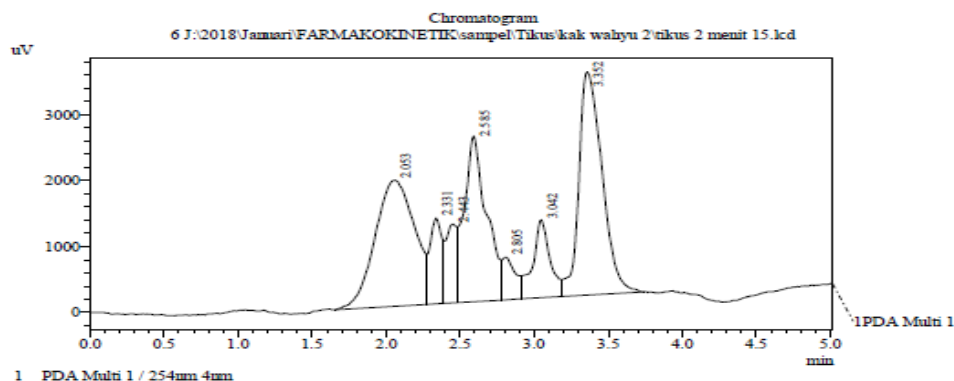
48. Hasil Kromatogram Sampel Plasma Tikus 1 Menit Ke 240



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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PeakTable

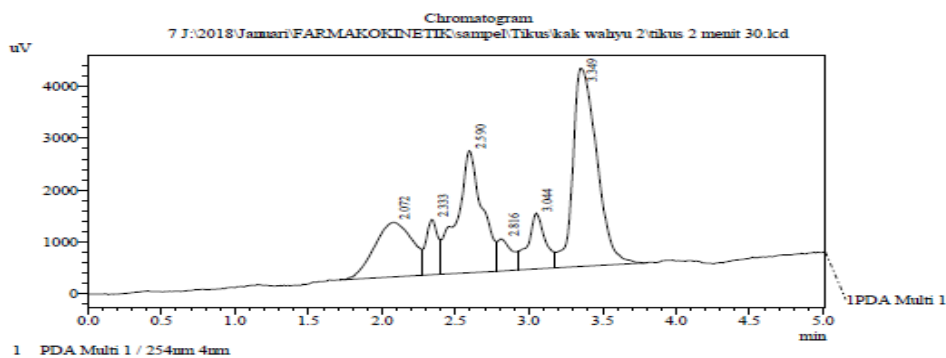
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.053	35434	1912	28.091	15.755
2	2.331	7534	1303	5.973	10.734
3	2.443	6438	1191	5.104	9.814
4	2.585	25831	2515	20.478	20.721
5	2.805	4133	649	3.277	5.350
6	3.042	9730	1182	7.714	9.735
7	3.352	37039	3386	29.363	27.893
Total		126139	12138	100.000	100.000

Gambar 49. Hasil Kromatogram Sampel Plasma Tikus 2 Menit Ke 15

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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PeakTable

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.072	18970	1053	17.185	10.532
2	2.333	6236	1070	5.649	10.707
3	2.590	28252	2351	25.594	23.523
4	2.816	4314	614	3.909	6.146
5	3.044	9018	1082	8.169	10.822
6	3.349	43596	3825	39.494	38.270
Total		110386	9995	100.000	100.000

50. Hasil Kromatogram Sampel Plasma Tikus 2 Menit Ke 30



Optimization Software:
www.balesio.com

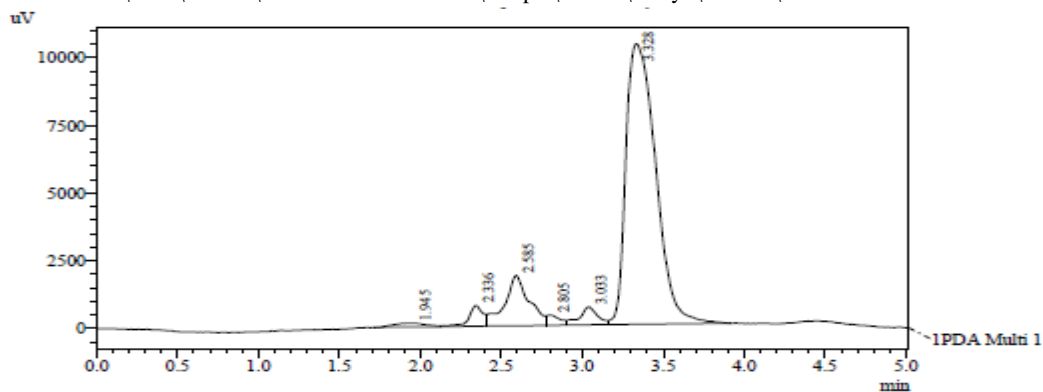
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Thu06Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Chromatogram

3 J\2018\Januari\FARMAKOKINETIK\sampel\kelinci\wahyu\060918\tikus 3 menit 60.lcd



1 PDA Multi 1 / 254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.945	1993	141	1.204	0.995
2	2.336	4777	756	2.886	5.344
3	2.585	19205	1855	11.601	13.119
4	2.805	2119	378	1.280	2.673
5	3.033	5061	659	3.057	4.659
6	3.328	132388	10351	79.971	73.210
Total		165545	14138	100.000	100.000

Gambar 51. Hasil Kromatogram Sampel Plasma Tikus 2 Menit Ke 60

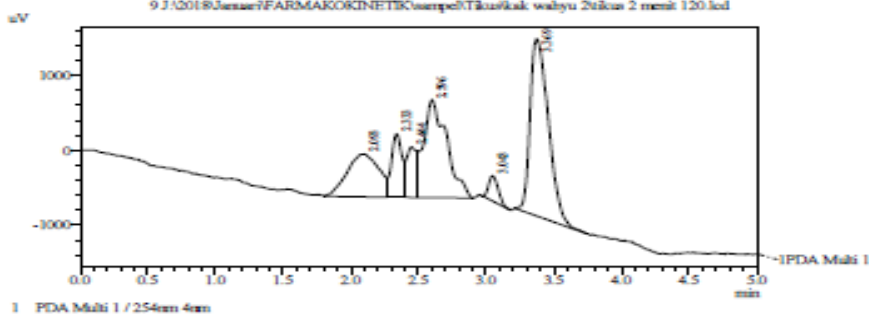
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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Chromatogram

9 J\2018\Januari\FARMAKOKINETIK\sampel\Tikus\kak\ wahyu 2\tikus 2 menit 120.lcd



1 PDA Multi 1 / 254nm 4nm

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.095	3478	572	16.664	9.364
2	2.333	4649	850	8.174	13.912
3	2.444	3171	693	5.595	11.039
4	2.596	15903	1310	27.610	21.447
5	3.043	3607	333	2.825	5.449
6	3.369	22268	2371	39.153	38.800
Total		56876	6109	100.000	100.000

52. Hasil Kromatogram Sampel Plasma Tikus 2 Menit Ke 120

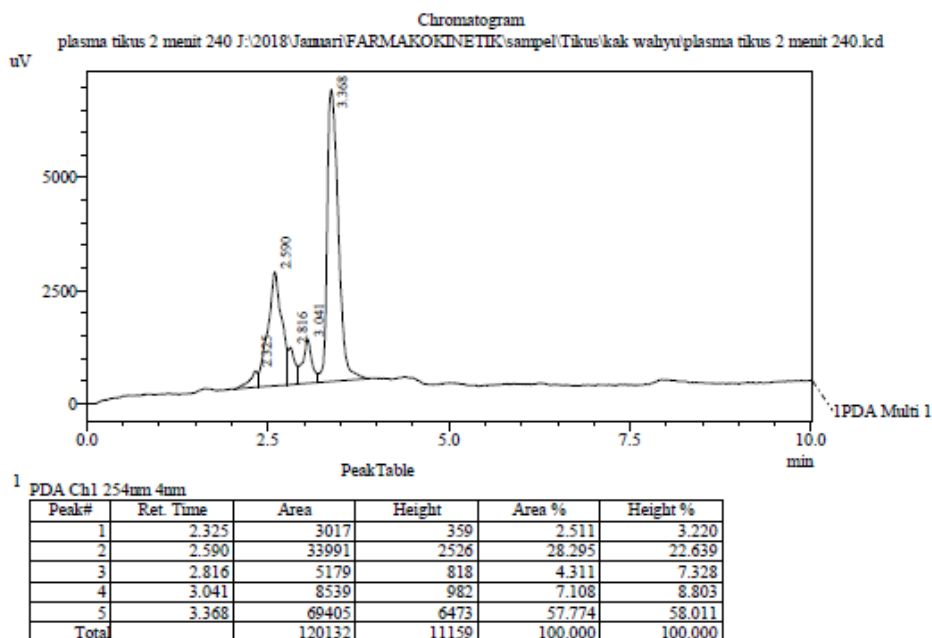


Optimization Software:
www.balesio.com

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Wed15Aug082018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

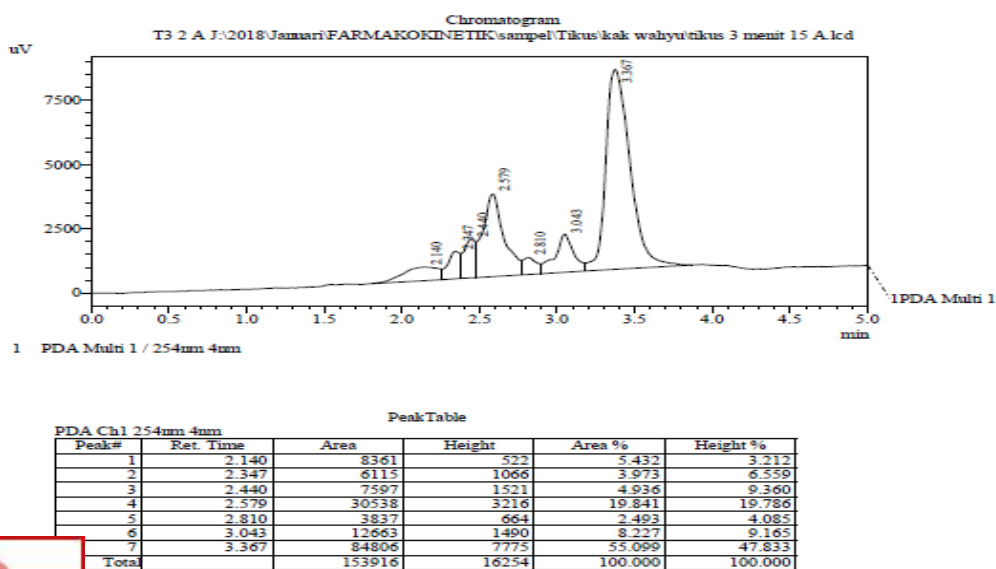


Gambar 53. Hasil Kromatogram Sampel Plasma Tikus 2 Menit Ke 240

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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



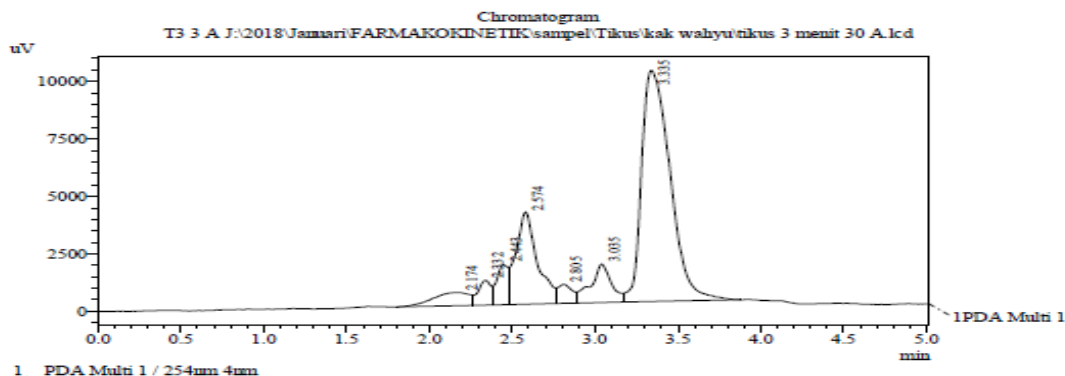
Gambar 54. Hasil Kromatogram Sampel Plasma Tikus 3 Menit Ke 15



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Wed05Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PDA Ch1 254nm 4nm

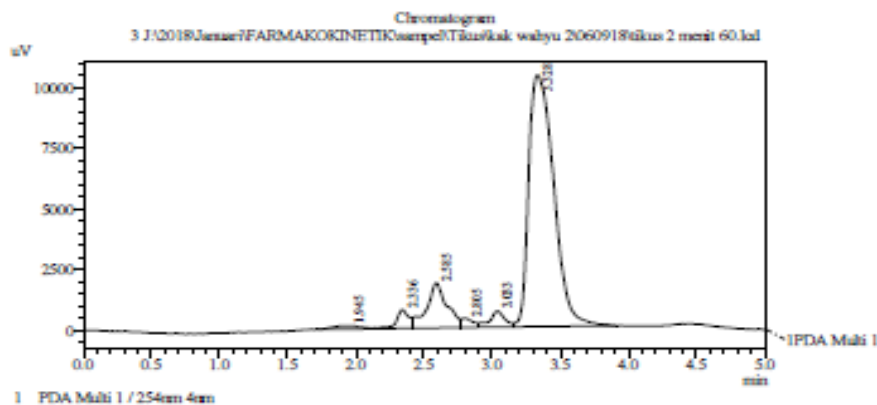
Peak#	Ret. Time	Area	Height	Area %	Height %
1	2.174	8827	568	4.417	2.841
2	2.332	5730	1083	2.867	5.414
3	2.443	8255	1752	4.131	8.755
4	2.574	36343	4025	18.186	20.120
5	2.805	5140	827	2.572	4.132
6	3.035	14517	1680	7.264	8.399
7	3.335	121029	10071	60.563	50.338
Total		199840	20007	100.000	100.000

Gambar 55. Hasil Kromatogram Sampel Plasma Tikus 3 Menit Ke 30

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Thu06Sep092018

Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian



PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.945	1993	141	1.204	0.3925
2	2.336	4777	756	2.886	5.344
3	2.585	15035	1835	11.601	13.119
4	2.805	2119	378	1.280	2.673
5	3.033	5061	659	3.057	4.659
6	3.328	132388	10351	79.971	73.230
Total		165545	14138	100.000	100.000

56. Hasil Kromatogram Sampel Plasma Tikus 3 Menit Ke 60

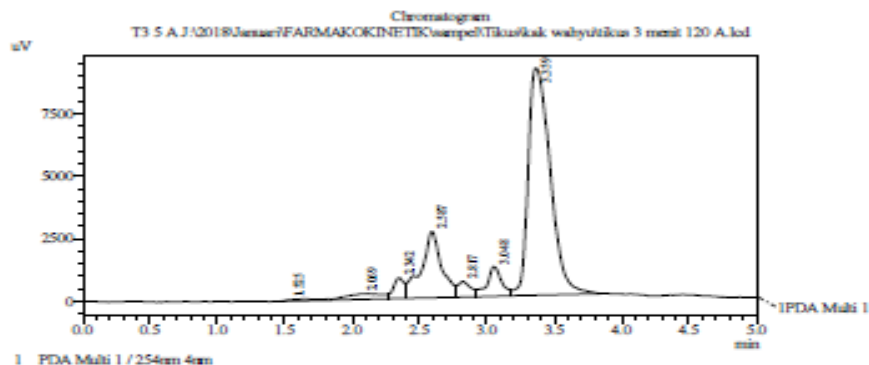


Optimization Software:
www.balesio.com

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Pusat Penelitian Fakultas Farmasi
lantai 4 wing B Gedung Pusat Kegiatan Penelitian

Wed05Sep092018



PeakTable
PDA Ch1 254nm 4nm

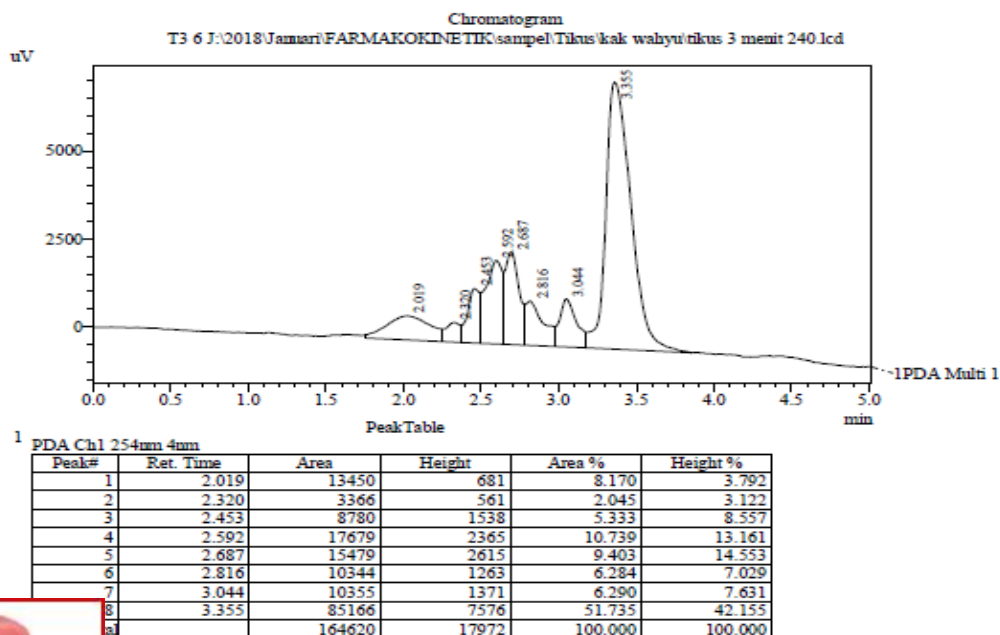
Peak#	Ret. Time	Area	Height	Area %	Height %
1	1.525	1072	55	0.698	0.378
2	2.069	4253	222	2.767	1.518
3	2.342	4593	832	2.988	5.697
4	2.587	27663	2647	17.995	18.121
5	2.817	3886	618	2.528	4.229
6	3.048	8929	1182	5.808	8.091
7	3.359	103128	9051	67.216	61.967
Total		153724	14607	100.000	100.000

Gambar 57. Hasil Kromatogram Sampel Plasma Tikus 3 Menit Ke 120

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lantai 4 wing B Gedung Pusat Kegiatan Penelitian

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58. Hasil Kromatogram Sampel Plasma Tikus 3 Menit Ke 240



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9. Persetujuan Kode Etik Penelitian


KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS HASANUDDIN
FAKULTAS KEDOKTERAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
KOMITE ETIK PENELITIAN KESEHATAN
 Sekretariat : Lantai 3 Gedung Laboratorium Terpadu
 JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
 Contact Person: dr. Agussalim Bukhari, MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax: 0411-581431

REKOMENDASI PERSETUJUAN ETIK
 Nomor : 498 / H4.8.4.5.31 / PP36-KOMETIK / 2018
 Tanggal: 23 Juli 2018

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH18040251	No Sponsor Protokol	
Peneliti Utama	Wahyu Pramudya, S.Farm, Apt	Sponsor	Pribadi
Judul Peneliti	Profil Farmakokinetik Senyawa Tetra Hydroxy Ethyl Di-Sulphate (THES) yang Diberikan Secara Intravena (i.v) Pada Marmut (Cavia Porcellus), Kelinci (Oryctolagus Cuniculus) dan Tikus (Rattus Novergicus)		
No Versi Protokol	3	Tanggal Versi	13 Juli 2018
No Versi PSP	3	Tanggal Versi	13 Juli 2018
Tempat Penelitian	Laboratorium Fakultas Farmasi Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 23 Juli 2018 sampai 23 Juli 2019	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan	Tanggal
Sekretaris Komisi Etik Penelitian	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan	Tanggal

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

