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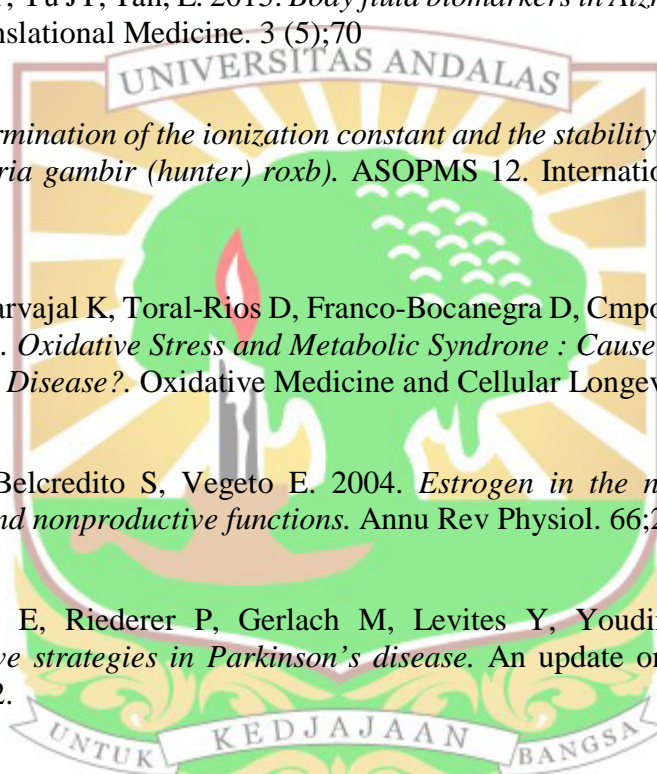
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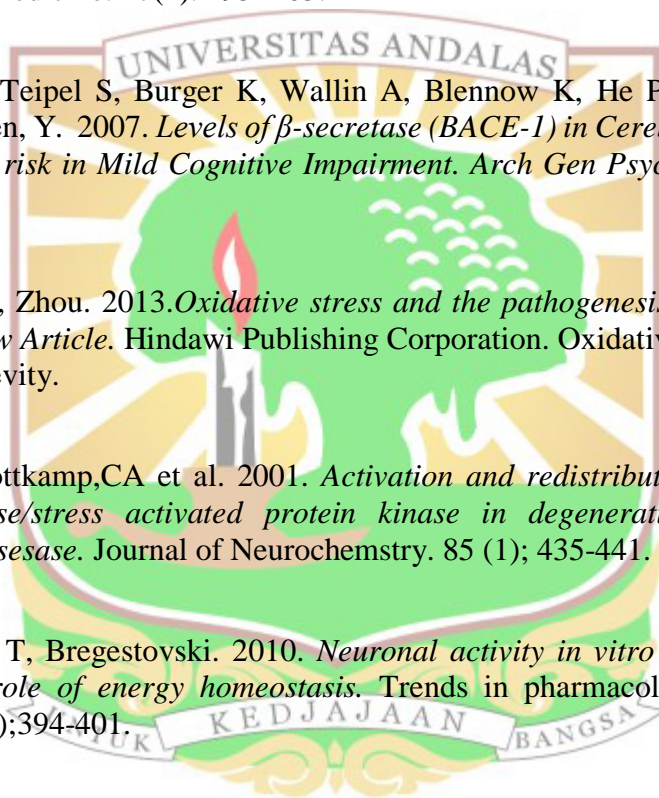
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Lampiran 1. Data Berat Badan Tikus (gram) Sebelum Perlakuan**Data Berat Badan Tikus (gram) Sebelum Perlakuan**

Nomor Replika	K-	K +	KP I	KP II	KP III	KP IV
1	152	146	145	144	164	173
2	156	162	163	163	167	147
3	162	168	167	149	150	163
4	157	154	145	170	160	144
5	164	149	170	161	146	154
Rata-rata ± Standar Deviasi	158,2 ± 4,82	155,8 ± 9,12	158,0 ± 12,12	157,4 ± 10,64	157,4 ± 9,04	156,2 ± 11,90



Lampiran 2. Analisis Statistik terhadap Berat Badan Tikus Sebelum Perlakuan

1. Uji normalitas data berat badan tikus sebelum perlakuan ($p > 0,05$)

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		BB Tikus Sebelum Perlakuan
N		30
Normal Parameters ^{a,b}	Mean	157,167
	Std. Deviation	9,0671
Most Extreme Differences	Absolute	,136
	Positive	,119
	Negative	-,136
Test Statistic		,136
Asymp. Sig. (2-tailed)		,162 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

2. Analisis statistik uji ANOVA data berat badan tikus sebelum perlakuan

Oneway

Descriptives

BB Tikus Sebelum Perlakuan

	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
				Lower Bound	Upper Bound		
Kontrol negatif	158,200	4,8166	2,1541	152,219	164,181	152,0	164,0
Kontrol positif	155,800	9,1214	4,0792	144,474	167,126	146,0	168,0
Dosis 1	158,000	12,1244	5,4222	142,946	173,054	145,0	170,0
Dosis 2	157,400	10,6442	4,7603	144,183	170,617	144,0	170,0
Dosis 3	157,400	9,0443	4,0447	146,170	168,630	146,0	167,0
Dosis 4	156,200	11,9038	5,3235	141,420	170,980	144,0	173,0
Total	157,167	9,0671	1,6554	153,781	160,552	144,0	173,0

Test of Homogeneity of Variances

BB Tikus Sebelum Perlakuan

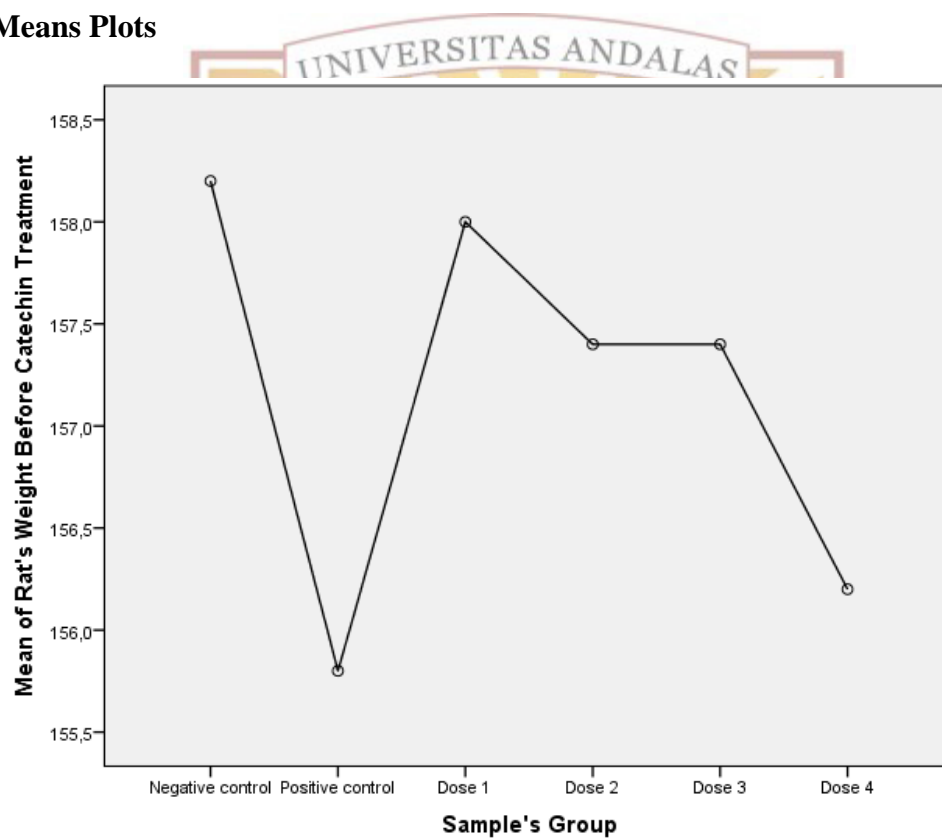
Levene Statistic	df1	df2	Sig.
1,714	5	24	,170

ANOVA

BB Tikus Sebelum Perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	23,367	5	4,673	,048	,998
Within Groups	2360,800	24	98,367		
Total	2384,167	29			

Means Plots



Lampiran 3. Data % alternation Y-Maze Test Tikus Sebelum Perlakuan

Data % alternation Y-Maze Test Tikus Sebelum Pemberian Katekin

Nomor Replika	K-	K +	KP I	KP II	KP III	KP IV
1	67,00	50,00	33,00	25,00	29,00	25,00
2	88,90	25,00	25,00	38,00	40,00	25,00
3	60,00	33,00	11,00	25,00	25,00	50,00
4	80,00	13,60	50,00	44,00	11,10	40,00
5	85,70	33,00	40,00	29,00	33,00	20,00
Rata-rata ± Standar Deviasi	76,32 ± 12,38	30,92 ± 13,30	31,80 ± 14,82	32,20 ± 8,47	27,42 ± 10,84	32,00 ± 12,55

**Data Spontaneous Alternation Performance (SAP) pada Y-Maze Test Tikus
Sebelum Pemberian Katekin**

Nomor Replika	K-	K +	KP I	KP II	KP III	KP IV
1	CBCAB CBA	BCBAB C	ACAC BABA	BBBAB C	CABCA ABAC	ACBC BCAB BA
2	CABCA BCABA C	BBBAB C	BCAB CACB ABC	CBABA BCABB	CACBA CBCBC AC	CABB CB
3	ABCBA BABCA BC	BACBB	ABAC AAAA AAA	BBCAB B	ABCBC C	ABCA CBAC
4	ABCAB CC	BABBC BBCCA BBBCA CBBCB CBAB	A	ABBAB ABCAB C	ABACA AAAAA A	ABBC ABC
5	CABCA BCBA	ABAAC CABCB AACB	CAAB CAB	BCBBC BABC	BCBCB ABC	BACB BAA

Lampiran 4. Analisis Statistik terhadap Data % *alternation Y-Maze Test* Tikus Sebelum Perlakuan

1. Uji normalitas data % *alternation y-maze test* ($p < 0,05$)

NPar Tests

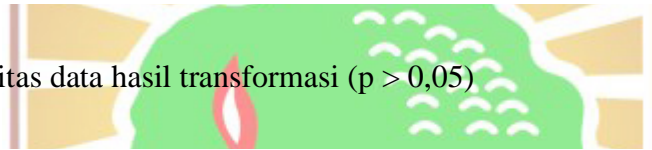
One-Sample Kolmogorov-Smirnov Test

		Y-Maze Sebelum Perlakuan
N		30
Normal Parameters ^{a,b}	Mean	38,4433
	Std. Deviation	20,57214
Most Extreme Differences	Absolute	,171
	Positive	,171
	Negative	-,108
Test Statistic		,171
Asymp. Sig. (2-tailed)		,025 ^c

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.



2. Uji normalitas data hasil transformasi ($p > 0,05$)

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Setelah transformasi data Y-Maze Sebelum Perlakuan
N		30
Normal Parameters ^{a,b}	Mean	1,5268
	Std. Deviation	,23213
Most Extreme Differences	Absolute	,131
	Positive	,081
	Negative	-,131
Test Statistic		,131
Asymp. Sig. (2-tailed)		,200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

3. Analisis statistik nilai % *alternation Y-Maze test* tikus sebelum pemberian katekin.

Oneway

Descriptives

Data Y-Maze Sebelum Perlakuan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Kontrol negatif	5	1,8778	,07305	,03267	1,7871	1,9685	1,78	1,95
Kontrol positif	5	1,4535	,20867	,09332	1,1944	1,7126	1,13	1,70
Dosis 1	5	1,4518	,25468	,11390	1,1355	1,7680	1,04	1,70
Dosis 2	5	1,4963	,11082	,04956	1,3587	1,6339	1,40	1,64
Dosis 3	5	1,4017	,21502	,09616	1,1347	1,6687	1,05	1,60
Dosis 4	5	1,4796	,16458	,07360	1,2752	1,6839	1,30	1,70
Total	30	1,5268	,23213	,04238	1,4401	1,6135	1,04	1,95

Test of Homogeneity of Variances

Data Y-Maze Sebelum Perlakuan

Levene Statistic	df1	df2	Sig.
1,009	5	24	,434

ANOVA

Data Y-Maze Sebelum Perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,765	5	,153	4,606	,004
Within Groups	,797	24	,033		
Total	1,563	29			



Post Hoc Tests

Multiple Comparisons

Dependent Variable: Data Y-Maze Sebelum Perlakuan

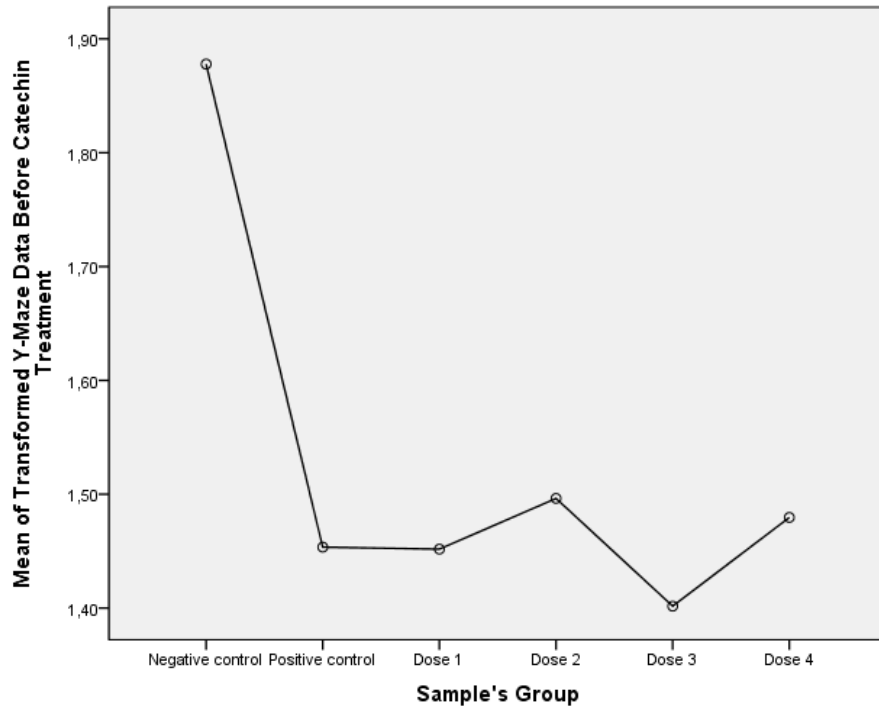
Tukey HSD

(I) Kelompok Sampel	(J) Kelompok Sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol negatif	Kontrol positif	,42434*	,11528	,013	,0679	,7808
	Dosis 1	,42606*	,11528	,013	,0696	,7825
	Dosis 2	,38154*	,11528	,031	,0251	,7380
	Dosis 3	,47614*	,11528	,005	,1197	,8326
	Dosis 4	,39825*	,11528	,022	,0418	,7547
Kontrol positif	Kontrol negatif	-,42434*	,11528	,013	-,7808	-,0679
	Dosis 1	,00172	,11528	1,000	-,3547	,3582
	Dosis 2	-,04281	,11528	,999	-,3992	,3136
	Dosis 3	,05179	,11528	,997	-,3046	,4082
	Dosis 4	-,02609	,11528	1,000	-,3825	,3303
Dosis 1	Kontrol negatif	-,42606*	,11528	,013	-,7825	-,0696
	Kontrol positif	-,00172	,11528	1,000	-,3582	,3547
	Dosis 2	-,04453	,11528	,999	-,4010	,3119
	Dosis 3	,05007	,11528	,998	-,3064	,4065
	Dosis 4	-,02781	,11528	1,000	-,3843	,3286
Dosis 2	Kontrol negatif	-,38154*	,11528	,031	-,7380	-,0251
	Kontrol positif	,04281	,11528	,999	-,3136	,3992
	Dosis 1	,04453	,11528	,999	-,3119	,4010
	Dosis 3	,09460	,11528	,961	-,2618	,4510
	Dosis 4	,01671	,11528	1,000	-,3397	,3732
Dosis 3	Kontrol negatif	-,47614*	,11528	,005	-,8326	-,1197
	Kontrol positif	-,05179	,11528	,997	-,4082	,3046
	Dosis 1	-,05007	,11528	,998	-,4065	,3064
	Dosis 2	-,09460	,11528	,961	-,4510	,2618
	Dosis 4	-,07789	,11528	,983	-,4343	,2786
Dosis 4	Kontrol negatif	-,39825*	,11528	,022	-,7547	-,0418
	Kontrol positif	,02609	,11528	1,000	-,3303	,3825
	Dosis 1	,02781	,11528	1,000	-,3286	,3843
	Dosis 2	-,01671	,11528	1,000	-,3732	,3397

Dosis 3	,07789	,11528	,983	-,2786	,4343
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*. The mean difference is significant at the 0.05 level.

Means Plots



Lampiran 5. Analisis Statistik terhadap Data % *Alternation Y-Maze test* lima Kelompok (Kontrol Positif dan Perlakuan I-IV) Sebelum Perlakuan

Test of Homogeneity of Variances

Y-Maze Sebelum Perlakuan

Levene Statistic	df1	df2	Sig.
,336	4	20	,850

ANOVA

Y-Maze Sebelum Perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	79,078	4	19,770	,133	,968
Within Groups	2973,256	20	148,663		
Total	3052,334	24			



Lampiran 6. Laporan Pengujian Laboratorium Katekin



KEMENTERIAN PERTANIAN
BADAN PENELITIAN DAN PENGEMBANGAN PERTANIAN

F.05

**BALAI BESAR PENELITIAN DAN PENGEMBANGAN PASCAPANEN PERTANIAN
LABORATORIUM PENGUJIAN**

Jalan Tentara Pelajar 12
Bogor 16114
Jalan Surotokuntho No. 56
Rawagabus Karawang 41313

Telp. 0251-8321762, 0251-8346367
Fax. 0251-8346367
Telp. 0267-401294
Fax. 0267-402357

LAPORAN PENGUJIAN LABORATORIUM

No. Administrasi /Number	:	8/LBBPSC/III/PL/16
Nama/Instansi Pengirim/Name	:	Zuhrah Taufiq
No. Surat Permohonan Number of letter	:	-
Alamat Pengirim/Address	:	Jl. Carang Pulang No. 1 Kas Dramaga
Tanggal Penerimaan Sampel/Date of receive	:	28 Maret 2016
Jenis Produk/Type of product	:	Katekin Gambir
Unit Kemasan/Packaging unit	:	Plastik
Berat bersih/Netto	:	-

No.	Nama Sampel Sample name	Jenis Analisis Type of Analysis	Metode Method	Hasil Result	Satuan Unit
1.	Katekin Gambir	Katekin	HPLC	95,78	%

Bogor, 15 April 2016
Manajer Teknis,

Dr. Hoerudin

Laporan ini dilarang diperbanyak tanpa persetujuan tertulis dari Laboratorium Pengujian BBPP Pascapanen Pertanian
Laporan ini hanya berlaku pada contoh yang diuji
Laporan ini merupakan hasil pengujian bukan penelitian
Sisa contoh akan kami simpan selama satu bulan dari tanggal terbit laporan

Lampiran 7. Kromatogram

LABORATORIUM PENGUJIAN BALAI BESAR PASCAPANEN

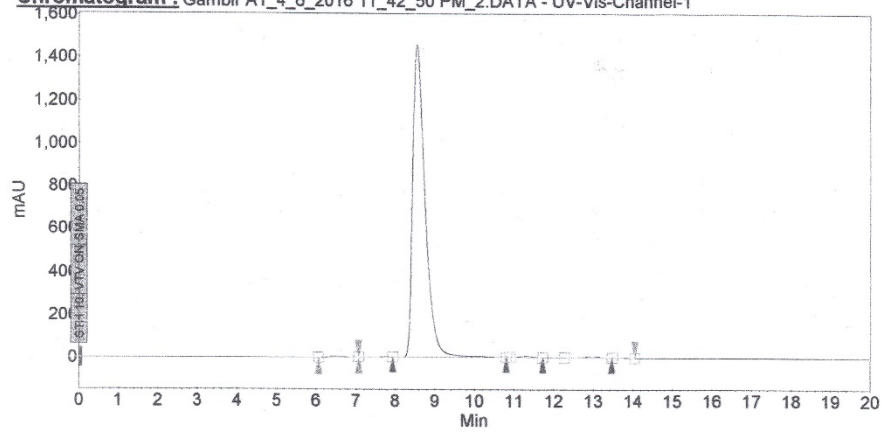
Jl. Tentara Pelajar No. 12
Komplek Pertanian Cimanggu, Bogor

Chromatogram : CHROMATONAME

System : Varian_940_LC
Method : Katekin cs
User : Yudi

Processed : 4/7/2016 1:55:22 PM
Printed : 8/3/2016 3:32:24 AM

Chromatogram : Gambir A1_4_6_2016 11_42_50 PM_2.DATA - UV-Vis-Channel-1



Peak Results :

Index	Name	Time [Min]	Quantity [% Area]	Area [mAU.Sec]	Area % [%]	Height [mAU]
1	UNKNOWN	6.46	0.39	125.8	0.394	4.3
2	UNKNOWN	7.70	0.13	42.6	0.133	1.9
3	UNKNOWN	8.54	98.49	31485.7	98.486	1455.3
4	UNKNOWN	11.29	0.40	129.3	0.404	6.0
5	UNKNOWN	12.99	0.55	176.7	0.553	6.7
6	UNKNOWN	13.76	0.03	9.6	0.030	0.6
Total			100.00	31969.6	100.000	1474.8

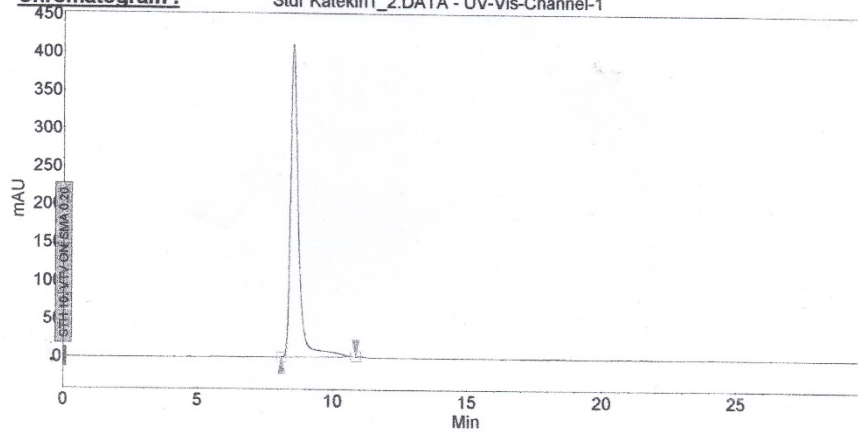
LABORATORIUM PENGUJIAN BALAI BESAR PASCAPANEN

Jl. Tentara Pelajar No. 12
Komplek Pertanian Cimanggu, Bogor

Chromatogram : CHROMATONAME

System : Varian_940_LC
Method : Katekin cs
User : Yudi

Processed : 4/6/2016 8:13:27 PM
Printed : 3/3/2016 3:31:13 AM

Chromatogram : Std Katekin1_2.DATA - UV-Vis-Channel-1**Peak Results :**

Index	Name	Time (Min)	Quantity (% Area)	Area (mAU.Sec)	Area % (%)	Height (mAU)
1	UNKNOWN	8.52	100.00	8398.3	100.000	410.5
Total			100.00	8398.3	100.000	410.5

LABORATORIUM PENGUJIAN BALAI BESAR PASCAPANEN

Jl. Tentara Pelajar No. 12
Komplek Pertanian Cimanggu, Bogor

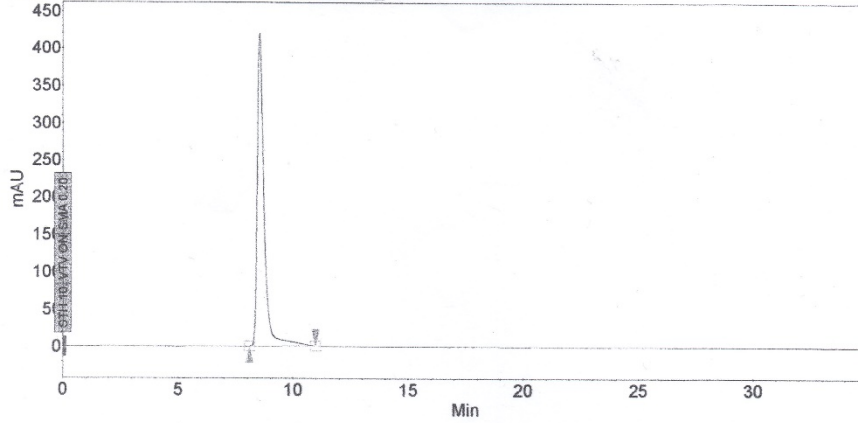
Chromatogram : CHROMATONAME

System : Varian_940_LC
Method : Katekin cs
User : Yudi

Processed : 4/6/2016 9:33:17 PM
Printed : 8/3/2016 3:31:45 AM

Chromatogram :

Strd Katekin1_3.DATA - UV-Vis-Channel-1

**Peak Results :**

Index	Name	Time [Min]	Quantity [% Area]	Area [mAU.Sec]	Area % [%]	Height [mAU]
1	UNKNOWN	8.53	100.00	8588.8	100.000	419.4
Total			100.00	8588.8	100.000	419.4

LABORATORIUM PENGUJIAN BALAI BESAR PASCAPANEN

Jl. Tentara Pelajar No. 12
Komplek Pertanian Cimanggu, Bogor

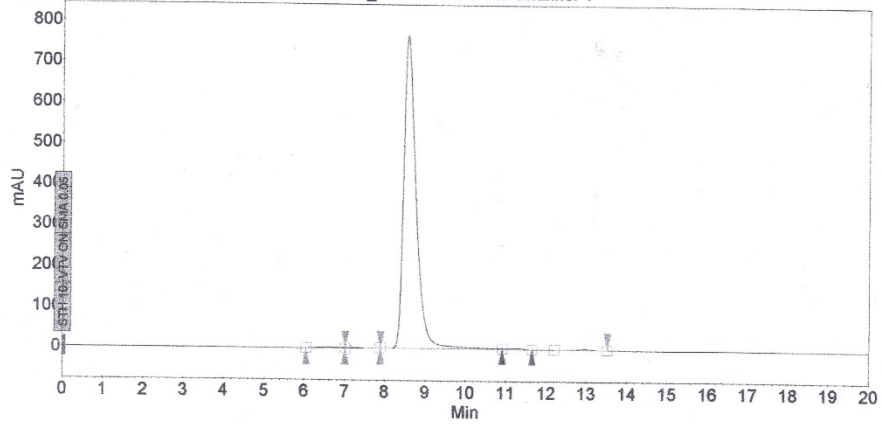
Chromatogram : CHROMATONAME

System : Varian_940_LC
Method : Katakain cs
User : Yudi

Processed : 4/7/2016 1:51:25 PM
Printed : 8/3/2016 3:28:45 AM

Chromatogram :

Gambir A1_2.DATA - UV-Vis-Channel-1



Peak Results :

Index	Name	Time [Min]	Quantity [% Area]	Area [mAU.Sec]	Area % [%]	Height [mAU]
1	UNKNOWN	6.54	0.29	46.3	0.285	1.6
2	UNKNOWN	7.66	0.09	13.8	0.085	0.6
3	UNKNOWN	8.55	98.87	16051.9	98.865	764.5
4	UNKNOWN	11.27	0.29	47.3	0.291	2.2
5	UNKNOWN	12.95	0.47	76.8	0.473	2.9
Total			100.00	16236.2	100.000	771.8

LABORATORIUM PENGUJIAN BALAI BESAR PASCAPANEN

Jl. Tentara Pelajar No. 12
Komplek Pertanian Cimanggu, Bogor

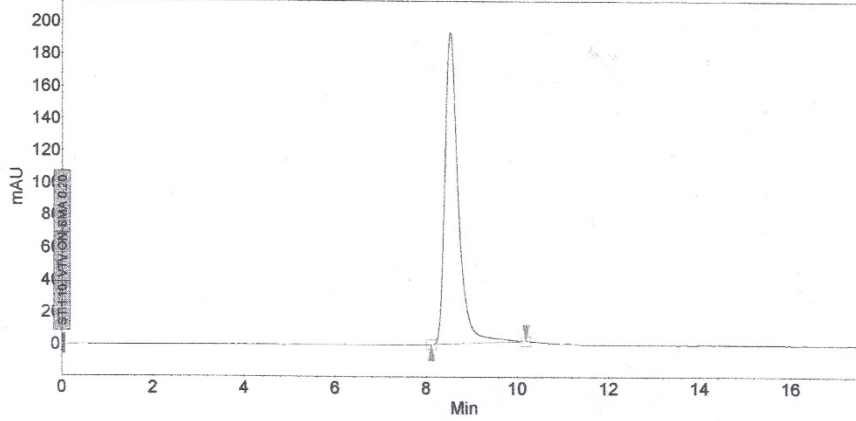
Chromatogram : CHROMATONAME

System : Varian_940_LC
Method : Katekin cs
User : Yudi

Processed : 4/6/2016 9:34:20 PM
Printed : 8/3/2016 3:27:56 AM

Chromatogram :

Std Katekin B1_2.DATA - UV-Vis-Channel-1

**Peak Results :**

Index	Name	Time [Min]	Quantity [% Area]	Area [mAU.Sec]	Area % [%]	Height [mAU]
1	UNKNOWN	8.51	100.00	4023.4	100.000	193.2
Total			100.00	4023.4	100.000	193.2

Lampiran 8. Data Hasil Pengukuran Kadar BACE-1 (ng/ml) Setelah Perlakuan

**Data Hasil Pengukuran Kadar BACE-1 (ng/ml)
Setelah Pemberian Katekin**

Nomor Replika	K-	K +	KP I	KP II	KP III	KP IV
1	0,278	0,360	0,088	0,162	0,063	0,137
2	0,327	0,187	0,380	0,088	0,088	0,121
3	0,137	0,154	0,121	0,104	0,253	0,154
4	0,129	0,456	0,327	0,178	0,066	0,162
5	0,325	0,421	0,129	0,145	0,096	0,063
Rata-rata ±	0,239 ±	0,316 ±	0,209 ±	0,135 ±	0,113 ±	0,127 ±
Standar Deviasi	0,099	0,137	0,134	0,038	0,079	0,039



Lampiran 9. Analisis Data Hasil Pengukuran Kadar BACE-1 Setelah Perlakuan

1. Uji normalitas data kadar BACE-1 setelah perlakuan ($p < 0,05$)

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		BACE1 Setelah Perlakuan
N		30
Normal Parameters ^{a,b}	Mean	,18997
	Std. Deviation	,114559
Most Extreme Differences	Absolute	,230
	Positive	,230
	Negative	-,134
Test Statistic		,230
Asymp. Sig. (2-tailed)		,000 ^c

- a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.

2. Uji normalitas data hasil transformasi ($p > 0,05$)

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Setelah transformasi data BACE1 Setelah Perlakuan
N		30
Normal Parameters ^{a,b}	Mean	-,7935
	Std. Deviation	,25327
Most Extreme Differences	Absolute	,129
	Positive	,129
	Negative	-,119
Test Statistic		,129
Asymp. Sig. (2-tailed)		,200 ^{c,d}

- a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.
 d. This is a lower bound of the true significance.



3. Analisis statistik uji ANOVA kadar BACE-1

Oneway**Descriptives**

Data BACE1 Setelah Perlakuan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Kontrol negatif	5	-,6564	,20293	,09075	-,9084	-,4045	-,89	-,49
Kontrol positif	5	-,5402	,21535	,09631	-,8076	-,2728	-,81	-,34
Dosis 1	5	-,7536	,28258	,12638	-1,1044	-,4027	-1,06	-,42
Dosis 2	5	-,8834	,13046	,05835	-1,0454	-,7214	-1,06	-,75
Dosis 3	5	-1,0102	,24403	,10913	-1,3133	-,7072	-1,20	-,60
Dosis 4	5	-,9168	,16604	,07426	-1,1230	-,7107	-1,20	-,79
Total	30	-,7935	,25327	,04624	-,8880	-,6989	-1,20	-,34

Test of Homogeneity of Variances

Data BACE1 Setelah Perlakuan

Levene Statistic	df1	df2	Sig.
1,357	5	24	,275

ANOVA

Data BACE1 Setelah Perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,774	5	,155	3,421	,018
Within Groups	1,086	24	,045		
Total	1,860	29			

Post Hoc Tests**Multiple Comparisons**

Dependent Variable: Data BACE1 Setelah Perlakuan

Tukey HSD

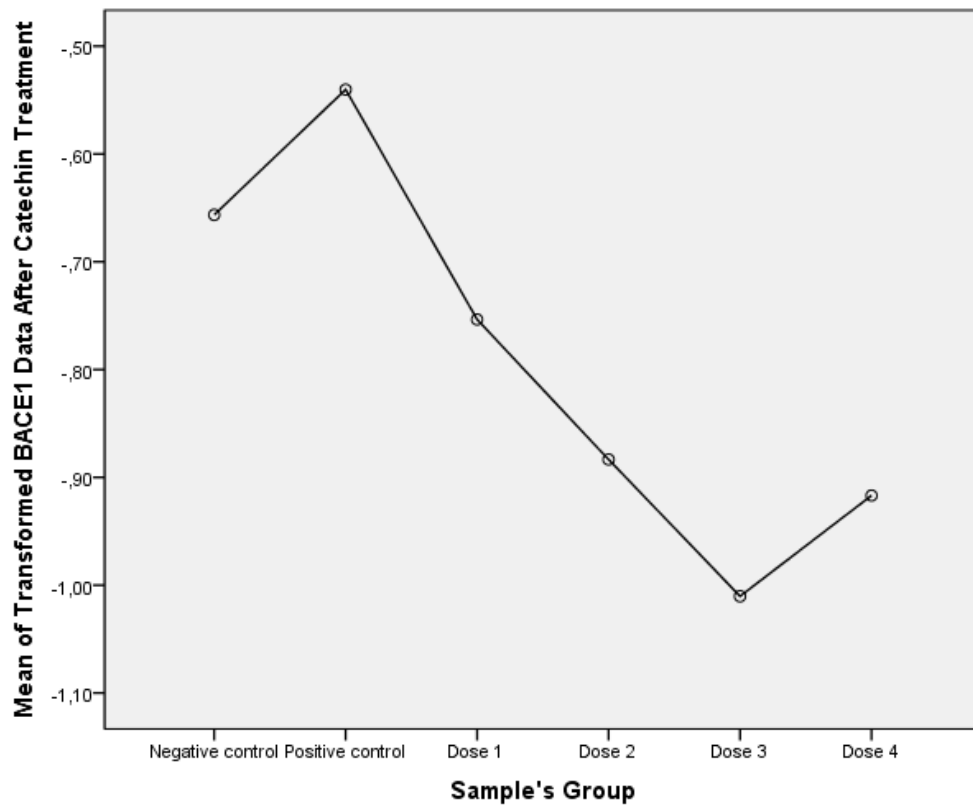
(I) Kelompok Sampel	(J) Kelompok Sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol negatif	Kontrol positif	-,11623	,13455	,952	-,5322	,2998
	Dosis 1	,09712	,13455	,977	-,3189	,5131
	Dosis 2	,22699	,13455	,553	-,1890	,6430
	Dosis 3	,35381	,13455	,128	-,0622	,7698
	Dosis 4	,26038	,13455	,406	-,1556	,6764

Kontrol positif	Kontrol negatif	,11623	,13455	,952	-,2998	,5322
	Dosis 1	,21334	,13455	,615	-,2027	,6294
	Dosis 2	,34322	,13455	,149	-,0728	,7592
	Dosis 3	,47003*	,13455	,020	,0540	,8860
	Dosis 4	,37661	,13455	,092	-,0394	,7926
Dosis 1	Kontrol negatif	-,09712	,13455	,977	-,5131	,3189
	Kontrol positif	-,21334	,13455	,615	-,6294	,2027
	Dosis 2	,12987	,13455	,924	-,2861	,5459
	Dosis 3	,25669	,13455	,422	-,1593	,6727
	Dosis 4	,16326	,13455	,826	-,2528	,5793
Dosis 2	Kontrol negatif	-,22699	,13455	,553	-,6430	,1890
	Kontrol positif	-,34322	,13455	,149	-,7592	,0728
	Dosis 1	-,12987	,13455	,924	-,5459	,2861
	Dosis 3	,12681	,13455	,931	-,2892	,5428
	Dosis 4	,03339	,13455	1,000	-,3826	,4494
Dosis 3	Kontrol negatif	-,35381	,13455	,128	-,7698	,0622
	Kontrol positif	-,47003*	,13455	,020	-,8860	-,0540
	Dosis 1	-,25669	,13455	,422	-,6727	,1593
	Dosis 2	-,12681	,13455	,931	-,5428	,2892
	Dosis 4	-,09342	,13455	,981	-,5094	,3226
Dosis 4	Kontrol negatif	-,26038	,13455	,406	-,6764	,1556
	Kontrol positif	-,37661	,13455	,092	-,7926	,0394
	Dosis 1	-,16326	,13455	,826	-,5793	,2528
	Dosis 2	-,03339	,13455	1,000	-,4494	,3826
	Dosis 3	,09342	,13455	,981	-,3226	,5094

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



Means Plots



Lampiran 10. Data Hasil Pengukuran Kadar Beta Amyloid-42 (ng/ml) Setelah Perlakuan

**Data Hasil Pengukuran Kadar Beta Amyloid-42 (ng/ml)
Setelah Pemberian Katekin**

Nomor Replika	K-	K +	KP I	KP II	KP III	KP IV
1	27,021	52,961	24,687	14,126	13,352	11,583
2	23,702	38,294	27,034	13,362	20,024	23,388
3	29,618	36,773	16,683	14,892	7,790	17,195
4	33,774	52,350	42,156	21,034	14,892	19,509
5	22,350	46,024	47,572	17,195	10,569	14,892
Rata-rata ± Standar Deviasi	27,293 ± 4,60	45,280 ± 7,59	31,626 ± 12,82	17,321 ± 5,62	13,325 ± 4,625	17,313 ± 4,48



Lampiran 11. Analisis Data Hasil Pengukuran Kadar BACE-1 Setelah Perlakuan

1. Uji normalitas data kadar beta amyloid-42 setelah perlakuan ($p > 0,05$)

NPar Tests

One-Sample Kolmogorov-Smirnov Test

		Beta Amyloid Setelah Perlakuan	
N			30
Normal Parameters ^{a,b}	Mean		25,36007
	Std. Deviation		12,912758
Most Extreme Differences	Absolute		,148
	Positive		,148
	Negative		-,093
Test Statistic			,148
Asymp. Sig. (2-tailed)			,090 ^c

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.

2. Analisis statistik uji ANOVA kadar beta amyloid-42

Oneway

Descriptives

Beta Amyloid Setelah Perlakuan

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Kontrol negatif	5	27,29300	4,604658	2,059266	21,57556	33,01044	22,350	33,774
Kontrol positif	5	45,28040	7,594561	3,396391	35,85051	54,71029	36,773	52,961
Dosis 1	5	31,62640	12,822687	5,734480	15,70493	47,54787	16,683	47,572
Dosis 2	5	17,32180	5,615603	2,511374	10,34911	24,29449	13,362	27,034
Dosis 3	5	13,32540	4,625056	2,068388	7,58263	19,06817	7,790	20,024
Dosis 4	5	17,31340	4,484309	2,005444	11,74540	22,88140	11,583	23,388
Total	30	25,36007	12,912758	2,357536	20,53836	30,18177	7,790	52,961

Test of Homogeneity of Variances

Beta Amyloid Setelah Perlakuan

Levene Statistic	df1	df2	Sig.
3,771	5	24	,012

ANOVA

Beta Amyloid Setelah Perlakuan

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3570,093	5	714,019	13,543	,000
Within Groups	1265,347	24	52,723		
Total	4835,440	29			

Post Hoc Tests

Multiple Comparisons

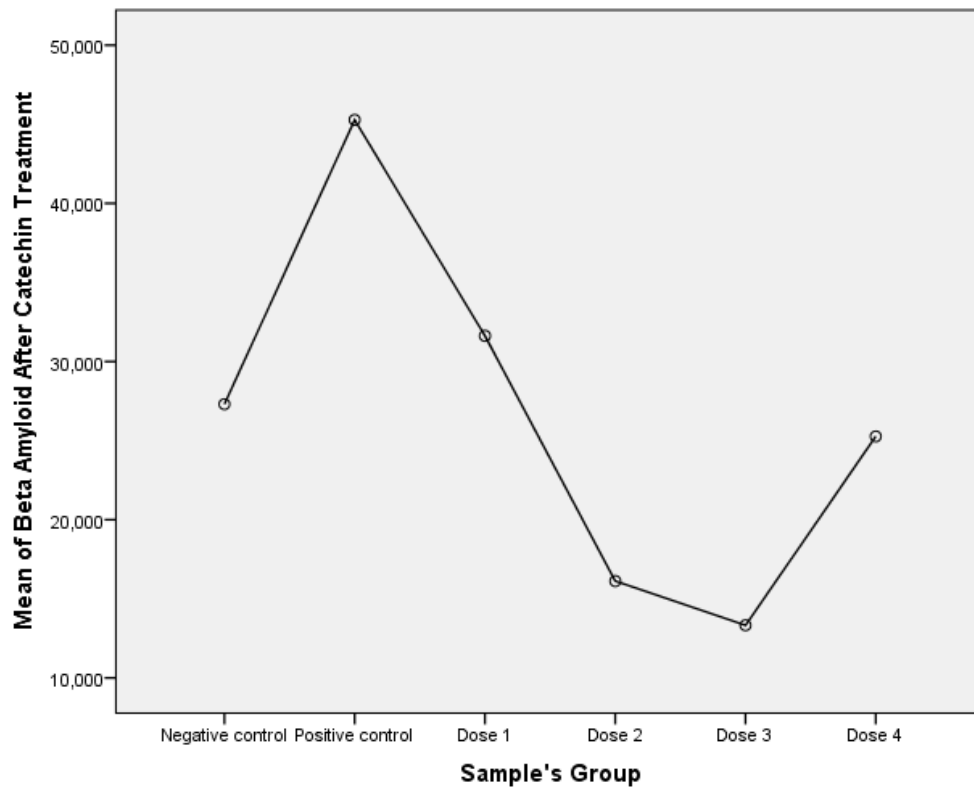
Dependent Variable: Beta Amyloid Setelah Perlakuan

Tukey HSD

(I) Kelompok Sampel	(J) Kelompok Sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol negatif	Kontrol positif	-17,987400*	4,592289	,008	-32,18644	-3,78836
	Dosis 1	-4,333400	4,592289	,931	-18,53244	9,86564
	Dosis 2	9,971200	4,592289	,287	-4,22784	24,17024
	Dosis 3	13,967600	4,592289	,056	-,23144	28,16664
	Dosis 4	9,979600	4,592289	,286	-4,21944	24,17864
Kontrol positif	Kontrol negatif	17,987400*	4,592289	,008	3,78836	32,18644
	Dosis 1	13,654000	4,592289	,064	-,54504	27,85304
	Dosis 2	27,958600*	4,592289	,000	13,75956	42,15764
	Dosis 3	31,955000*	4,592289	,000	17,75596	46,15404
	Dosis 4	27,967000*	4,592289	,000	13,76796	42,16604
Dosis 1	Kontrol negatif	4,333400	4,592289	,931	-9,86564	18,53244
	Kontrol positif	-13,654000	4,592289	,064	-27,85304	,54504
	Dosis 2	14,304600*	4,592289	,048	,10556	28,50364
	Dosis 3	18,301000*	4,592289	,006	4,10196	32,50004
	Dosis 4	14,313000*	4,592289	,047	,11396	28,51204
Dosis 2	Kontrol negatif	-9,971200	4,592289	,287	-24,17024	4,22784
	Kontrol positif	-27,958600*	4,592289	,000	-42,15764	-13,75956
	Dosis 1	-14,304600*	4,592289	,048	-28,50364	-,10556
	Dosis 3	3,996400	4,592289	,950	-10,20264	18,19544
	Dosis 4	,008400	4,592289	1,000	-14,19064	14,20744
Dosis 3	Kontrol negatif	-13,967600	4,592289	,056	-28,16664	,23144
	Kontrol positif	-31,955000*	4,592289	,000	-46,15404	-17,75596
	Dosis 1	-18,301000*	4,592289	,006	-32,50004	-4,10196
	Dosis 2	-3,996400	4,592289	,950	-18,19544	10,20264
	Dosis 4	-3,988000	4,592289	,950	-18,18704	10,21104
Dosis 4	Kontrol negatif	-9,979600	4,592289	,286	-24,17864	4,21944
	Kontrol positif	-27,967000*	4,592289	,000	-42,16604	-13,76796
	Dosis 1	-14,313000*	4,592289	,047	-28,51204	-,11396
	Dosis 2	-,008400	4,592289	1,000	-14,20744	14,19064
	Dosis 3	3,988000	4,592289	,950	-10,21104	18,18704

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

Means Plots



Lampiran 12. Master Tabel

**EFEK NEUROPROTEKTIF KATEKIN GAMBIR TERHADAP
KADAR BACE-1 DAN BETA AMYLOID 42 CAIRAN SEREBROSPINAL
PADA TIKUS *Sprague dawley* MODEL ALZHEIMER**

No. Urut	Kelompok Sampel	Berat Badan Tikus Sebelum Pemberian Katekin (gram)	Y-Maze Sebelum Pemberian Katekin (%)		Beta Amyloid Setelah Pemberian Katekin (ng/mL)	BACE -1 Setelah Pemberian Katekin (ng/mL)
			Sebelum Transformasi Data	Setelah Transformasi Data		
1	Kontrol Negatif (Diet Standar)	152,0	67,00	1,83	27,021	0,278
2		156,0	88,90	1,95	23,702	0,327
3		162,0	60,00	1,78	29,618	0,137
4		157,0	80,00	1,90	33,774	0,129
5		164,0	85,70	1,93	22,350	0,325
6	Kontrol Positif (NaCl 0,9% 1 mL)	146,0	50,00	1,70	52,961	0,360
7		162,0	25,00	1,40	38,294	0,187
8		168,0	33,00	1,52	36,773	0,154
9		154,0	13,60	1,13	52,350	0,456
10		149,0	33,00	1,52	46,024	0,421
11	Perlakuan I (Katekin Dosis 20 mg/200 gr BB)	145,0	33,00	1,52	24,687	0,088
12		163,0	25,00	1,40	27,034	0,380
13		167,0	11,00	1,04	16,683	0,121
14		145,0	50,00	1,70	42,156	0,327
15		170,0	40,00	1,60	47,572	0,129
16	Perlakuan II (Katekin Dosis 40 mg/200 gr BB)	144,0	25,00	1,40	14,126	0,162
17		163,0	38,00	1,58	13,362	0,088
18		149,0	25,00	1,40	14,892	0,104
19		170,0	44,00	1,64	27,034	0,178
20		161,0	29,00	1,46	17,195	0,145
21	Perlakuan III (Katekin Dosis 60 mg/200 gr BB)	164,0	29,00	1,46	13,352	0,063
22		167,0	40,00	1,60	20,024	0,088
23		150,0	24,00	1,38	7,790	0,253
24		160,0	11,10	1,05	14,892	0,066
25		146,0	33,00	1,52	10,569	0,096
26	Perlakuan IV (Katekin Dosis 100 mg/200 gr BB)	173,0	25,00	1,40	11,583	0,137
27		147,0	25,00	1,40	23,388	0,121
28		163,0	50,00	1,70	17,195	0,154
29		144,0	40,00	1,60	19,509	0,162
30		154,0	20,00	1,30	14,892	0,063

Lampiran 13. Surat Keterangan Penelitian Payung

SURAT KETERANGAN

Saya yang bertandatangan di bawah ini,

Nama : Prof. dr. Nur Indrawaty Lipoeto, M.Sc, Ph.D, Sp.GK

Jabatan : Dosen di Bagian Gizi Fakultas Kedokteran Universitas Andalas

dengan ini menyatakan bahwa penelitian yang berjudul "Potensi Rekayasa Katekin dari Gambir untuk Peningkatan Kualitas Hidup Lanjut Usia" adalah penelitian yang didanai oleh Hibah Pasca untuk tahun anggaran 2015 dan melibatkan mahasiswa sebagai berikut :

No.	Nama Mahasiswa	No.BP.	Status	Judul
1.	dr. Linda Rosalina, M.Biomed	1131202014	S3	Efek Pemberian Katekin Gambir terhadap Kadar Plasma Beta Amyloid, 4-Hydroxynonenal, Gambaran Histopatologik dan Ekspresi Beta Amyloid pada Otak Tikus Model Alzheimer
2.	dr. Zuhrah Taufiq	1420312004	S2	Efek Neuroprotektif Katekin Gambir terhadap Kadar BACE-1 dan Beta Amyloid-42 Cairan Serebrospinal pada Tikus <i>Sprague dawley</i> Model Alzheimer
3.	dr. Ulya Uti Fasrini	1420312040	S2	Efek Neuroprotektif Katekin Gambir terhadap Protein Tau Terlarut pada Tikus Model Alzheimer <i>Sprague dawley</i> betina

dengan Surat Keterangan Lolos Kaji Etik (Nomor: 012/KEP/FK/2016) serta Laporan Hasil Akhir Pemeriksaan Laboratorium BACE1 (Nomor Dokumen: LB/FORM-12/017/2016) dan β -amyloid (Nomor Dokumen: LB/FORM-12/017/2016).

Padang, Mei 2015



Prof. dr. Nur Indrawaty Lipoeto, M.Sc, Ph.D, Sp.GK
NIP/NIDN: 196305071990012001/0007056308

Lampiran 14. Keterangan Lolos Kaji Etik



KOMITE ETIKA PENELITIAN
FAKULTAS KEDOKTERAN UNIVERSITAS ANDALAS
 Jl. Perintis Kemerdekaan Padang 25127
 Telepon: 0751 31746 Fax : 0751 32838 No. Reg : 036/KNEP/2008
 e-mail: fk2unand@pdg.vision.net.id

No: 012/KEP/FK/2016

KETERANGAN LOLOS KAJI ETIK ***ETHICAL CLEARANCE***

Tim Komite Etika Penelitian Fakultas Kedokteran Universitas Andalas Padang, dalam upaya melindungi hak azazi dan kesejahteraan subjek penelitian kedokteran/kesehatan, telah mengkaji dengan teliti protokol penelitian dengan judul:

The Committee of the Research Ethics of the Faculty of Medicine, Andalas University, with regards of the protection of human rights and welfare in medical/health research, has carefully reviewed the research protocol entitled:

“Pemberian Katekin Gambir terhadap Kadar Plasma Beta Amyloid, 4 – hidroksynonenal, gambaran Histopatologik dan Ekspresi Beta Amyloid pada otak tikus model alzheimer”

Nama Peneliti Utama : Linda Rosalina
Name of the Investigator

Nama Institusi : Fakultas Kedokteran Universitas Andalas
Name of Institution

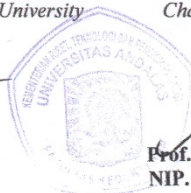
dan telah menyetujui protokol penelitian tersebut diatas.
and recommended the above research protocol.

Padang, 02 Februari 2016

Dekan Fakultas Kedokteran Universitas Andalas
Dean of Faculty of Medicine Andalas University

Ketua
Chairperson

Dr. dr.H. Masrul, MSc, Sp.GK
 NIP. 1956 1226 1987 101 001



Prof. Dr. dr. Eryati Darwin, PA(K)
 NIP. 1953 1109 1982 112 001

Lampiran 15. Laporan Hasil Akhir Pemeriksaan ELISA BACE1



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 Telp: 082384645776/ 0811662495; e-mail:lsbbiomedik@gmail.com
 www.lsbbiomedik.fk.unand.ac.id



LAPORAN HASIL AKHIR

No. Dokumen: LB/FORM-12/017/2016

Nama Peneliti : Linda
 No. Registrasi :-
 Institusi :-
 Judul Penelitian :-
 Jenis Sampel : LCS Rat
 Paramater yang diuji : BACE1
 Metode Uji : Elisa
 Analisis Lab. : Juane Plantika Menra
 Biomedik
 Deskripsi Hasil : Lampiran 3 halaman

Mengetahui,
 Ketua Lab. Biomedik FK-UNAND



Prof. Dr. dr. Hj. Yanwirasti P. A
 NIP. 194309301973032001

Padang, 30 September 2016
 Analis Lab. Biomedik FK-UNAND

Juane Plantika Menra



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<http://labbiomedik.uand.ac.id>



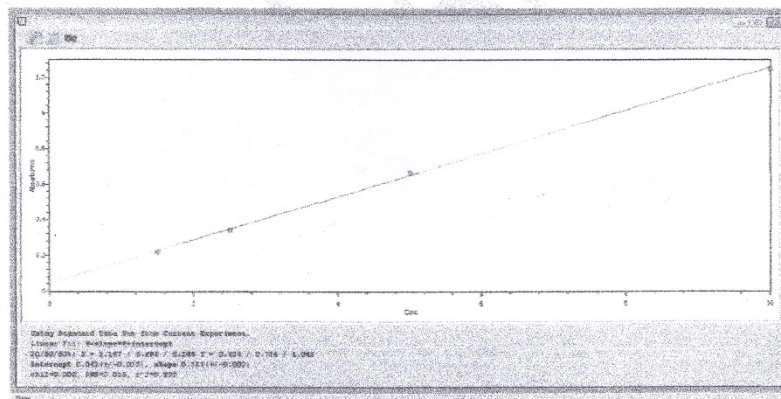
LAPORAN HASIL AKHIR

No. Dokumen: LB/FORM-12/017/2016

LAMPIRAN

Title
 Protocol
 Date/Time 09/22/2016 16:04:45
 Technician
 Plate ID
 Unit
 Reader Setup Endpoint Single 450.0nm Mix off Temp 24.9
 Reader Model # xMark
 Reader Serial # 10108
 Reader Version # 2.02.05
 Comments

Using Standard Data Set from Current Experiment.
 Linear Fit: $Y = \text{slope} \cdot X + \text{intercept}$
 20/50/80%: $X = 3.147 / 5.696 / 8.245$ $Y = 0.424 / 0.734 / 1.043$
 intercept: $0.042 (+/-0.013)$, slope: $0.121 (+/-0.002)$
 $\chi^2 = 0.000$, RMS = 0.015, $r^2 = 0.999$





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LAPORAN HASIL AKHIR

No. Dokumen: LB/FORM-12/017/2016

Standards Report:

Std #	Conc (ng/ml)	Well	Optical Density
1	1.5	D1	0.218
2	2.5	C1	0.341
3	5	B1	0.667
4	10	A1	1.249

Data Analysis Report:

Sample ID	Well	Optical Density	Conc (ng/ml)
A01	F6	0.059	0.137
A02	G6	0.057	0.121
K+01	H5	0.086	0.360
K+02	A6	0.065	0.187
K+03	B6	0.061	0.154
K-04	C6	0.059	0.137
K-05	D6	0.058	0.129
K-06	E6	0.106	0.525
K03	D5	0.061	0.154
K04	E5	0.081	0.318
K05	B2	0.050	0.063
K06	F5	0.062	0.162
K07	G5	0.074	0.261
VCO1-01	G2	0.120	0.640
VCO1-05	H2	0.063	0.170
VCO1-06	D2	0.051	0.071
VCO1-07	A3	0.056	0.112
VCO2-01	B2	0.066	0.195
VCO2-03	A2	0.057	0.121
VCO2-04	C2	0.071	0.236
VCO2-05	D2	0.068	0.211
VCO2-06	E2	0.163	0.994
VCO2-07	F2	0.091	0.401
X1-02	B3	0.053	0.088
X1-03	C3	0.052	0.080
X1-04	D3	0.057	0.121
X1-05	E3	0.122	0.656
X1-06	F3	0.082	0.327
X1-07	G3	0.058	0.129
X2-01	H3	0.062	0.162
X2-02	A4	0.053	0.088
X2-03	B4	0.055	0.104
X2-05	C4	0.052	0.080



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**LAPORAN HASIL AKHIR**

No. Dokumen: LB/FORM-12/017/2016

X2-06	D4	0.060	0.145
X2-07	E4	0.064	0.178
X3-01	F4	0.050	0.063
X3-02	G4	0.053	0.088
X3-03	C2	0.053	0.088
X3-04	H4	0.073	0.253
X3-05	A5	0.054	0.096
X3-06	B5	0.101	0.483
X3-07	C5	0.054	0.096

Lampiran 16. Laporan Hasil Akhir Pemeriksaan ELISA Beta Amyloid



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<http://labbiomedik.blogspot.com/>



LAPORAN HASIL AKHIR

No. Dokumen: LB/FORM-12/017/2016

Nama Peneliti : dr. Linda Rosalina
 No. Registrasi : -
 Institusi : -
 Judul Penelitian : -
 Jenis Sampel : LCS Rat
 Paramater yang diuji : β -Amyloid
 Metode Uji : Elisa
 Analisis Lab. : Nova Aulina Rohana
 Biomedik
 Deskripsi Hasil : Lampiran 3 halaman

Mengetahui,
 Ketua Lab. Biomedik FK-UNAND

Padang, 30 September 2016
 Analis Lab. Biomedik FK-UNAND



Prof. Dr. dr. Hj. Yanwirasti, P. A.
 NIP. 194309301973032001

Nova Aulina Rohana



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<http://labbiomedik.blogspot.com/>



LAPORAN HASIL AKHIR

No. Dokumen: LB/FORM-12/017/2016

LAMPIRAN

Title E-Amyloid
 Protocol Elabscience
 Date/Time 09/22/2016 17:49:05
 Technician Nova Aulina Rohana
 Plate ID
 Unit
 Reader Setup Endpoint Single 450.0nm Mix off Temp 26.3
 Reader Model # xMark
 Reader Serial # 10108
 Reader Version # 2.02.05
 Comments

Using Standard Data Set from Current Experiment.
 Quadratic Fit: $Y=A+BX+CX^2$
 20/50/80%: X = 53,158 / 155,062 / 296,282 Y = 0,276 / 0,608 / 0,939
 A: 0,073 (+/-0,015), B: 0,004 (+/-0,000), C: -0,000 (+/-0,000)
 chi2=0,004, RMS=0,029, r^2=0,996

Standards Report:

Std #	Conc	Well	Optical Density (OD)
1	0	H1	0,111
		C9	0,000
2	15.63	G1	0,149
3	31.25	F1	0,222
4	62.5	E1	0,288
5	125	D1	0,556
6	250	C1	0,820
7	500	B1	1,160

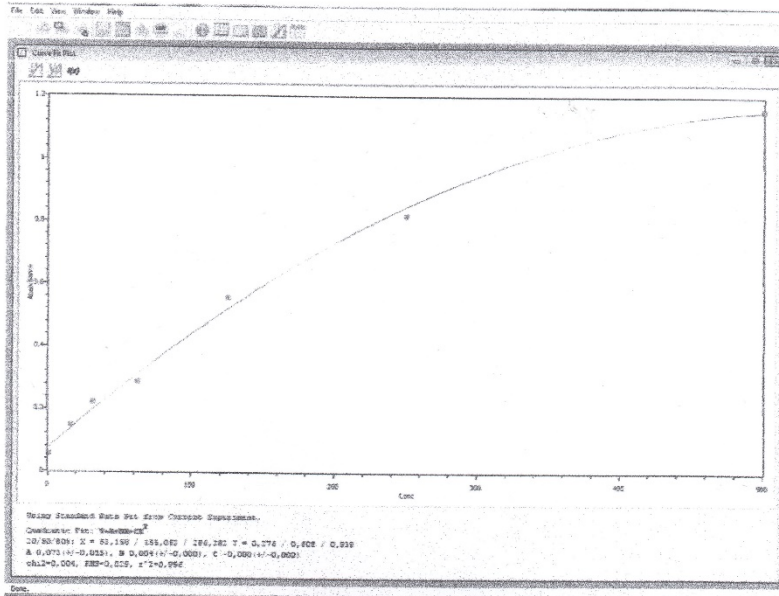


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No. Dokumen: LB/FORM-12/017/2016

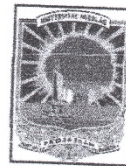


Data Analysis Report:

Sample ID	Well	Optical Density (OD)	Conc
A01	F6	0,231	40,811
A02	G6	0,287	56,086
K+01	H5	0,448	102,961
K+02	A6	0,106	8,294
K+03	B6	0,178	26,773
K-04	C6	0,300	59,702
K-05	D6	0,088	3,774
K-06	E6	0,161	22,350
K03	D5	0,334	69,288
K04	E5	0,525	127,253
K06	F5	0,426	96,264
K07	G5	0,227	39,738
KTK/01	H6	0,119	11,583



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KTK/02	A7	0,165	23,388
KTK/03	B7	0,141	17,195
KTK/04	C7	0,150	19,509
KTK/05	D7	0,127	13,617
KTK/06	E7	0,180	27,296
KTK/07	F7	0,132	14,892
VCO I/01	G7	0,106	8,294
VCO I/02	H7	0,109	9,051
VCO I/03	A8	0,121	12,091
VCO I/05	B8	0,112	9,809
VCO I/06	C8	0,129	14,126
VCO I/07	D8	0,149	19,251
VCO II/01	E8	0,095	5,527
VCO II/03	F8	0,088	3,774
VCO II/04	G8	0,110	9,304
VCO II/05	H8	0,102	7,286
VCO II/06	A9	0,141	17,195
VCO II/07	B9	0,125	13,108
VCO1-01	G2	0,151	19,766
VCO1-05	H2	0,075	0,533
VCO1-07	A3	0,295	58,308
VCO2-01	B2	0,556	137,446
VCO2-03	A2	0,379	82,285
VCO2-04	C2	0,579	145,178
VCO2-05	D2	0,219	37,599
VCO2-06	E2	0,827	240,964
VCO2-07	F2	0,973	315,673
X1-02	B3	0,170	24,687
X1-03	C3	0,179	27,034
X1-04	D3	0,139	16,683
X1-05	E3	0,529	128,554
X1-06	F3	0,236	42,156
X1-07	G3	0,256	47,572
X2-01	H3	0,129	14,126
X2-02	A4	0,126	13,362
X2-03	B4	0,132	14,892
X2-05	C4	0,111	9,557
X2-06	D4	0,179	27,034
X2-07	E4	0,141	17,195



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No. Dokumen: LB/FORM-12/017/2016

X3-01	F4	0,126	13,362
X3-02	G4	0,152	20,024
X3-04	H4	0,104	7,790
X3-05	A5	0,132	14,892
X3-06	B5	0,242	43,775
X3-07	C5	0,115	10,569
LCS K-05	B2	0,056	29,618
LCS VCO1-06	D2	0,067	224,386
LCS X1 NO 03	A2	0,061	118,149
LCS X3-03	C2	0,055	11,912

Lampiran 17. Foto-Foto Kegiatan Penelitian

1. Penimbangan Tikus



2. Pemeliharaan Tikus



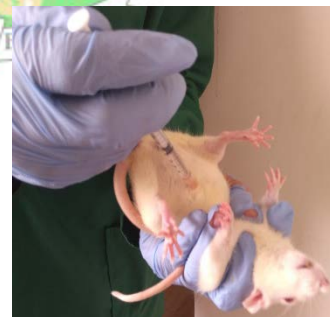
3. Proses Induksi Alzheimer



b. Anastesi

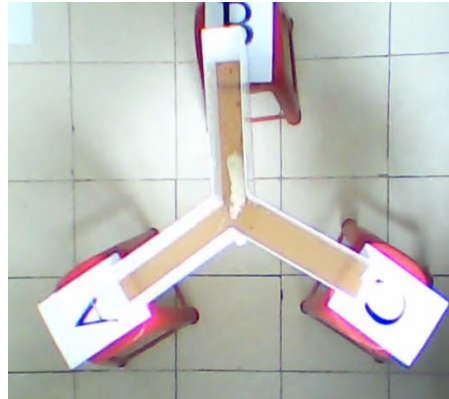


a. *Ovariectomy* bilateral



c. Injeksi D-Galaktosa Intraperitoneal

4. Y-Maze test



5. Proses Pemberian Katekin



a. Katekin



b. Larutan Katekin



c. Pemberian Katekin

6. Alat untuk Pengambilan Cairan Serebrospinal



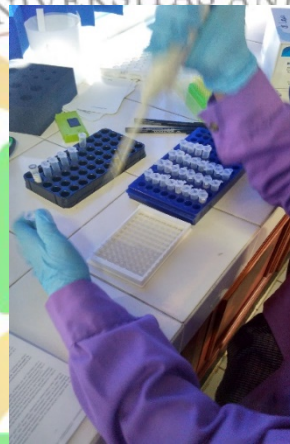
7. Penyimpanan Sampel



8. Pemeriksaan Sampel Cairan Serebrospinal dengan Metode ELISA



c. Persiapan



b. Pemeriksaan



a. ELISA reader

