

LAMPIRAN

Lampiran 1 Persetujuan Etik



KOMISI ETIK RISET
FAKULTAS KEDOKTERAN
UNIVERSITAS TRISAKTI
Jalan Kyai Tapa, Grogol, (Kampus B) Jakarta 11440
Telp: (021) 5672731, 5655786
Fax : (021) 5660706

PERSETUJUAN ETIK
Ethical Clearance
Nomor: 144/KER/FK/I/2019

Komisi Etik Riset Fakultas Kedokteran Universitas Trisakti setelah mempelajari dengan seksama dan mendengarkan penjelasan dari peneliti utama tentang kemungkinan adanya dampak etis terhadap subyek riset, masyarakat dan lingkungan, menetapkan penelitian dengan judul:

**"PENGARUH PEMBERIAN EKSTRAK DAUN BLACKBERRY
(*Rubus Sp*) TERHADAP KADAR SUPEROXIDE DISMUTASE
(SOD) PADA JANTUNG DAN DARAH TIKUS *SPRAGUE
DAWLEY* YANG DIINDUKSI HIPOKSIDA**

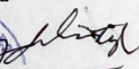
Peneliti Utama : Steffanny Regina Maria Andini

Lembaga/Tempat penelitian : FK Universitas Tarumanagara

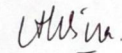
Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 17 Januari 2019

Ketua


Prof. DR. dr. Adi Hidayat, MS

Sekretaris


dr. Alvina SpPK

Lampiran 2 Identifikasi Tumbuhan



LEMBAGA ILMU PENGETAHUAN INDONESIA
(INDONESIAN INSTITUTE OF SCIENCES)
PUSAT PENELITIAN BIOLOGI
(RESEARCH CENTER FOR BIOLOGY)

Cibinong Science Center, Jl. Raya Jakarta - Bogor KM. 46 Cibinong 16911
Telp. (+62 21) 87907636 - 87907604, Fax. 87907612
Website : www.biologi.lipi.go.id



Nomor : 865/IPH.1.01/If.07/IV/2018
Lampiran : -
Perihal : Hasil identifikasi/determinasi Tumbuhan

Cibinong, 6 April 2018

Kepada Yth.
Bpk./Ibu/Sdr(i). **Chindy Tjandra**
Mhs. Univ. Tarumanagara
Jl. Letjend S. Parman No.1
Jakarta - 11440

Dengan hormat,

Bersama ini kami sampaikan hasil identifikasi/determinasi tumbuhan yang Saudara kirimkan ke "Herbarium Bogoriense", Bidang Botani Pusat Penelitian Biologi-LIPI Bogor, adalah sebagai berikut :

No.	No. Kol.	Jenis	Suku
1	Strawberry	<i>Fragaria vesca</i> L.	Rosaceae
2	Raspberry	<i>Rubus idaeus</i> L.	Rosaceae
3	Blackberry	<i>Rubus</i> sp.	Rosaceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,

Dr. Joeni Setijo Rahajoe
NIP. 196706241993032004

Lampiran 3 Pengujian pada Ekstrak Daun *Blackberry*

Regresi Linear Standar Pembanding Vitamin C

Best-fit values $\pm$ SE	
Slope	6,381 $\pm$ 0,1261
Y-intercept	19,49 $\pm$ 0,8363
X-intercept	-3,055
1/slope	0,1567
95% Confidence Intervals	
Slope	5,98 to 6,783
Y-intercept	16,83 to 22,16
X-intercept	-3,69 to -2,492
Goodness of Fit	
R square	0,9988
Sy.x	0,7974
Is slope significantly non-zero?	
F	2562
DFn, DFd	1, 3
P value	<0,0001
Deviation from zero?	Significant
Equation	$Y = 6,381 * X + 19,49$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Regresi Linear Hasil DPPH Ekstrak Daun *Blackberry*

Best-fit values $\pm$ SE	
Slope	0,3842 $\pm$ 0,01362
Y-intercept	-0,7879 $\pm$ 0,7823
X-intercept	2,051
1/slope	2,603
95% Confidence Intervals	
Slope	0,3409 to 0,4276
Y-intercept	-3,278 to 1,702
X-intercept	-4,917 to 7,783
Goodness of Fit	
R square	0,9962
Sy.x	0,8613
Is slope significantly non-zero?	
F	796
DFn, DFd	1, 3
P value	<0,0001
Deviation from zero?	Significant
Equation	$Y = 0,3842 * X - 0,7879$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Regresi Linear *Total Alkaloid Content* (Kapasitas Total Alkaloid) pada Ekstrak Daun *Blackberry*

Best-fit values $\pm$ SE	
Slope	0,001715 $\pm$ 0,0001864
Y-intercept	0,0491 $\pm$ 0,01237
X-intercept	-28,63
1/slope	583,1
95% Confidence Intervals	
Slope	0,001122 to 0,002308
Y-intercept	0,009743 to 0,08846
X-intercept	-77,04 to -4,321
Goodness of Fit	
R square	0,9658
Sy.x	0,01179
Is slope significantly non-zero?	
F	84,62
DFn, DFd	1, 3
P value	0,0027
Deviation from zero?	Significant
Equation	$Y = 0,001715 \cdot X + 0,0491$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Regresi Linear *Total Phenolic Content* (Kapasitas Total Fenolik) pada Ekstrak Daun *Blackberry*

Best-fit values $\pm$ SE	
Slope	0,00073 $\pm$ 7,332e-005
Y-intercept	0,1188 $\pm$ 0,0381
X-intercept	-162,7
1/slope	1370
95% Confidence Intervals	
Slope	0,0004967 to 0,0009633
Y-intercept	-0,002447 to 0,24
X-intercept	-478,9 to 2,564
Goodness of Fit	
R square	0,9706
Sy.x	0,02319
Is slope significantly non-zero?	
F	99,13
DFn, DFd	1, 3
P value	0,0022
Deviation from zero?	Significant
Equation	$Y = 0,00073 \cdot X + 0,1188$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Regresi Uji Toksisitas BSLT pada Ekstrak Daun *Blackberry*

Best-fit values $\pm$ SE	
Slope	41,67 $\pm$ 1,147
Y-intercept	-27,99 $\pm$ 2,645
X-intercept	0,6717
1/slope	0,024
95% Confidence Intervals	
Slope	36,74 to 46,6
Y-intercept	-39,37 to -16,61
X-intercept	0,4478 to 0,8528
Goodness of Fit	
R square	0,9985
Sy.x	1,764
Is slope significantly non-zero?	
F	1321
DFn, DFd	1, 2
P value	0,0008
Deviation from zero?	Significant
Equation	$Y = 41,67 * X - 27,99$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Lampiran 4 Pengujian pada Sampel Darah dan Jantung Tikus

Optimasi Darah Tidak Cekok (Kelompok Kontrol)

T	ΔV			
	5x	10x	15x	20x
1	0.0000	0.0000	0.0000	0.0000
2	0.0060	0.0050	0.0050	0.0020
3	0.0120	0.0050	0.0050	0.0025
4	0.0133	0.0057	0.0053	0.0023
5	0.0135	0.0055	0.0055	0.0023
6	0.0128	0.0054	0.0058	0.0024
7	0.0118	0.0052	0.0060	0.0022
8	0.0114	0.0053	0.0059	0.0021
9	0.0115	0.0053	0.0058	0.0021
10	0.0113	0.0053	0.0058	0.0023

Optimasi Darah Cekok (Kelompok Uji)

T	ΔV			
	5x	10x	20x	25x
1	0,0000	0,0000	0,0000	0,0000
2	0,0020	0,0000	0,0190	0,0190
3	0,0020	0,0010	0,0195	0,0195
4	0,0023	0,0017	0,0193	0,0190
5	0,0025	0,0018	0,0188	0,0188
6	0,0038	0,0016	0,0180	0,0184
7	0,0027	0,0018	0,0178	0,0178
8	0,0026	0,0019	0,0173	0,0174
9	0,0026	0,0019	0,0169	0,0170
10	0,0027	0,0019	0,0164	0,0164

Optimasi Jantung Tidak Cekok (Kelompok Kontrol)

T	ΔV			
	5x	10x	15x	20x
1	0.0000	0.0000	0.0000	0.0000
2	0.0240	0.0020	0.0120	0.0090
3	0.0230	0.0035	0.0115	0.0090
4	0.0210	0.0037	0.0113	0.0087
5	0.0210	0.0038	0.0110	0.0090
6	0.0198	0.0040	0.0106	0.0088
7	0.0185	0.0040	0.0103	0.0087
8	0.0171	0.0039	0.0101	0.0086
9	0.0163	0.0039	0.0099	0.0085
10	0.0153	0.0040	0.0098	0.0084

Optimasi Jantung Cekok (Kelompok Uji)

T	ΔV			
	10x	25x	50x	100x
1	0,0000	0,0000	0,0000	0,0000
2	0,0470	0,0360	0,0090	0,0160
3	0,0465	0,0360	0,0100	0,0155
4	0,0437	0,0347	0,0100	0,0167
5	0,0410	0,0335	0,0100	0,0165
6	0,0388	0,0322	0,0102	0,0164
7	0,0367	0,0312	0,0100	0,0162
8	0,0343	0,0301	0,0100	0,0159
9	0,0324	0,0290	0,0100	0,0156
10	0,0304	0,0280	0,0099	0,0152

Regresi Linear Standar Protein BSA

Best-fit values $\pm$ SE	
Slope	0,8335 $\pm$ 0,02395
Y-intercept	0,05981 $\pm$ 0,01024
X-intercept	-0,07177
1/slope	1,2
95% Confidence Intervals	
Slope	0,7748 to 0,8921
Y-intercept	0,03475 to 0,08488
X-intercept	-0,1081 to -0,03948
Goodness of Fit	
R square	0,9951
Sy.x	0,01806
Is slope significantly non-zero?	
F	1211
DFn, DFd	1, 6
P value	<0,0001
Deviation from zero?	Significant
Equation	$Y = 0,8335 \cdot X + 0,05981$
Data	
Number of X values	8
Maximum number of Y replicates	1
Total number of values	8
Number of missing values	0

Aktivitas Katalase, Kadar Protein, dan Aktivitas Spesifik Katalase Darah

Kelompok	Lama Hipoksia (hari)	Tikus	Aktivitas Katalase (mU/mL)	Kadar Protein (mg/mL)	Aktivitas Spesifik Katalase (mU/mg protein)
Tidak Cekok (Kelompok Kontrol)	0	1	22,05882353	0,349328215	63,14641241
		2	20,22058824	0,391914587	51,59437512
		3	36,76470588	0,726607486	50,59775272
		4	23,89705882	0,600947697	39,76562179
	1	1	11,02941176	0,296545106	37,19303255
		2	16,54411765	0,359524952	46,01660484
		3	8,272058824	0,308541267	26,81021864
		4	6,433823529	0,221569098	29,03754897
	7	1	14,70588235	0,377519194	38,95399914
		2	11,02941176	0,432701536	25,48965247
		3	13,78676471	0,332533589	41,45976572
		4	9,191176471	0,458493282	20,04648013
	14	1	5,514705882	0,367622361	15,00100775
		2	17,46323529	0,461792226	37,81621754
		3	8,272058824	0,375419866	22,03415317
		4	11,02941176	0,379318618	29,0769059
Cekok (Kelompok Uji)	0	1	386,029412	0,437799904	881,748508
		2	404,411765	0,444397793	910,021993
		3	376,838235	0,424904031	886,878466
		4	404,411765	0,437799904	923,736532
	1	1	340,0735294	0,43450096	782,6761295
		2	349,2647059	0,442898273	788,5890001
		3	321,6911765	0,399712092	804,807217
		4	358,4558824	0,423704415	846,0045966
	7	1	266,5441176	0,399712092	707,1647883
		2	248,1617647	0,34452975	720,2912502
		3	248,1617647	0,337332054	735,6601958
		4	284,9264706	0,373320537	763,2220626
	14	1	211,3970588	0,358925144	588,9725543
		2	193,0147059	0,31693858	608,9971946
		3	174,6323529	0,270153551	646,4188695
		4	193,0147059	0,320537428	602,1596513

Aktivitas Katalase, Kadar Protein, dan Aktivitas Spesifik Katalase Jantung

Kelompok	Lama Hipoksia (hari)	Tikus	Aktivitas Katalase (mU/mL)	Kadar Protein (mg/mL)	Aktivitas Spesifik Katalase (mU/mg protein)
Tidak Cekok (Kelompok Kontrol)	0	1	92,268464	14,29942418	6,4526
		2	88,071382	11,30038388	7,7936628
		3	106,10759	14,17946257	7,4831886
		4	84,736728	13,25975688	6,390519
	1	1	82,138153	13,4596929	6,102528
		2	94,999986	14,97920665	6,342124
		3	67,78981	13,21976967	5,1279116
		4	110,16992	18,25815739	6,034011
	7	1	96,857007	17,17850288	5,6382682
		2	71,751901	11,06046065	6,4872435
		3	81,374814	14,29942418	5,6907756
		4	83,980468	17,4184261	4,821358
	14	1	131,74749	21,85700576	6,0277007
		2	76,665632	15,49904031	4,9464761
		3	91,290341	17,53838772	5,2051729
		4	104,77099	18,29814459	5,7257713
Cekok (Kelompok Uji)	0	1	154,41176	12,14011516	12,71913511
		2	147,05882	12,26007678	11,994935
		3	139,70588	12,97984645	10,76329235
		4	154,41176	13,33973129	11,57532799
	1	1	117,64705	11,06046065	10,63672325
		2	110,29411	12,5	8,82352944
		3	117,64705	9,261036468	12,70344409
		4	125	11,42034549	10,94537815
	7	1	80,882235	10,10076775	8,007533414
		2	80,882235	9,021113244	8,965881828
		3	73,529412	8,18138195	8,987407308
		4	73,529412	9,021113244	8,150813543
	14	1	58,823529	7,821497121	7,520750579
		2	51,470588	7,22168906	7,12722295
		3	51,470588	7,461612284	6,898051794
		4	44,117647	6,501919386	6,785326668

Uji Normalitas Aktivitas Spesifik Katalase Darah Kelompok Kontrol

	Normoksia	Hipoksia 1	Hipoksia 7	Hipoksia 14
Number of values	4	4	4	4
Minimum	39,77	26,81	20,05	15
25% Percentile	42,48	27,37	21,41	16,76
Median	51,1	33,12	32,22	25,56
75% Percentile	60,26	43,81	40,83	35,64
Maximum	63,15	46,02	41,46	37,82
Mean	51,28	34,77	31,49	25,98
Std. Deviation	9,556	8,73	10,36	9,763
Std. Error of Mean	4,778	4,365	5,179	4,882
Lower 95% CI of mean	36,07	20,87	15	10,45
Upper 95% CI of mean	66,48	48,66	47,97	41,52
Sum	205,1	139,1	126	103,9
Shapiro-Wilk normality test				
W	0,9619	0,927	0,8928	0,9936
P value	0,7911	0,5771	0,3961	0,9751
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns
KS normality test				
KS distance	N too small	N too small	N too small	N too small
P value				
Passed normality test (alpha=0.05)?				
P value summary				

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia dengan Hipoksia 1 hari pada Tikus Kelompok Kontrol

Table Analyzed	TIDAK CEKOK - DARAH
Column B	HIPOKSIA 1 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0434
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,552 df=6
How big is the difference?	
Mean ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column B	34,77 ± 4,365, n=4
Difference between means	-16,51 ± 6,471
95% confidence interval	-32,35 to -0,6775
R squared (eta squared)	0,5204
F test to compare variances	
F, DFn, Dfd	1,198, 3, 3
P value	0,8853
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia dengan Hipoksia 7 hari pada Tikus Kelompok Kontrol

Table Analyzed	TIDAK CEKOK - DARAH
Column C	HIPOKSIA 7 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0308
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,808 df=6
How big is the difference?	
Mean ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column C	31,49 ± 5,179, n=4
Difference between means	-19,79 ± 7,047
95% confidence interval	-37,03 to -2,547
R squared (eta squared)	0,568
F test to compare variances	
F, DFn, Dfd	1,175, 3, 3
P value	0,8976
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia dengan Hipoksia 14 hari pada Tikus Kelompok Kontrol

Table Analyzed	TIDAK CEKOK - DARAH
Column D	HIPOKSIA 14 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0101
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,703 df=6
How big is the difference?	
Mean ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column D	25,98 ± 4,882, n=4
Difference between means	-25,3 ± 6,831
95% confidence interval	-42,01 to -8,581
R squared (eta squared)	0,6956
F test to compare variances	
F, DFn, Dfd	1,044, 3, 3
P value	0,9727
P value summary	ns
Significantly different (P < 0.05)?	No

Uji Normalitas Aktivitas Spesifik Katalase Darah Kelompok Uji

	Normoksia	Hipoksia 1	Hipoksia 7	Hipoksia 14
Number of values	4	4	4	4
Minimum	881,8	782,7	707,2	589
25% Percentile	883	784,2	710,4	592,3
Median	898,5	796,7	728	605,6
75% Percentile	920,3	835,7	756,3	637,1
Maximum	923,7	846	763,2	646,4
Mean	900,6	805,5	731,6	611,6
Std. Deviation	19,73	28,56	24,09	24,63
Std. Error of Mean	9,865	14,28	12,05	12,32
Lower 95% CI of mean	869,2	760,1	693,2	572,4
Upper 95% CI of mean	932	851	769,9	650,8
Sum	3602	3222	2926	2447
D'Agostino & Pearson normality test				
K2	N too small	N too small	N too small	N too small
P value				
Passed normality test (alpha=0.05)?				
P value summary				
Shapiro-Wilk normality test				
W	0,9161	0,8727	0,9692	0,9064
P value	0,5152	0,3084	0,8367	0,4637
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia dengan Hipoksia 1 hari pada Tikus Kelompok Uji

Table Analyzed	CEKOK - DARAH
Column B	HIPOKSIA 1 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0015
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5,478 df=6
How big is the difference?	
Mean ± SEM of column A	900,6 ± 9,865, n=4
Mean ± SEM of column B	805,5 ± 14,28, n=4
Difference between means	-95,08 ± 17,36
95% confidence interval	-137,5 to -52,61
R squared (eta squared)	0,8334
F test to compare variances	
F, DFn, Dfd	2,096, 3, 3
P value	0,5589
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia dengan Hipoksia 7 hari pada Tikus Kelompok Uji

Table Analyzed	CEKOK - DARAH
Column C	HIPOKSIA 7 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=10,85 df=6
How big is the difference?	
Mean ± SEM of column A	900,6 ± 9,865, n=4
Mean ± SEM of column C	731,6 ± 12,05, n=4
Difference between means	-169 ± 15,57
95% confidence interval	-207,1 to -130,9
R squared (eta squared)	0,9515
F test to compare variances	
F, DFn, Dfd	1,491, 3, 3
P value	0,7505
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia dengan Hipoksia 14 hari pada Tikus Kelompok Uji

Table Analyzed	CEKOK - DARAH
Column D	HIPOKSIA 14 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=18,31 df=6
How big is the difference?	
Mean ± SEM of column A	900,6 ± 9,865, n=4
Mean ± SEM of column D	611,6 ± 12,32, n=4
Difference between means	-289 ± 15,78
95% confidence interval	-327,6 to -250,3
R squared (eta squared)	0,9824
F test to compare variances	
F, DFn, Dfd	1,559, 3, 3
P value	0,7241
P value summary	ns
Significantly different (P < 0.05)?	No

Uji Normalitas Aktivitas Spesifik Katalase Jantung Kelompok Kontrol

	Normoksia	Hipoksia 1	Hipoksia 7	Hipoksia 14
Number of values	4	4	4	4
Minimum	6,39	5,13	4,82	4,95
25% Percentile	6,405	5,355	5,025	5,015
Median	6,965	6,065	5,665	5,47
75% Percentile	7,713	6,28	6,29	5,955
Maximum	7,79	6,34	6,49	6,03
Mean	7,028	5,9	5,66	5,48
Std. Deviation	0,7132	0,5302	0,6821	0,4895
Std. Error of Mean	0,3566	0,2651	0,3411	0,2447
Lower 95% CI of mean	5,893	5,056	4,575	4,701
Upper 95% CI of mean	8,162	6,744	6,745	6,259
Sum	28,11	23,6	22,64	21,92
Shapiro-Wilk normality test				
W	0,8419	0,8431	0,9575	0,9555
P value	0,2010	0,2045	0,7630	0,7506
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns
KS normality test				
KS distance	N too small	N too small	N too small	N too small
P value				
Passed normality test (alpha=0.05)?				
P value summary				

Perbandingan Aktivitas Spesifik Katalase Jantung Normoksia dengan Hipoksia 1 hari pada Tikus Kelompok Kontrol

Table Analyzed	TIDAK CEKOK - JARINGAN
Column B	HIPOKSIA 1 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0442
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,537 df=6
How big is the difference?	
Mean ± SEM of column A	7,028 ± 0,3566, n=4
Mean ± SEM of column B	5,9 ± 0,2651, n=4
Difference between means	-1,128 ± 0,4444
95% confidence interval	-2,215 to -0,04019
R squared (eta squared)	0,5176
F test to compare variances	
F, DFn, Dfd	1,809, 3, 3
P value	0,6383
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Jantung Normoksia dengan Hipoksia 7 hari pada Tikus Kelompok Kontrol

Table Analyzed	TIDAK CEKOK - JARINGAN
Column C	HIPOKSIA 7 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0324
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,771 df=6
How big is the difference?	
Mean ± SEM of column A	7,028 ± 0,3566, n=4
Mean ± SEM of column C	5,66 ± 0,3411, n=4
Difference between means	-1,368 ± 0,4934
95% confidence interval	-2,575 to -0,1601
R squared (eta squared)	0,5614
F test to compare variances	
F, DFn, Dfd	1,093, 3, 3
P value	0,9433
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Jantung Normoksia dengan Hipoksia 14 hari pada Tikus Kelompok Kontrol

Table Analyzed	TIDAK CEKOK - JARINGAN
Column D	HIPOKSIA 14 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0117
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,578 df=6
How big is the difference?	
Mean ± SEM of column A	7,028 ± 0,3566, n=4
Mean ± SEM of column D	5,48 ± 0,2447, n=4
Difference between means	-1,548 ± 0,4325
95% confidence interval	-2,606 to -0,4892
R squared (eta squared)	0,6809
F test to compare variances	
F, DFn, Dfd	2,123, 3, 3
P value	0,5522
P value summary	ns
Significantly different (P < 0.05)?	No

Uji Normalitas Aktivitas Spesifik Katalase Jantung Kelompok Uji

	Normoksia	Hipoksia 1	Hipoksia 7	Hipoksia 14
Number of values	4	4	4	4
Minimum	10,76	8,82	8,01	6,79
25% Percentile	10,97	9,275	8,045	6,818
Median	11,79	10,79	8,56	7,015
75% Percentile	12,54	12,26	8,985	7,423
Maximum	12,72	12,7	8,99	7,52
Mean	11,76	10,78	8,53	7,085
Std. Deviation	0,8179	1,589	0,5228	0,3227
Std. Error of Mean	0,4089	0,7944	0,2614	0,1614
Lower 95% CI of mean	10,46	8,247	7,698	6,571
Upper 95% CI of mean	13,06	13,3	9,362	7,599
Sum	47,05	43,1	34,12	28,34
D'Agostino & Pearson normality test				
K2	N too small	N too small	N too small	N too small
P value				
Passed normality test (alpha=0.05)?				
P value summary				
Shapiro-Wilk normality test				
W	0,998	0,9744	0,8	0,933
P value	0,9937	0,8686	0,1021	0,6120
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Perbandingan Aktivitas Spesifik Katalase Jantung Normoksia dengan Hipoksia 1 hari pada Tikus Kelompok Uji

Table Analyzed	CEKOK - JARINGAN
Column B	HIPOKSIA 1 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,3114
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,105 df=6
How big is the difference?	
Mean ± SEM of column A	11,76 ± 0,4089, n=4
Mean ± SEM of column B	10,78 ± 0,7944, n=4
Difference between means	-0,9875 ± 0,8935
95% confidence interval	-3,174 to 1,199
R squared (eta squared)	0,1691
F test to compare variances	
F, DFn, Dfd	3,774, 3, 3
P value	0,3043
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Jantung Normoksia dengan Hipoksia 7 hari pada Tikus Kelompok Uji

Table Analyzed	CEKOK - JARINGAN
Column C	HIPOKSIA 7 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	0,0006
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=6,66 df=6
How big is the difference?	
Mean $\pm$ SEM of column A	11,76 $\pm$ 0,4089, n=4
Mean $\pm$ SEM of column C	8,53 $\pm$ 0,2614, n=4
Difference between means	-3,233 $\pm$ 0,4854
95% confidence interval	-4,42 to -2,045
R squared (eta squared)	0,8808
F test to compare variances	
F, DFn, Dfd	2,447, 3, 3
P value	0,4816
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Jantung Normoksia dengan Hipoksia 14 hari pada Tikus Kelompok Uji

Table Analyzed	CEKOK - JARINGAN
Column D	HIPOKSIA 14 HARI
vs.	vs,
Column A	NORMOKSIA
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=10,64 df=6
How big is the difference?	
Mean $\pm$ SEM of column A	11,76 $\pm$ 0,4089, n=4
Mean $\pm$ SEM of column D	7,085 $\pm$ 0,1614, n=4
Difference between means	-4,678 $\pm$ 0,4396
95% confidence interval	-5,753 to -3,602
R squared (eta squared)	0,9497
F test to compare variances	
F, DFn, Dfd	6,422, 3, 3
P value	0,1610
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Normoksia antara Kelompok Kontrol dan Kelompok Uji

Table Analyzed	DARAH KORELASI
Column E	CEKOK - NORMOKSIA
vs.	vs,
Column A	TIDAK CEKOK - NORMOKSIA
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=77,49 df=6
How big is the difference?	
Mean ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column E	900,6 ± 9,865, n=4
Difference between means	849,3 ± 10,96
95% confidence interval	822,5 to 876,1
R squared (eta squared)	0,999
F test to compare variances	
F, DFn, Dfd	4,263, 3, 3
P value	0,2646
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Hipoksia 1 Hari antara Kelompok Kontrol dan Kelompok Uji

Table Analyzed	DARAH KORELASI
Column F	CEKOK - HIPOKSIA 1 HARI
vs.	vs,
Column B	TIDAK CEKOK - HIPOKSIA 1 HARI
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=51,61 df=6
How big is the difference?	
Mean ± SEM of column B	34,76 ± 4,364, n=4
Mean ± SEM of column F	805,5 ± 14,28, n=4
Difference between means	770,8 ± 14,93
95% confidence interval	734,2 to 807,3
R squared (eta squared)	0,9978
F test to compare variances	
F, DFn, Dfd	10,71, 3, 3
P value	0,0826
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Hipoksia 7 Hari antara Kelompok Kontrol dan Kelompok Uji

Table Analyzed	DARAH KORELASI
Column G	CEKOK - HIPOKSIA 7 HARI
vs.	vs,
Column C	TIDAK CEKOK - HIPOKSIA 7 HARI
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=53,39 df=6
How big is the difference?	
Mean ± SEM of column C	31,49 ± 5,181, n=4
Mean ± SEM of column G	731,6 ± 12,05, n=4
Difference between means	700,1 ± 13,11
95% confidence interval	668 to 732,2
R squared (eta squared)	0,9979
F test to compare variances	
F, DFn, Dfd	5,407, 3, 3
P value	0,1992
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Aktivitas Spesifik Katalase Darah Hipoksia 14 hari antara Kelompok Kontrol dan Kelompok Uji

Table Analyzed	DARAH KORELASI
Column H	CEKOK - HIPOKSIA 14 HARI
vs.	vs,
Column D	TIDAK CEKOK - HIPOKSIA 14 HARI
Unpaired t test	
P value	<0,0001
P value summary	****
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=44,21 df=6
How big is the difference?	
Mean ± SEM of column D	25,98 ± 4,88, n=4
Mean ± SEM of column H	611,6 ± 12,32, n=4
Difference between means	585,7 ± 13,25
95% confidence interval	553,2 to 618,1
R squared (eta squared)	0,9969
F test to compare variances	
F, DFn, Dfd	6,37, 3, 3
P value	0,1626
P value summary	ns
Significantly different (P < 0.05)?	No

Korelasi Aktivitas Spesifik Katalase antara Darah dan Jantung Kelompok Kontrol

Pearson r	
r	0,9939
95% confidence interval	0,732 to 0,9999
R squared	0,9878
P value	
P (two-tailed)	0,0061
P value summary	**
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

Regresi Linear Aktivitas Spesifik Katalase antara Darah dan Jantung Kelompok Kontrol

Best-fit values $\pm$ SE	
Slope	15,56 $\pm$ 1,223
Y-intercept	-57,73 $\pm$ 7,395
X-intercept	3,711
1/slope	0,06428
95% Confidence Intervals	
Slope	10,3 to 20,82
Y-intercept	-89,55 to -25,91
X-intercept	2,506 to 4,32
Goodness of Fit	
R square	0,9878
Sy.x	1,473
Is slope significantly non-zero?	
F	161,8
DFn, DFd	1, 2
P value	0,0061
Deviation from zero?	Significant
Equation	$Y = 15,56 * X - 57,73$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Korelasi Aktivitas Spesifik Katalase antara Darah dan Jantung Kelompok Uji

Pearson r	
r	0,9805
95% confidence interval	0,3363 to 0,9996
R squared	0,9613
P value	
P (two-tailed)	0,0195
P value summary	*
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

Regresi Linear Aktivitas Spesifik Katalase antara Darah dan Jantung Kelompok Uji

Best-fit values $\pm$ SE	
Slope	56,36 $\pm$ 7,991
Y-intercept	224,7 $\pm$ 77,62
X-intercept	-3,988
1/slope	0,01774
95% Confidence Intervals	
Slope	21,98 to 90,74
Y-intercept	-109,3 to 558,7
X-intercept	-25,23 to 1,213
Goodness of Fit	
R square	0,9613
Sy.x	29,37
Is slope significantly non-zero?	
F	49,74
DFn, DFd	1, 2
P value	0,0195
Deviation from zero?	Significant
Equation	$Y = 56,36 \cdot X + 224,7$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Lampiran 5 Dokumentasi Selama Penelitian



Hasil Uji Kardioglikosida



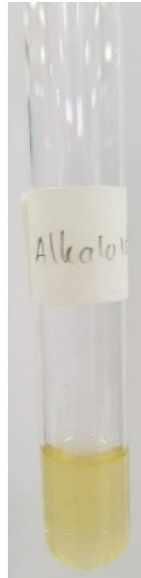
Hasil Uji Kuinon



Hasil Uji Flavonoid



Hasil Uji Betasianin



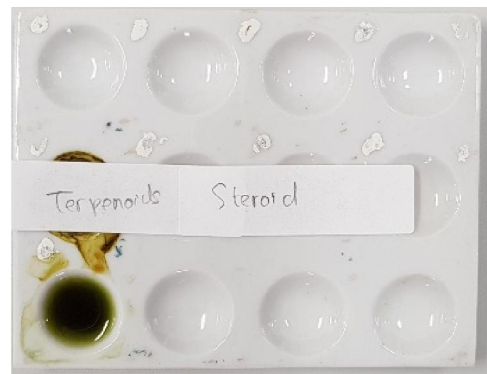
Hasil Uji Alkaloid



Hasil Uji Tanin



Hasil Uji Glikosida



Hasil Uji Terpenoid dan Steroid



Hasil Uji Fenol



Hasil Uji Kumarin



Simplisia Ekstrak Daun *Blackberry*



Penangas



Alat Evaporasi



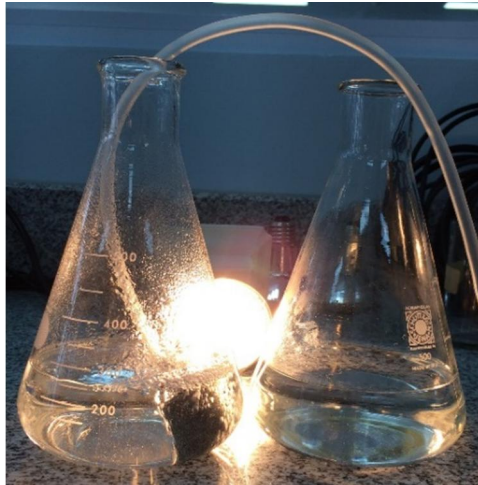
Spektrofotometer *Genesis 30*



Proses Evaporasi Ekstrak Daun



Vortex Mixer



Penetasan Telur *Artemia salina*



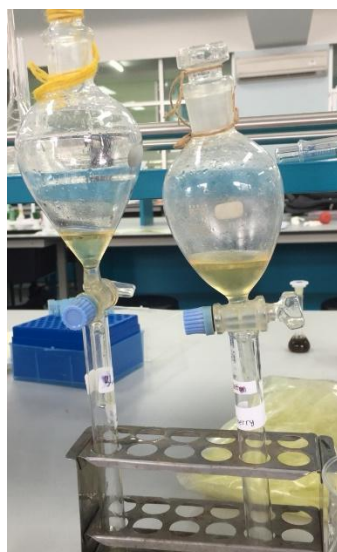
Tabung Gas (O_2 10%; N_2 90%)



Uji Alkaloid



Anestesi untuk Bedah



Labu Pemisah & Hasil Uji Alkaloid



Alat Grinder (*Homogenizer*)



Timbangan



Micropipette



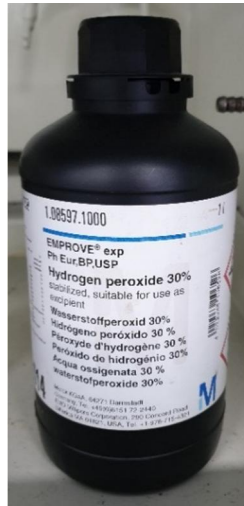
Alat Sentrifugasi



pH meter



Spektrofotometer *Genesys 10S UV-Vis*



Larutan Hidrogen Peroksida 30%



Kuvet (*Cuvette*)

Lampiran 6

DAFTAR RIWAYAT HIDUP

A. Data Pribadi

Nama	: Citra Setyorini
NIM	: 405160062
Jenis Kelamin	: Perempuan
Tempat / Tanggal Lahir	: Jakarta, 8 April 1998
Agama	: Kristen
Alamat	: Jalan Kelapa Puan Timur 1 blok NC 2 / 27, Kelapa Gading, Jakarta Utara
Kewarganegaraan	: Indonesia
Status	: Belum Menikah
Nomor Handphone	: 081399171678
E-mail	: citra.setyorini@gmail.com

B. Riwayat Pendidikan

2002 – 2004	: TK Santa Bernadette Kelapa Gading
2004 – 2010	: SD Don Bosco I Kelapa Gading
2010 – 2013	: SMP Don Bosco I Kelapa Gading
2013 – 2016	: SMA Don Bosco I Kelapa Gading
2016 – sekarang	: Fakultas Kedokteran Universitas Tarumanagara