Lampiran – 1. Kaji 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 HIPOKSIA

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 – Hasil Identifikasi Tanaman

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

Cibinong, 6 April 2018

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

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	*Fragaria vesca* L.	Rosaceae
2	Raspberry	*Rubus idaeus* L.	Rosaceae
3	Blackberry	*Rubus* sp.	Rosaceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,

Dr. Joeni Setijo Rahajoe
NIP. 196706241993032004

C:\Users\windows 7\Desktop\dokumen lia\Ident 2018\Cindy Tjandra.doc\Hamzah-I Putu Gede

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Lampiran 3- Absorbansi Standar GSH

Tabel Absorbansi Standar GSH

Kadar GSH (g/mL)	Absorban
1	0,004
2	0,020
4	0,075
5	0,094
10	0,214

Lampiran 4 – Hasil Absorbansi dan Kadar GSH Hati dan Darah

Tabel Hati Normoksia Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,070	0,067	0,071	3,966
Tikus 2	0,062	0,060	0,061	3.542
Tikus 3	0,078	0,069	0,0735	4,072
Tikus 4	0,065	0,070	0,0675	3,817
	Rata-rata		0,06825	3,850

Tabel Hati Hipoksia 1 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,051	0,057	0,055	3,288
Tikus 2	0,043	0,051	0,047	2,949
Tikus 3	0,060	0,067	0,064	3,648
Tikus 4	0,045	0,055	0,050	3,076
	Rata-rata		0,090	3,240

Tabel Hati Hipoksia 7 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,042	0,037	0,0395	2,631
Tikus 2	0,033	0,028	0,0304	2,250
Tikus 3	0,038	0,046	0,042	2,737
Tikus 4	0,047	0,049	0,048	2,991
	Rata-rata		0,11575	2,653

Tabel Hati Hipoksia 14 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,026	0,030	0,0280	2,144
Tikus 2	0,032	0,024	0,0380	2,567
Tikus 3	0,037	0,032	0,0345	2,419
Tikus 4	0,029	0,035	0,0320	2,313
	Rata-rata		0,16275	2,358

Tabel Hati Normoksia Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,038	0,042	0,040	2,65
Tikus 2	0,041	0,037	0,034	2,39
Tikus 3	0,032	0,031	0,0315	2,29
Tikus 4	0,035	0,033	0,034	2,52
	Rata-rata		0,0356	2,4625

Tabel Hati Hipoksia 1 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,032	0,028	0,030	2,22
Tikus 2	0,028	0,031	0,026	2,05
Tikus 3	0,022	0,022	0,024	1,97
Tikus 4	0,023	0,021	0,020	1,80
	Rata-rata		0,0245	2,01

Tabel Hati Hipoksia 7 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,021	0,018	0,0195	1,78
Tikus 2	0,017	0,023	0,023	1,93
Tikus 3	0,022	0,019	0,0265	2,05
Tikus 4	0,016	0,024	0,02	1,80
	Rata-rata		0,02212	1,89

Tabel Hati Hipoksia 14 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,014	0,020	0,017	1,67
Tikus 2	0,020	0,018	0,019	1,76
Tikus 3	0,013	0,019	0,015	1,59
Tikus 4	0,021	0,015	0,028	2,14
	Rata-rata		0,01975	1,79

Lampiran 4 - Hasil Absorbansi dan Kadar Glutation Darah

Tabel Darah Normoksia Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,073	0,077	0,075	4,135
Tikus 2	0,072	0,082	0,077	4,220
Tikus 3	0,070	0,073	0,0715	3,987
Tikus 4	0,068	0,080	0,074	4,093
	Rata-rata		0,744	4,109

Tabel Darah Hipoksia 1 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,067	0,073	0,07	3,923
Tikus 2	0,064	0,066	0,065	3,711
Tikus 3	0,062	0,078	0,0695	3,902
Tikus 4	0,065	0,071	0,068	3,838
	Rata-rata		0,06812	3,844

Tabel Darah Hipoksia 7 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,061	0,073	0,067	3,796
Tikus 2	0,063	0,065	0,064	3,669
Tikus 3	0,066	0,060	0,063	3,627
Tikus 4	0,054	0,068	0,061	3,542
	Rata-rata		0,0637	3,658

Tabel Darah Hipoksia 14 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,056	0,061	0,0585	3,436
Tikus 2	0,058	0,062	0,06	3,5
Tikus 3	0,057	0,064	0,0605	3,521
Tikus 4	0,056	0,066	0,061	3,542
	Rata-rata		0,06	3,5

Tabel Darah Normoksia Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,055	0,063	0,059	3,457
Tikus 2	0,062	0,065	0,064	3,669
Tikus 3	0,058	0,064	0,061	3,542
Tikus 4	0,070	0,060	0,065	3,711
	Rata-rata		0,0625	3,595

Tabel Darah Hipoksia 1 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,049	0,053	0,051	3,118
Tikus 2	0,060	0,058	0,059	3,457
Tikus 3	0,061	0,055	0,058	3,415
Tikus 4	0,054	0,60	0,057	3,372
	Rata-rata		0,0562	3,341

Tabel Darah Hipoksia 7 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,056	0,052	0,054	3,245
Tikus 2	0,049	0,053	0,051	3,118
Tikus 3	0,055	0,059	0,057	3,372
Tikus 4	0,057	0,061	0,059	3,457
	Rata-rata		0,0552	3,298

Tabel Darah Hipoksia 14 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,049	0,051	0,05	3,07
Tikus 2	0,060	0,054	0,057	3,37
Tikus 3	0,058	0,060	0,059	3,45
Tikus 4	0,050	0,052	0,051	3,11
	Rata-rata		0,0542	3,256

Lampiran 5 – Tabel Hasil Penelitian dan Analisis Statistik

Hasil Uji Kapasitas Total Antioksidan Standar Asam Askorbat (Vitamin C)

Hasil Absorbansi dan persen inhibisi

Konsentrasi (µg/ml)	Absorbansi (A)	% Inhibisi
2	0,346	32,6848249
4	0,288	43,9688716
6	0,213	58,56031128
8	0,152	70,42801556
10	0,086	83,26848249
	IC_{50} =	4,78 µg/ml

Regresi Linear Standar Pembanding Vitamin C

Linear Reggresion	Nilai
Best-fit values ± SE	
Slope	0,3842 ± 0,01362
Y-intercept	-0,7879 ± 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 Hasil DPPH Ekstrak Daun *Blackberry*

Konsentrasi (µg/mL)	Absorbansi	Inhibisi (%)	IC_{50} (µg/mL)
10	0.346	32.6848249	
50	0.288	43.9688716	
100	0.213	58.5603113	4,780
150	0.152	70.4280156	
200	0.086	83.2684825	

Tabel Persentase Inhibisi Ekstrak Daun *Blackberry*

Konsentrasi (µg/mL)	Persentase Inhibisi (%)	IC50 (µg/mL)
10	3.405	
30	10.895	
50	17.996	128.09
70	25.097	
90	34.728	

Linear Reggresion	Nilai
Best-fit values ± SE	
Slope	0,3842 ± 0,01362
Y-intercept	-0,7879 ± 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

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

Tabel Absorbansi dan Konsentrasi Larutan Standar *Berberin Chloride*

Konsentrasi (µg/mL)	Absorbansi
20	0.088
40	0.123
60	0.139
80	0.178
100	0.232

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

Best-fit values ± SE	
Slope	0,001715 ± 0,0001864
Y-intercept	0,0491 ± 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*X + 0,0491
Data	
Number of X values	5
Maximum number of Y replicates	1

Total fenolik Content (Kapasitas Total Fenolik) pada Ekstrak Daun *Blackberry*

Tabel Absorbansi dan Konsentrasi Larutan Standar Tanin

Konsentrasi (µg/mL)	Absorbansi
300	0.365
400	0.416
500	0.46
600	0.565
700	0.649

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

Best-fit values ± SE	
Slope	0,00073 ± 7,332e-005
Y-intercept	0,1188 ± 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*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

Tabel 5 Uji Toksisitas BSLT pada Ekstrak Daun *Blackberry*

Konsentrasi	1000 µg/mL	500 µg/mL	100 µg/mL	10 µg/mL
I	0	2	4	8
II	1	2	5	7
Total Kematian	23	18	16	10
% Kematian	14.7%	53,33%	86,48%	98,07%

Tabel Pengaruh ekstrak daun *blackberry* terhadap larva *Artemia Salina* L

Konsentrasi (µg/ml)	Hidup	Mati	Akumulasi Kehidupan	Akumulasi Kematian	Persentase Rata-Rata Kematian Larva Udang (%)
10	15	5	29	5	14.70
100	9	11	14	16	53.33
500	4	16	5	32	86.48
1000	1	19	1	51	98.08
				LC_{50} = 72,44 µg/ml	

Tabel Regresi Linear Uji Toksisitas Ekstrak Ekstrak Daun *Blackberry*

Best-fit values ± SE	
Slope	42,11 ± 1,347
Y-intercept	-28,45 ± 3,108
X-intercept	0,6756
1/slope	0,02375
95% Confidence Intervals	
Slope	36,32 to 47,91
Y-intercept	-41,82 to -15,08
X-intercept	0,4107 to 0,8826
Goodness of Fit	
R square	0,998
Sy.x	2,073
Is slope significantly non-zero?	
F	977,5
DFn, DFd	1, 2
P value	0,0010
Deviation from zero?	Significant
Equation	Y = 42,11*X - 28,45
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Tabel Analisa Statistik Hati cekok: Hipoksia 1 hari dengan Normoksia

Table Analyzed	Organ Hati +
Column B	Hipoksia 1 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0184
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,209 df=6
How big is the difference?	
Mean ± SEM of column A	3,848 ± 0,1156, n=4
Mean ± SEM of column B	3,233 ± 0,1528, n=4
Difference between means	-0,615 ± 0,1916
95% confidence interval	-1,084 to -0,1461
R squared (eta squared)	0,6318
F test to compare variances	
F, DFn, Dfd	1,747, 3, 3
P value	0,6582
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Hati cekok hipoksia 7 hari dengan Normoksia

Table Analyzed	Organ Hati +
Column C	Hipoksia 7 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0008
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=6,233 df=6
How big is the difference?	
Mean ± SEM of column A	3,848 ± 0,1156, n=4
Mean ± SEM of column C	2,65 ± 0,1534, n=4
Difference between means	-1,198 ± 0,1921
95% confidence interval	-1,668 to -0,7274
R squared (eta squared)	0,8662
F test to compare variances	
F, DFn, Dfd	1,76, 3, 3
P value	0,6540
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Hati Cekok hipoksia 14 hari dengan Normoksia

Table Analyzed	Organ Hati +
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=10,26 df=6
How big is the difference?	
Mean ± SEM of column A	3,848 ± 0,1156, n=4
Mean ± SEM of column D	2,355 ± 0,08818, n=4
Difference between means	-1,493 ± 0,1454
95% confidence interval	-1,848 to -1,137
R squared (eta squared)	0,9461
F test to compare variances	
F, DFn, Dfd	1,72, 3, 3
P value	0,6669
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Hati Tidak Cekok hipoksia 1 hari dengan Normoksia

Table Analyzed	Organ Hati -
Column B	Hipoksia 1 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0084
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,86 df=6
How big is the difference?	
Mean ± SEM of column A	2,463 ± 0,07825, n=4
Mean ± SEM of column B	2,01 ± 0,08727, n=4
Difference between means	-0,4525 ± 0,1172
95% confidence interval	-0,7393 to -0,1657
R squared (eta squared)	0,713
F test to compare variances	
F, DFn, Dfd	1,244, 3, 3
P value	0,8618
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Hati tidak cekok Hipoksia 7 hari dengan Normoksia

Table Analyzed	Organ Hati -
Column C	Hipoksia 7 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0013
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5,704 df=6
How big is the difference?	
Mean ± SEM of column A	2,463 ± 0,07825, n=4
Mean ± SEM of column C	1,89 ± 0,06285, n=4
Difference between means	-0,5725 ± 0,1004
95% confidence interval	-0,8181 to -0,3269
R squared (eta squared)	0,8443
F test to compare variances	
F, DFn, Dfd	1,55, 3, 3
P value	0,7275
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Hati tidak cekok Hipoksia 14 hari dengan Normoksia

Table Analyzed	Organ Hati -
Column D	Hipoksia 14 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0035
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,647 df=6
How big is the difference?	
Mean ± SEM of column A	2,463 ± 0,07825, n=4
Mean ± SEM of column D	1,79 ± 0,1217, n=4
Difference between means	-0,6725 ± 0,1447
95% confidence interval	-1,027 to -0,3184
R squared (eta squared)	0,7826
F test to compare variances	
F, DFn, Dfd	2,42, 3, 3
P value	0,4870
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Darah dicekok Hipoksia 1 hari dengan Normoksia

Table Analyzed	Darah Hati +
Column B	Hipoksia 1 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0084
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,855 df=6
How big is the difference?	
Mean ± SEM of column A	4,105 ± 0,04975, n=4
Mean ± SEM of column B	3,84 ± 0,04743, n=4
Difference between means	-0,265 ± 0,06874
95% confidence interval	-0,4332 to -0,0968
R squared (eta squared)	0,7124
F test to compare variances	
F, DFn, Dfd	1,1, 3, 3
P value	0,9394
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Darah dicekok Hipoksia 7 hari dengan Normoksia

Table Analyzed	Darah Hati +
Column C	Hipoksia 7 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0008
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=6,276 df=6
How big is the difference?	
Mean ± SEM of column A	4,105 ± 0,04975, n=4
Mean ± SEM of column C	3,653 ± 0,05218, n=4
Difference between means	-0,4525 ± 0,0721
95% confidence interval	-0,6289 to -0,2761
R squared (eta squared)	0,8678
F test to compare variances	
F, DFn, Dfd	1,1, 3, 3
P value	0,9393
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Darah dicekok Hipoksia 14 hari dengan Normoksia

Table Analyzed	Darah Hati +
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=11 df=6
How big is the difference?	
Mean ± SEM of column A	4,105 ± 0,04975, n=4
Mean ± SEM of column D	3,498 ± 0,02394, n=4
Difference between means	-0,6075 ± 0,05521
95% confidence interval	-0,7426 to -0,4724
R squared (eta squared)	0,9528
F test to compare variances	
F, DFn, Dfd	4,32, 3, 3
P value	0,2605
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Darah Tidak dicekok Hipoksia 1 hari dengan Normoksia

Table Analyzed	Darah Hati -
Column B	Hipoksia 1 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0386
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,638 df=6
How big is the difference?	
Mean ± SEM of column A	3,59 ± 0,05874, n=4
Mean ± SEM of column B	3,335 ± 0,07676, n=4
Difference between means	-0,255 ± 0,09665
95% confidence interval	-0,4915 to -0,0185
R squared (eta squared)	0,5371
F test to compare variances	
F, DFn, Dfd	1,708, 3, 3
P value	0,6710
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel AnalisaStatistik Darah Tidak dicekok Hipoksia 7 hari dengan Normoksia

Table Analyzed	Darah Hati -
Column C	Hipoksia 7 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0203
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,132 df=6
How big is the difference?	
Mean ± SEM of column A	3,59 ± 0,05874, n=4
Mean ± SEM of column C	3,293 ± 0,07465, n=4
Difference between means	-0,2975 ± 0,09499
95% confidence interval	-0,5299 to -0,06507
R squared (eta squared)	0,6205
F test to compare variances	
F, DFn, Dfd	1,615, 3, 3
P value	0,7032
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Darah Tidak dicekok Hipoksia 14 hari dengan Normoksia

Table Analyzed	Darah Hati -
	Hipoksia 14
Column D	Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0221
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,064 df=6
How big is the difference?	
Mean ± SEM of column A	3,59 ± 0,05874, n=4
Mean ± SEM of column D	3,25 ± 0,09416, n=4
Difference between means	-0,34 ± 0,111
95% confidence interval	-0,6116 to -0,06844
R squared (eta squared)	0,61
F test to compare variances	
F, DFn, Dfd	2,57, 3, 3
P value	0,4587
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Hati dicekok dan Tidak dicekok Normoksia

Table Analyzed	perbandingan organ
Column E	Dicekok Normoksia
vs.	vs,
Column A	Tidak Dicekok 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=9,919 df=6
How big is the difference?	
Mean ± SEM of column A	2,463 ± 0,07825, n=4
Mean ± SEM of column E	3,848 ± 0,1156, n=4
Difference between means	1,385 ± 0,1396
95% confidence interval	1,043 to 1,727
R squared (eta squared)	0,9425
F test to compare variances	
F, DFn, Dfd	2,184, 3, 3
P value	0,5377
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Hati dicekok dan Tidak dicekok Hipoksia 1 Hari

Table Analyzed	perbandingan organ
Column F	Dicekok Hipoksia 1 Hari
vs.	vs,
Column B	Tidak Dicekok Hipoksia 1 Hari
Unpaired t test	
P value	0,0004
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=6,946 df=6
How big is the difference?	
Mean ± SEM of column B	2,01 ± 0,08727, n=4
Mean ± SEM of column F	3,233 ± 0,1528, n=4
Difference between means	1,223 ± 0,176
95% confidence interval	0,7919 to 1,653
R squared (eta squared)	0,8894
F test to compare variances	
F, DFn, Dfd	3,066, 3, 3
P value	0,3820
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Hati dicekok dan Tidak dicekok Hipoksia7 Hari

Table Analyzed	perbandingan organ
Column G	Dicekok Hipoksia 7 Hari
vs.	vs,
Column C	Tidak Dicekok Hipoksia 7 Hari
Unpaired t test	
P value	0,0038
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,584 df=6
How big is the difference?	
Mean ± SEM of column C	1,89 ± 0,06285, n=4
Mean ± SEM of column G	2,65 ± 0,1534, n=4
Difference between means	0,76 ± 0,1658
95% confidence interval	0,3543 to 1,166
R squared (eta squared)	0,7779
F test to compare variances	
F, DFn, Dfd	5,958, 3, 3
P value	0,1768
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Hati dicekok dan Tidak dicekok Hipoksia 14 Hari

Table Analyzed	perbandingan organ
Column H	Dicekok Hipoksia 14 Hari
vs.	vs,
Column D	Tidak Dicekok Hipoksia 14 Hari
Unpaired t test	
P value	0,0094
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,759 df=6
How big is the difference?	
Mean ± SEM of column D	1,79 ± 0,1217, n=4
Mean ± SEM of column H	2,355 ± 0,08818, n=4
Difference between means	0,565 ± 0,1503
95% confidence interval	0,1972 to 0,9328
R squared (eta squared)	0,7019
F test to compare variances	
F, DFn, Dfd	1,906, 3, 3
P value	0,6097
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Darah dicekok dan Tidak dicekok Normoksia

Table Analyzed	perbandingan darah
Column E	Dicekok Normoksia
vs.	vs,
Column A	Tidak Dicekok Normoksia
Unpaired t test	
P value	0,0005
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=6,691 df=6
How big is the difference?	
Mean ± SEM of column A	3,59 ± 0,05874, n=4
Mean ± SEM of column E	4,105 ± 0,04975, n=4
Difference between means	0,515 ± 0,07697
95% confidence interval	0,3267 to 0,7033
R squared (eta squared)	0,8818
F test to compare variances	
F, DFn, Dfd	1,394, 3, 3
P value	0,7914
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Darah dicekok dan Tidak dicekok Hipoksia 1 Hari

Table Analyzed	perbandingan darah
Column F	Dicekok Hipoksia 1 Hari
vs.	vs,
Column B	Tidak Dicekok Hipoksia 1 Hari
Unpaired t test	
P value	0,0014
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5,597 df=6
How big is the difference?	
Mean ± SEM of column B	3,335 ± 0,07676, n=4
Mean ± SEM of column F	3,84 ± 0,04743, n=4
Difference between means	0,505 ± 0,09023
95% confidence interval	0,2842 to 0,7258
R squared (eta squared)	0,8392
F test to compare variances	
F, DFn, Dfd	2,619, 3, 3
P value	0,4501
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Darah dicekok dan Tidak dicekok Hipoksia 7 Hari

Table Analyzed	perbandingan darah
Column G	Dicekok Hipoksia 7 Hari
vs.	vs,
Column C	Tidak Dicekok Hipoksia 7 Hari
Unpaired t test	
P value	0,0075
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,953 df=6
How big is the difference?	
Mean ± SEM of column C	3,293 ± 0,07465, n=4
Mean ± SEM of column G	3,653 ± 0,05218, n=4
Difference between means	0,36 ± 0,09108
95% confidence interval	0,1371 to 0,5829
R squared (eta squared)	0,7225
F test to compare variances	
F, DFn, Dfd	2,047, 3, 3
P value	0,5713
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Darah dicekok dan Tidak dicekok Hipoksia 14 Hari

Table Analyzed	perbandingan darah
Column H	Dicekok Hipoksia 14 Hari
vs.	vs,
Column D	Tidak Dicekok Hipoksia 14 Hari
Unpaired t test	
P value	0,0436
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,547 df=6
How big is the difference?	
Mean ± SEM of column D	3,25 ± 0,09416, n=4
Mean ± SEM of column H	3,498 ± 0,02394, n=4
Difference between means	0,2475 ± 0,09716
95% confidence interval	0,009764 to 0,4852
R squared (eta squared)	0,5196
F test to compare variances	
F, DFn, Dfd	15,48, 3, 3
P value	0,0498
P value summary	*
Significantly different (P < 0.05)?	Yes

Tabel Analisis Korelasi Organ dan Darah Kontrol Positif

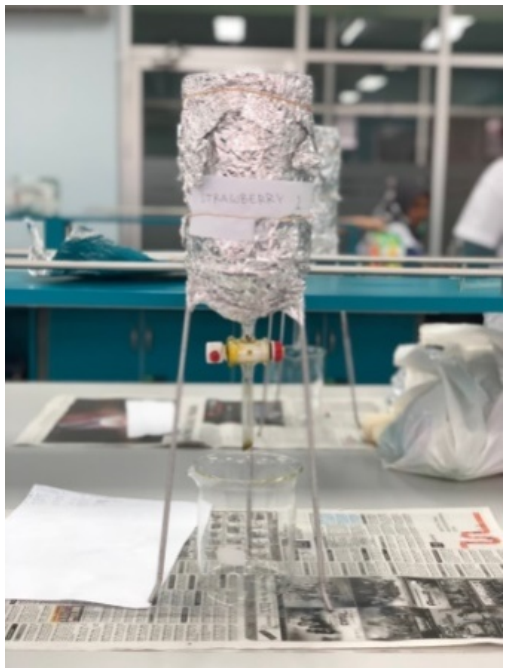
Best-fit values ± SE	
Slope	0,3942 ± 0,02097
Y-intercept	2,583 ± 0,06449
X-intercept	-6,552
1/slope	2,537
95% Confidence Intervals	
Slope	0,304 to 0,4844
Y-intercept	2,305 to 2,86
X-intercept	-9,398 to -4,765
Goodness of Fit	
R square	0,9944
Sy.x	0,024
Is slope significantly non-zero?	
F	353,4
DFn, DFd	1, 2
P value	0,0028
Deviation from zero?	Significant
Equation	Y = 0,3942*X + 2,583
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Tabel Analisis Korelasi Organ dan Darah Kontrol Negatif

Best-fit values ± SE	
Slope	0,5122 ± 0,02895
Y-intercept	2,323 ± 0,05947
X-intercept	-4,535
1/slope	1,952
95% Confidence Intervals	
Slope	0,3877 to 0,6367
Y-intercept	2,067 to 2,579
X-intercept	-6,649 to -3,248
Goodness of Fit	
R square	0,9937
Sy.x	0,0149
Is slope significantly non-zero?	
F	313,1
DFn, DFd	1, 2
P value	0,0032
Deviation from zero?	Significant
Equation	Y = 0,5122*X + 2,323
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

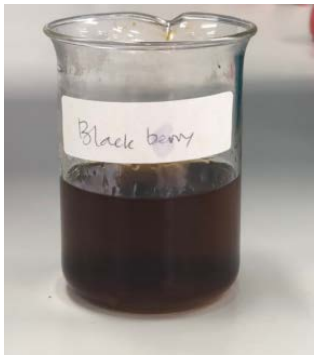
Lampiran 6 – Dokumentasi Hasil Uji In Vitro

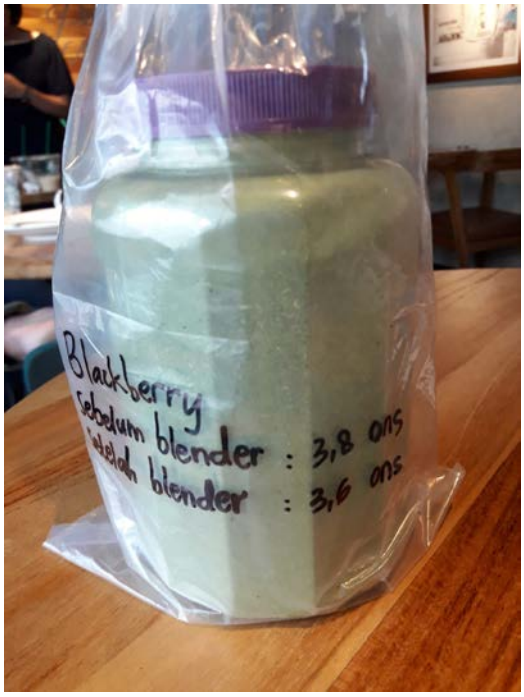
Pengeringan daun *blackberry*



Proses Maserasi

Proses Evaporasi





Simplisia ekstrak daun *blackberry*

Lampiran 7 – Dokumentasi hasil uji Fitokimia

Uji Kuinon

Uji Flavonoid

Uji Kardioglikosida

Uji Glikosida

Uji Tannin

Uji Koumarins

Uji Terpenoid

Uji Alkaloid

Uji Betasianin

Uji Phenol

Lampiran 8- Dokumentasi Uji BSLT

Proses Penetasan Telur Udang

Lampiran 9- Proses Hipoksia

Proses Perlakuan Hipoksia terhadap Tikus *Sprague Dawley*

DAFTAR RIWAYAT HIDUP

DATA PRIBADI

1. Nama :Regi Mustika
2. NIM : 405160150
3. Jenis kelamin : : Perempuan
4. Tempat, Tanggal Lahir : Medan, 25 Januari 1998
5. Agama : Islam
6. Status : Belum Menikah
7. Pendidikan Terakhir : SMA
8. Alamat : Jalan Anggrek Loka blok AF No 29,BSD
9. Nomor Telepon : 081315150111
10. Email : Regimustikaaa@gmail.com

DATA PENDIDIKAN

1. 2016- saat ini : Fakultas Kedokteran Universitas Tarumanagara
2. 2012-2015 : SMAN 70 Jakarta
3. 2009-2012 : SMP Bakti Mulya 400
4. 2003-2009 : SD Putra- Pertiwi
5. 2001-2003 : TK Putra- Pertiwi

PENGALAMAN ORGANISASI

1. Anggota ICU FK UNTAR