

LAMPIRAN 1 : Identifikasi LIPI 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

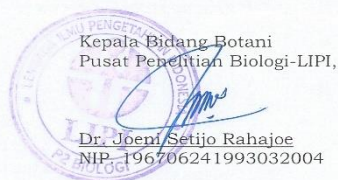
Kepada Yth.
Bpk./Ibu/Sdr(i). **Chindy Tjandra**
Mhs. Univ. Tarumanagara
Jl. Letjend S. Parman No.1
Jakarta - 11440

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	<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 2 – 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

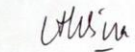
Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 17 Januari 2019

Ketua


Prof. DR. dr. Adi Hidayat, MS

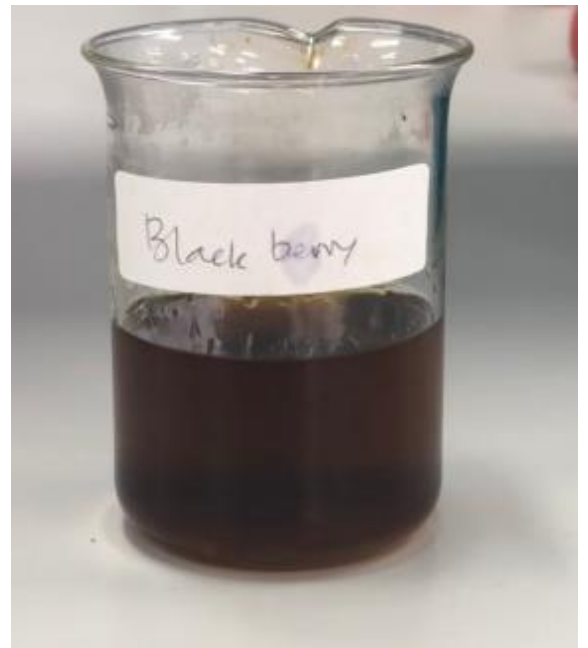
Sekretaris


dr. Alvina SpPK

Lampiran 3 : Proses Pembuatan Ekstrak Daun *Blackberry*



Proses pengeringan dan penghalusan daun *blackberry* hingga terbentuk simplisia





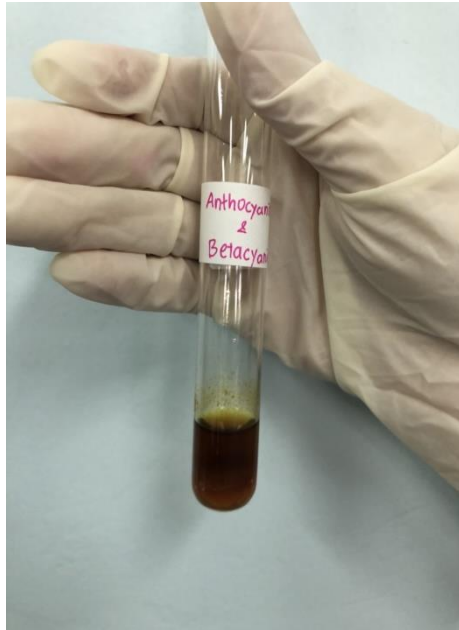
Proses dan hasil maserasi



Proses Evaporasi

Lampiran 4 : Hasil Uji Fitokimia

Gambar 1. Uji Antosianin dan Betasianin



Gambar 2. Uji Kardioglikosida



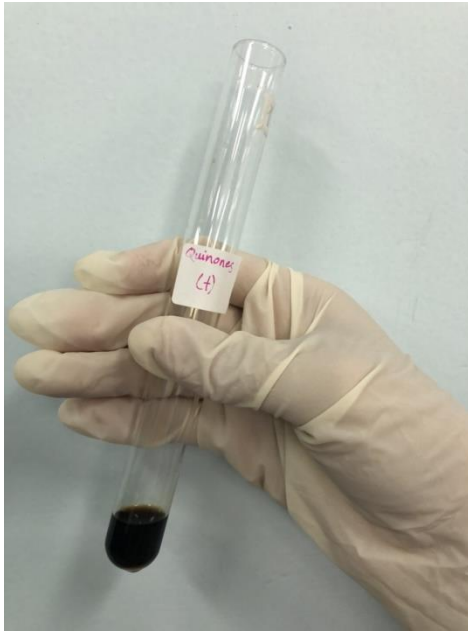
Gambar 3. Uji Koumarin



Gambar 4. Uji Glikosida



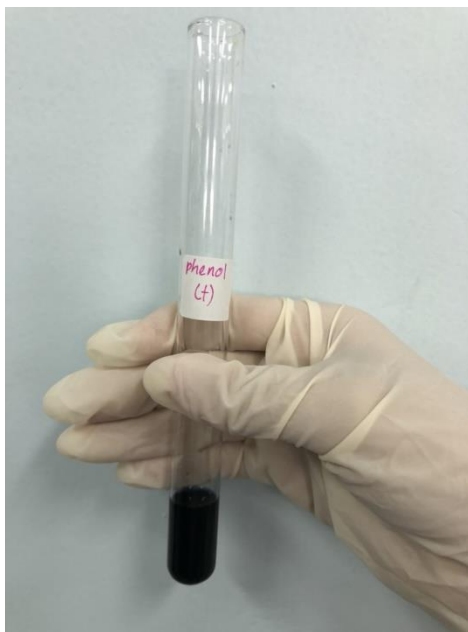
Gambar 5. Uji Kuinon



Gambar 6. Uji Tanin



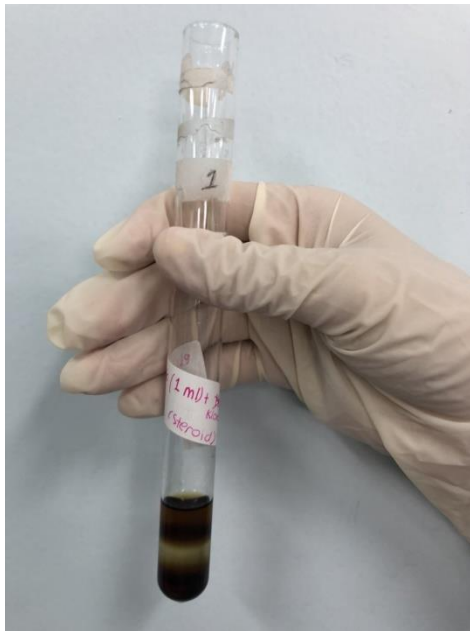
Gambar 7. Uji Fenol



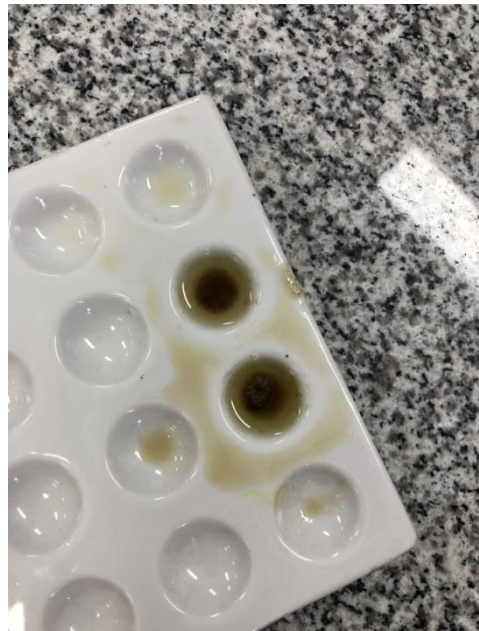
Gambar 8. Uji Flavonoid



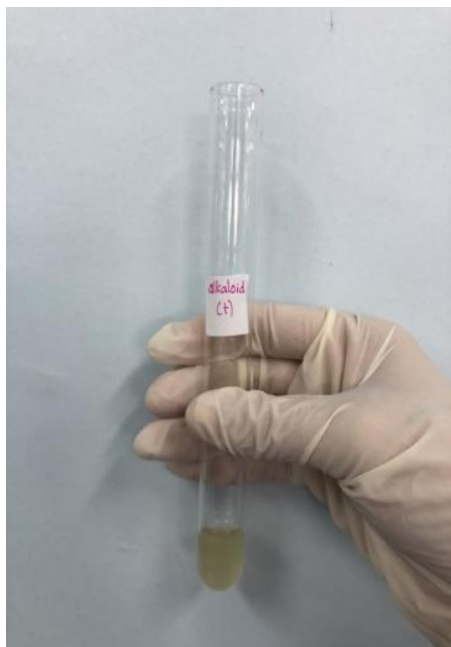
Gambar 9. Uji Steroid



Gambar 10. Uji Terpenoid



Gambar 11. Uji Alkaloid



Lampiran 5 : Proses Perlakuan Pada Tikus *Sprague Dawley*



Perlakuan Hipoksia terhadap Tikus *Sprague Dawley*



Pembedahan Tikus *Sprague Dawley*



Pengambilan Organ Tikus



Alat Spektrofotometer

Lampiran 6 : Uji Toksisitas Ekstrak Daun Blackberry dengan BSLT



Proses Penetasan Telur Udang

LAMPIRAN 7 : Hasil Absorbansi dan Kadar GSH Jantung

Tabel Jantung Normoksia Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,051	0,047	0,049
Tikus 2	0,046	0,045	0,0455	2.88559
Tikus 3	0,053	0,049	0,051	3.11864
Tikus 4	0,046	0,050	0,048	2.99152
	Rata-rata		0,0483	3.00423

Tabel Jantung Hipoksia 1 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,041	0,038	0,0395
Tikus 2	0,036	0,042	0,039	2.61016
Tikus 3	0,040	0,039	0,0395	2.63135
Tikus 4	0,035	0,036	0,0355	2.46186
	Rata-rata		0,0383	2.58050

Tabel Jantung Hipoksia 7 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,033	0,031	0,032
Tikus 2	0,032	0,034	0,033	2.35593
Tikus 3	0,032	0,029	0,0305	2.25000
Tikus 4	0,034	0,032	0,033	2.35593
	Rata-rata		0,0321	2.31779

Tabel Jantung Hipoksia 14 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,028	0,028	0,028
Tikus 2	0,026	0,030	0,028	2.14406
Tikus 3	0,025	0,027	0,026	2.05932
Tikus 4	0,029	0,028	0,0285	2.16525
	Rata-rata		0,0276	2.12711

Tabel Jantung Normoksia Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,037	0,033	0,035
Tikus 2	0,029	0,037	0,033	2,355932203
Tikus 3	0,027	0,031	0,029	2,186440678
Tikus 4	0,032	0,025	0,0285	2,165254237
	Rata-rata		0,0314	2,287076271

Tabel Jantung Hipoksia 1 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,028	0,022	0,025
Tikus 2	0,031	0,026	0,0285	2,165254
Tikus 3	0,024	0,029	0,0265	2,080508
Tikus 4	0,029	0,030	0,0295	2,207627
	Rata-rata		0,02738	2,117585

Tabel Jantung Hipoksia 7 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,024	0,020	0,022
Tikus 2	0,030	0,024	0,027	2,101695
Tikus 3	0,022	0,028	0,025	2,016949
Tikus 4	0,020	0,027	0,0235	1,95339
	Rata-rata		0,02438	1,990466

Tabel Jantung Hipoksia 14 Hari Tidak Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,024	0,017	0,0205
Tikus 2	0,015	0,021	0,018	1,720339
Tikus 3	0,020	0,013	0,0165	1,65678
Tikus 4	0,018	0,011	0,0145	1,572034
	Rata-rata		0,01738	1,693856

LAMPIRAN 8 : Hasil Absorbansi dan Kadar GSH Darah**Tabel Darah Normoksia Cekok**

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,073		
Tikus 2	0,072	0,082	0.077	4.22034
Tikus 3	0,070	0,073	0.0715	3.98729
Tikus 4	0,068	0,080	0.074	4.09322
	Rata-rata		0.07438	4.10911

Tabel Darah Hipoksia 1 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,067		
Tikus 2	0,064	0,066	0.065	3.71186
Tikus 3	0,062	0,078	0.0695	3.90254
Tikus 4	0,065	0,071	0.068	3.83898
	Rata-rata		0.06813	3.84428

Tabel Darah Hipoksia 7 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,061		
Tikus 2	0,063	0,065	0.064	3.66949
Tikus 3	0,066	0,060	0.063	3.62712
Tikus 4	0,054	0,068	0.061	3.54237
	Rata-rata		0.06375	3.6589

Tabel Darah Hipoksia 14 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
	Tikus 1	0,056		
Tikus 2	0,058	0,062	0.06	3.5
Tikus 3	0,057	0,064	0.0605	3.52119
Tikus 4	0,056	0,066	0.061	3.54237
	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
Tikus 2	0,062	0,065	0.064	3.66949
Tikus 3	0,058	0,064	0.061	3.54237
Tikus 4	0,070	0,060	0.065	3.71186
	Rata-rata		0.06225	3.59534

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
Tikus 2	0,060	0,058	0.059	3.45763
Tikus 3	0,061	0,055	0.058	3.41525
Tikus 4	0,054	0,60	0.057	3.37288
	Rata-rata		0.05625	3.3411

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
Tikus 2	0,049	0,053	0.051	3.11864
Tikus 3	0,055	0,059	0.057	3.37288
Tikus 4	0,057	0,061	0.059	3.45763
	Rata-rata		0.05525	3.29873

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
Tikus 2	0,060	0,054	0.057	3.37288
Tikus 3	0,058	0,060	0.059	3.45763
Tikus 4	0,050	0,052	0.051	3.11864
	Rata-rata		0.05425	3.25636

LAMPIRAN 9 : Tabel Hasil PenelitianKonsentrasi, Absorbansi, Persentase Inhibisi, dan IC₅₀ Larutan Standar Vitamin C

Hasil Absorbansi dan persen inhibisi		
Konsentrasi (µg/ml)	Absorbansi (A)	% Inhibisi
2	0,346	32,68
4	0,288	43,96
6	0,213	58,56
8	0,152	70,42
10	0,086	83,26
IC ₅₀ =		4,78 µg/ml

Tabel 1: Regresi Linear Standar Pembanding Vitamin C

Best-fit values ± SE

Slope	6.381 ± 0.1261
Y-intercept	19.49 ± 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

Tabel 2: Regresi Linear Hasil DPPH Ekstrak Daun *Blackberry*

Konsentrasi ($\mu\text{g/mL}$)	Persentase Inhibisi (%)	IC50 ($\mu\text{g/mL}$)
10	3.405	
30	10.895	
50	17.996	128.09
70	25.097	
90	34.728	

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

**Tabel 3 : Regresi Linear Kapasitas Total Fenolik pada Ekstrak Daun
*Blackberry***

Konsentrasi ($\mu\text{g/ml}$)	Absorbansi
300	0,344
400	0,421
500	0,469
600	0,531
700	0,654

Best-fit values \pm SE

Slope	$0.00073 \pm 7.332e-005$
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 4 : Regresi Linear Kapasitas Total Alkaloid pada Ekstrak Daun *Blackberry*

Konsentrasi ($\mu\text{g/mL}$)	Absorbansi
20	0.088
40	0.123
60	0.139
80	0.178
100	0.232

Best-fit values \pm SE	
Slope	0.001715 \pm 0.0002174
Y-intercept	0.0481 \pm 0.01442
X-intercept	-28.05
1/slope	583.1
95% Confidence Intervals	
Slope	0.001023 to 0.002407
Y-intercept	0.002209 to 0.09399
X-intercept	-89.38 to -0.9434
Goodness of Fit	
R square	0.954
Sy.x	0.01375
Is slope significantly non-zero?	
F	62.24
DFn, DFd	1, 3
P value	0.0042
Deviation from zero?	Significant
Equation	$Y = 0.001715 * X + 0.0481$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Tabel 5: Regresi Linear Uji Toksisitas BSLT pada Ekstrak Daun *Blackberry*

Konsentrasi ($\mu\text{g/ml}$)	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
LC50 = 72,44 $\mu\text{g/ml}$					

Best-fit values \pm SE

Slope	42.12 \pm 1.347
Y-intercept	-28.46 \pm 3.108
X-intercept	0.6757
1/slope	0.02374
95% Confidence Intervals	
Slope	36.32 to 47.91
Y-intercept	-41.83 to -15.08
X-intercept	0.4108 to 0.8827
Goodness of Fit	
R square	0.998
Sy.x	2.073
Is slope significantly non-zero?	
F	977.2
DFn, DFd	1, 2
P value	0.0010
Deviation from zero?	Significant
Equation	Y = 42.12*X - 28.46
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Tabel GSH darah yang tidak dicekok ekstrak daun *blackberry*

	normoksia	hipoksia 1 hari	hipoksia 7 hari	hipoksia 14 hari
Number of values	4	4	4	4
Minimum	3,458	3,119	3,119	3,076
25% Percentile	3,479	3,182	3,15	3,087
Median	3,606	3,394	3,309	3,246
75% Percentile	3,701	3,447	3,436	3,436
Maximum	3,712	3,458	3,458	3,458
Mean	3,595	3,341	3,299	3,256
Std. Deviation	0,1167	0,1523	0,1483	0,1875
Std. Error of Mean	0,05834	0,07614	0,07415	0,09376
Lower 95% CI of mean	3,41	3,099	3,063	2,958
Upper 95% CI of mean	3,781	3,583	3,535	3,555
Sum	14,38	13,36	13,19	13,03
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	0,9393	0,828	0,9787	0,8783
P value	0,6498	0,1627	0,8941	0,3315
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel GSH darah yang dicekok ekstrak daun *blackberry*

	normoksia	hipoksia 1 hari	hipoksia 7 hari	hipoksia 14 hari
Number of values	4	4	4	4
Minimum	3,987	3,712	3,542	3,436
25% Percentile	4,014	3,744	3,564	3,452
Median	4,114	3,871	3,648	3,511
75% Percentile	4,199	3,918	3,765	3,537
Maximum	4,22	3,924	3,797	3,542
Mean	4,109	3,844	3,659	3,5
Std. Deviation	0,09689	0,09534	0,1059	0,04577
Std. Error of Mean	0,04845	0,04767	0,05297	0,02288
Lower 95% CI of mean	3,955	3,693	3,49	3,427
Upper 95% CI of mean	4,263	3,996	3,827	3,573
Sum	16,44	15,38	14,64	14
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	0,9927	0,8945	0,9815	0,9271
P value	0,9709	0,4043	0,9109	0,5772
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel GSH jantung tidak dicekok ekstrak daun *blackberry*

	normoksia	hipoksia 1 hari	hipoksia 7 hari	hipoksia 14 hari
Number of values	5	5	5	5
Minimum	2,165	2,017	1,89	1,572
25% Percentile	2,176	2,049	1,922	1,614
Median	2,287	2,118	1,99	1,694
75% Percentile	2,398	2,186	2,059	1,773
Maximum	2,441	2,208	2,102	1,826
Mean	2,287	2,118	1,99	1,694
Std. Deviation	0,1154	0,07396	0,07838	0,0928
Std. Error of Mean	0,05162	0,03308	0,03505	0,0415
Lower 95% CI of mean	2,144	2,026	1,893	1,579
Upper 95% CI of mean	2,43	2,209	2,088	1,809
Sum	11,44	10,59	9,952	8,469
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	0,9411	0,99	0,9922	0,9861
P value	0,6734	0,9798	0,9869	0,9645
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel GSH jantung tidak dicekok ekstrak daun *blackberry*

	normoksia	hipoksia 1 hari	hipoksia 7 hari	hipoksia 14 hari
Number of values	5	5	5	5
Minimum	2,886	2,462	2,25	2,059
25% Percentile	2,939	2,521	2,282	2,093
Median	3,004	2,61	2,318	2,144
75% Percentile	3,076	2,631	2,356	2,155
Maximum	3,119	2,631	2,356	2,165
Mean	3,007	2,583	2,319	2,128

Std. Deviation	0,08393	0,07088	0,04336	0,04069
Std. Error of Mean	0,03753	0,0317	0,01939	0,01819
Lower 95% CI of mean	2,903	2,495	2,265	2,077
Upper 95% CI of mean	3,111	2,671	2,372	2,178
Sum	15,03	12,92	11,59	10,64
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	0,9677	0,7766	0,8647	0,8382
P value	0,8605	0,0515	0,2456	0,1600
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel Analisa Statistik Jantung cekok: Hipoksia 1 hari dengan Normoksia

Table Analyzed	Organ +
Column B	hipoksia 1 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=8.625 df=8
How big is the difference?	
Mean ± SEM of column A	3.007 ± 0.03753, n=5
Mean ± SEM of column B	2.583 ± 0.0317, n=5
Difference between means	-0.4237 ± 0.04913
95% confidence interval	-0.537 to -0.3104
R squared (eta squared)	0.9029
F test to compare variances	
F, DFn, Dfd	1.402, 4, 4
P value	0.7513
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Jantung cekok: Hipoksia 7 hari dengan Normoksia

Table Analyzed	Organ +
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=16.29 df=8
How big is the difference?	
Mean ± SEM of column A	3.007 ± 0.03753, n=5
Mean ± SEM of column C	2.319 ± 0.01939, n=5
Difference between means	-0.6881 ± 0.04225
95% confidence interval	-0.7856 to -0.5907
R squared (eta squared)	0.9707
F test to compare variances	
F, DFn, Dfd	3.747, 4, 4
P value	0.2289
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Jantung cekok: Hipoksia 14 hari dengan Normoksia

Table Analyzed	Organ +
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=21.07 df=8
How big is the difference?	
Mean ± SEM of column A	3.007 ± 0.03753, n=5
Mean ± SEM of column D	2.128 ± 0.01819, n=5
Difference between means	-0.8788 ± 0.04171
95% confidence interval	-0.975 to -0.7826
R squared (eta squared)	0.9823
F test to compare variances	
F, DFn, Dfd	4.255, 4, 4
P value	0.1897
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Jantung Tidak Cekok: Hipoksia 1 hari dengan Normoksia

Table Analyzed	Organ -
Column B	hipoksia 1 hari
vs.	vs.
Column A	normoksia
Unpaired t test	
P value	0.0245
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2.764 df=8
How big is the difference?	
Mean ± SEM of column A	2.287 ± 0.05162, n=5
Mean ± SEM of column B	2.118 ± 0.03308, n=5
Difference between means	-0.1695 ± 0.06131
95% confidence interval	-0.3109 to -0.0281
R squared (eta squared)	0.4885
F test to compare variances	
F, DF _n , D _{fd}	2.436, 4, 4
P value	0.4096
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Jantung Tidak Cekok: Hipoksia 7 hari dengan Normoksia

Table Analyzed	Organ -
Column C	hipoksia 7 hari
vs.	vs.
Column A	normoksia
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=4.753 df=8
How big is the difference?	
Mean ± SEM of column A	2.287 ± 0.05162, n=5
Mean ± SEM of column C	1.99 ± 0.03505, n=5
Difference between means	-0.2966 ± 0.0624
95% confidence interval	-0.4405 to -0.1527
R squared (eta squared)	0.7385
F test to compare variances	
F, DF _n , D _{fd}	2.169, 4, 4
P value	0.4718

P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Jantung Tidak Cekok: Hipoksia 14 hari dengan Normoksia

Table Analyzed	Organ -
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=8.956 df=8
How big is the difference?	
Mean ± SEM of column A	2.287 ± 0.05162, n=5
Mean ± SEM of column D	1.694 ± 0.0415, n=5
Difference between means	-0.5932 ± 0.06624
95% confidence interval	-0.746 to -0.4405
R squared (eta squared)	0.9093
F test to compare variances	
F, DFn, Dfd	1.547, 4, 4
P value	0.6827
P value summary	Ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Darah dicekok Hipoksia 1 hari dengan Normoksia

Table Analyzed	Darah +
Column B	hipoksia 1 hari
vs.	vs.
Column A	normoksia
Unpaired t test	
P value	0.0080
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3.896 df=6
How big is the difference?	
Mean ± SEM of column A	4.109 ± 0.04845, n=4
Mean ± SEM of column B	3.844 ± 0.04767, n=4
Difference between means	-0.2648 ± 0.06797
95% confidence interval	-0.4311 to -0.09852
R squared (eta squared)	0.7167

F test to compare variances	
F, DFn, Dfd	1.033, 3, 3
P value	0.9794
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Darah dicekok Hipoksia 7 hari dengan Normoksia

Table Analyzed	Darah +
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=6.272 df=6
How big is the difference?	
Mean ± SEM of column A	4.109 ± 0.04845, n=4
Mean ± SEM of column C	3.659 ± 0.05297, n=4
Difference between means	-0.4502 ± 0.07178
95% confidence interval	-0.6259 to -0.2746
R squared (eta squared)	0.8677
F test to compare variances	
F, DFn, Dfd	1.195, 3, 3
P value	0.8869
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Darah dicekok Hipoksia 14 hari dengan Normoksia

Table Analyzed	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=11.37 df=6
How big is the difference?	
Mean ± SEM of column A	4.109 ± 0.04845, n=4
Mean ± SEM of column D	3.5 ± 0.02288, n=4
Difference between means	-0.6091 ± 0.05358

95% confidence interval	-0.7402 to -0.478
R squared (eta squared)	0.9556
F test to compare variances	
F, DFn, Dfd	4.482, 3, 3
P value	0.2495
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Darah Tidak dicekok Hipoksia 1 hari dengan Normoksia

Table Analyzed	Darah -
Column B	hipoksia 1 hari
vs.	vs.
Column A	normoksia
Unpaired t test	
P value	0.0380
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2.65 df=6
How big is the difference?	
Mean ± SEM of column A	3.595 ± 0.05834, n=4
Mean ± SEM of column B	3.341 ± 0.07614, n=4
Difference between means	-0.2542 ± 0.09593
95% confidence interval	-0.489 to -0.01952
R squared (eta squared)	0.5393
F test to compare variances	
F, DFn, Dfd	1.703, 3, 3
P value	0.6725
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Darah Tidak dicekok Hipoksia 7 hari dengan Normoksia

Table Analyzed	Darah -
Column C	hipoksia 7 hari
vs.	vs.
Column A	normoksia
Unpaired t test	
P value	0.0200
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3.144 df=6

How big is the difference?	
Mean \pm SEM of column A	3.595 \pm 0.05834, n=4
Mean \pm SEM of column C	3.299 \pm 0.07415, n=4
Difference between means	-0.2966 \pm 0.09435
95% confidence interval	-0.5275 to -0.06574
R squared (eta squared)	0.6222
F test to compare variances	
F, DFn, Dfd	1.616, 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 -
Column D	hipoksia 14 hari
vs.	vs.
Column A	normoksia
Unpaired t test	
P value	0.0219
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3.07 df=6
How big is the difference?	
Mean \pm SEM of column A	3.595 \pm 0.05834, n=4
Mean \pm SEM of column D	3.256 \pm 0.09376, n=4
Difference between means	-0.339 \pm 0.1104
95% confidence interval	-0.6092 to -0.06878
R squared (eta squared)	0.611
F test to compare variances	
F, DFn, Dfd	2.583, 3, 3
P value	0.4564
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Perbandingan Kadar GSH Jantung dicekok dan Tidak dicekok Normoksia

Table Analyzed	Perbandingan
Column E	Organ
vs.	normoksia +
Column A	vs.
Mann Whitney test	normoksia -

P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,E	10 , 26
Mann-Whitney U	0
Difference between medians	
Median of column A	2.271, n=4
Median of column E	3.013, n=4
Difference: Actual	0.7415
Difference: Hodges-Lehmann	0.7097

**Tabel Perbandingan Kadar GSH Jantung dicekok dan Tidak dicekok
Hipoksia 1 Hari**

	Perbandingan
Table Analyzed	Organ
Column F	hipoksia 1 hari+
vs.	vs.
Column B	Hipoksia 1 Hari -
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column B,F	10 , 26
Mann-Whitney U	0
Difference between medians	
Median of column B	2.123, n=4
Median of column F	2.621, n=4
Difference: Actual	0.4979
Difference: Hodges-Lehmann	0.4555

**Tabel Perbandingan Kadar GSH Jantung dicekok dan Tidak dicekok
Hipoksia 7 Hari**

	Perbandingan
Table Analyzed	Organ
Column G	hipoksia 7 hari+
vs.	vs.
Column C	Hipoksia 7 Hari -
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*

Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column C,G	10 , 26
Mann-Whitney U	0
Difference between medians	
Median of column C	1.972, n=4
Median of column G	2.335, n=4
Difference: Actual	0.3628
Difference: Hodges-Lehmann	0.3602

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

Table Analyzed	Perbandingan Organ
Column H	hipoksia 14 hari+
vs.	vs.
Column D	Hipoksia 14 Hari -
Mann Whitney test	
P value	0.0286
Exact or approximate P value?	Exact
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
Sum of ranks in column D,H	10 , 26
Mann-Whitney U	0
Difference between medians	
Median of column D	1.646, n=4
Median of column H	2.144, n=4
Difference: Actual	0.4979
Difference: Hodges-Lehmann	0.4661

Tabel Perbandingan Kadar GSH Darah dicekok dan Tidak dicekok Normoksia

Table Analyzed	Perbandingan Darah
Column E	normoksia +
vs.	vs.
Column A	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=6.775 df=6
How big is the difference?	

Mean ± SEM of column A	3.595 ± 0.05834, n=4
Mean ± SEM of column E	4.109 ± 0.04845, n=4
Difference between means	0.5138 ± 0.07583
95% confidence interval	0.3282 to 0.6993
R squared (eta squared)	0.8844
F test to compare variances	
F, DFn, Dfd	1.45, 3, 3
P value	0.7674
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	hipoksia 1 hari +
vs.	vs.
Column B	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=5.601 df=6
How big is the difference?	
Mean ± SEM of column B	3.341 ± 0.07614, n=4
Mean ± SEM of column F	3.844 ± 0.04767, n=4
Difference between means	0.5032 ± 0.08984
95% confidence interval	0.2834 to 0.723
R squared (eta squared)	0.8395
F test to compare variances	
F, DFn, Dfd	2.551, 3, 3
P value	0.4620
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	hipoksia 7 hari +
vs.	vs.
Column C	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=3.952 df=6
How big is the difference?	
Mean \pm SEM of column C	3.299 \pm 0.07415, n=4
Mean \pm SEM of column G	3.659 \pm 0.05297, n=4
Difference between means	0.3602 \pm 0.09113
95% confidence interval	0.1372 to 0.5832
R squared (eta squared)	0.7225
F test to compare variances	
F, DF _n , D _{fd}	1.96, 3, 3
P value	0.5944
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	hipoksia 14 hari +
vs.	vs.
Column D	hipoksia 14 hari -
Unpaired t test	
P value	0.0450
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2.525 df=6
How big is the difference?	
Mean \pm SEM of column D	3.256 \pm 0.09376, n=4
Mean \pm SEM of column H	3.5 \pm 0.02288, n=4
Difference between means	0.2436 \pm 0.09651
95% confidence interval	0.007494 to 0.4798
R squared (eta squared)	0.5151
F test to compare variances	
F, DF _n , D _{fd}	16.79, 3, 3
P value	0.0445
P value summary	*
Significantly different (P < 0.05)?	Yes

Tabel Analisis Korelasi Organ dan Darah Kontrol Positif

Best-fit values \pm SE	
Slope	0.6878 \pm 0.02976
Y-intercept	2.053 \pm 0.07527
X-intercept	-2.986
1/slope	1.454

95% Confidence Intervals	
Slope	0.5597 to 0.8159
Y-intercept	1.73 to 2.377
X-intercept	-4.244 to -2.121
Goodness of Fit	
R square	0.9963
Sy.x	0.01958
Is slope significantly non-zero?	
F	534
DFn, DFd	1, 2
P value	0.0019
Deviation from zero?	Significant
Equation	$Y = 0.6878 * X + 2.053$
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 \pm SE	
Slope	0.5131 ± 0.2309
Y-intercept	2.335 ± 0.4696
X-intercept	-4.551
1/slope	1.949
95% Confidence Intervals	
Slope	-0.4804 to 1.507
Y-intercept	0.3146 to 4.356
X-intercept	-infinity to -0.2095
Goodness of Fit	
R square	0.7117
Sy.x	0.1001
Is slope significantly non-zero?	
F	4.938
DFn, DFd	1, 2
P value	0.1564
Deviation from zero?	Not Significant
Equation	$Y = 0.5131 * X + 2.335$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

DAFTAR RIWAYAT HIDUP

DATA PRIBADI

1. Nama : Ridho Edyar
2. NIM : 405160211
3. Jenis kelamin : Laki-laki
4. Tempat, Tanggal Lahir : Lebak, 10 Maret 1996
5. Agama : Islam
6. Status : Belum Menikah
7. Pendidikan Terakhir : SMA
8. Alamat : JL.Raya binuangeun, wanasalam, Lebak-
Banten
9. Nomor Telepon : 087772926242
10. Email : Ridhoedyar1010@gmail.com

DATA PENDIDIKAN

1. 2002 – 2008 : SDN 01 Wanasalam
2. 2008 – 2011 : SMPS La Tansa
3. 2011 – 2014 : SMAS La Tansa
4. 2016 – sekarang : Universitas Tarumanagara