

LAMPIRAN – 1. Identifikasi LIPI Tanaman



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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
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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

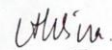
Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 17 Januari 2019

Ketua


Prof. DR. dr. Adi Hidayat, MS

Sekretaris


dr. Alvina SpPK

LAMPIRAN - 3 : Hasil Uji In Vitro dan In Vivo

Hasil Absorbansi dan Kadar GSH Paru

Tabel Paru Normoksia Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,055	0,045	0.05	3.07627
Tikus 2	0,041	0,040	0.0405	2.67373
Tikus 3	0,049	0,047	0.048	2.99153
Tikus 4	0,046	0,040	0.043	2.77966
	Rata-rata		0.04538	2.8803

Tabel Paru Hipoksia 1 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,039	0,038	0.0385	2.58898
Tikus 2	0,040	0,039	0.0395	2.63136
Tikus 3	0,036	0,063	0.0345	2.41949
Tikus 4	0,032	0,036	0.034	2.39831
	Rata-rata		0.03663	2.50953

Tabel Paru Hipoksia 7 Hari Cekok

	Duplo (Absorbansi)		Rerata Absorbansi	Kadar GSH (nmol/ml)
	I	II		
Tikus 1	0,04	0,02	0.03	2.22881
Tikus 2	0,035	0,034	0.0345	2.41949
Tikus 3	0,031	0,028	0.0295	2.20763
Tikus 4	0,029	0,027	0.028	2.14407
	Rata-rata		0.0305	2.25

Tabel Paru Hipoksia 14 Hari Cekok

	Duplo (Absorbansi)		Rerata	Kadar GSH
			Absorbansi	(nmol/ml)
	I	II		
Tikus 1	0,023	0,019	0.021	1.84746
Tikus 2	0,021	0,020	0.0205	1.82627
Tikus 3	0,015	0,021	0.018	1.72034
Tikus 4	0,018	0,021	0.0195	1.7839
	Rata-rata		0.01975	1.79449

Tabel Paru Normoksia Tidak Cekok

	Duplo		Rerata	Kadar GSH
	(Absorbansi)		Absorbansi	(nmol/ml)
	I	II		
Tikus 1	0,032	0,029	0.0305	2.25
Tikus 2	0,026	0,030	0.028	2.14407
Tikus 3	0,028	0,026	0.027	2.10169
Tikus 4	0,031	0,027	0.029	2.18644
	Rata-rata		0.02863	2.17055

Tabel Paru Hipoksia 1 Hari Tidak Cekok

	Duplo		Rerata	Kadar GSH
	(Absorbansi)		Absorbansi	(nmol/ml)
	I	II		
Tikus 1	0,025	0,023	0.024	1.97458
Tikus 2	0,024	0,023	0.0235	1.95339
Tikus 3	0,021	0,024	0.0225	1.91102
Tikus 4	0,022	0,020	0.021	1.84746
	Rata-rata		0.02275	1.92161

Tabel Paru Hipoksia 7 Hari Tidak Cekok

	Duplo		Rerata	Kadar GSH
	(Absorbansi)			
	I	II		
Tikus 1	0,021	0,022	0.0215	1.86864
Tikus 2	0,017	0,021	0.019	1.76271
Tikus 3	0,021	0,020	0.0205	1.82627
Tikus 4	0,017	0,020	0.0185	1.74153
	Rata-rata		0.01988	1.79979

Tabel Paru Hipoksia 14 Hari Tidak Cekok

	Duplo		Rerata	Kadar GSH
	(Absorbansi)			
	I	II		
Tikus 1	0,017	0,015	0.016	1.63559
Tikus 2	0,018	0,018	0.018	1.72034
Tikus 3	0,016	0,017	0.0165	1.65678
Tikus 4	0,016	0,013	0.0145	1.57203
	Rata-rata		0.01625	1.64619

Hasil Absorbansi dan Kadar GSH Darah**Tabel Darah Normoksia Cekok**

	Duplo		Rerata	Kadar GSH
	(Absorbansi)			
	I	II		
Tikus 1	0,073	0,077	0.075	4.13559
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		Rerata	Kadar GSH
	(Absorbansi)			
	I	II		
Tikus 1	0,067	0,073	0.07	3.92373
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		Rerata	Kadar GSH
	(Absorbansi)			
	I	II		
Tikus 1	0,061	0,073	0.067	3.79661
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		Rerata	Kadar GSH
	(Absorbansi)			
	I	II		
Tikus 1	0,056	0,061	0.0585	3.43644
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		Rerata	Kadar GSH (nmol/ml)
	(Absorbansi)			
	I	II		
Tikus 1	0,055	0,063	0.059	3.45763
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		Rerata	Kadar GSH (nmol/ml)
	(Absorbansi)			
	I	II		
Tikus 1	0,049	0,053	0.051	3.11864
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		Rerata	Kadar GSH (nmol/ml)
	(Absorbansi)			
	I	II		
Tikus 1	0,056	0,052	0.054	3.24576
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		Rerata	Kadar GSH
	(Absorbansi)			
	I	II	Absorbansi	(nmol/ml)
Tikus 1	0,049	0,051	0.05	3.07627
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

Tabel Hasil Penelitian

Konsentrasi, Absorbansi, Persentase Inhibisi, dan IC50 Larutan Standar Vitamin C

Konsentrasi ($\mu\text{g/mL}$)	Absorbansi	Persentase Inhibisi (%)	IC50 ($\mu\text{g/mL}$)
2	0,346	32.685	
4	0,288	43.969	
6	0,213	58.56	4.78
8	0,152	70.428	
10	0,086	83.268	

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

Konsentrasi, Absorbansi, Persentase Inhibisi, dan IC50 Ekstrak Daun *Blackberry*

Konsentrasi ($\mu\text{g/mL}$)	Absorbansi	Persentase Inhibisi (%)	IC50 ($\mu\text{g/mL}$)
10	0,4965	3.405	
30	0,4575	10.895	
50	0,4215	17.996	128.09
70	0,385	25.097	
90	0,368	34.728	

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

Absorbansi dan Konsentrasi Larutan Standar *Berberin Chloride*

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

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	$Y = 0,001715 * X + 0,0491$
Data	
Number of X values	5
Maximum number of Y replicates	1

Absorbansi dan Konsentrasi Larutan Standar Tanin

Konsentrasi ($\mu\text{g/mL}$)	Absorbansi
300	0.365
400	0.416

500	0.46
600	0.565
700	0.649

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

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

Regresi Uji Toksisitas BSLT pada Ekstrak Daun *Blackberry*

Best-fit values \pm SE	
Slope	42.11 \pm 1.347
Y-intercept	-28.45 \pm 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

Analisa Paru Tidak Cekok	Normoksia	Hipoksia 1 Hari	Hipoksia 7 Hari	Hipoksia 14 hari
Number of values	4	4	4	4
Minimum	2.102	1.847	1.742	1.572
25% Percentile	2.112	1.863	1.747	1.588
Median	2.165	1.932	1.794	1.646
75% Percentile	2.234	1.969	1.858	1.704
Maximum	2.25	1.975	1.869	1.72
Mean	2.171	1.922	1.8	1.646
Std. Deviation	0.06327	0.05605	0.05834	0.06116
Std. Error of Mean	0.03163	0.02803	0.02917	0.03058
Lower 95% CI of mean	2.07	1.832	1.707	1.549
Upper 95% CI of mean	2.271	2.011	1.893	1.744
Sum	8.682	7.686	7.199	6.585
D'Agostino & Pearson normality test				
K2	N too small	N too small	N too small	N too small
P value				

Analisa Paru Cekok	Normoksia	Hipoksia 1 Hari	Hipoksia 3 Hari	Hipoksia 14 Hari
Number of values	4	4	4	4
Minimum	2.674	2.398	2.144	1.72
25% Percentile	2.7	2.404	2.16	1.736
Median	2.886	2.504	2.218	1.805

75% Percentile	3.055	2.621	2.372	1.842
Maximum	3.076	2.631	2.419	1.847
Mean	2.88	2.51	2.25	1.794
Std. Deviation	0.1858	0.1178	0.1186	0.05605
Std. Error of Mean	0.0929	0.0589	0.0593	0.02803
Lower 95% CI of mean	2.585	2.322	2.061	1.705
Upper 95% CI of mean	3.176	2.697	2.439	1.884
Sum	11.52	10.04	9	7.178
D'Agostino & Pearson normality test				
		N too		
K2	N too small	small	N too small	N too small
P value				
Passed normality test (alpha=0.05)?				
P value summary				
Shapiro-Wilk normality test				
W	0.9392	0.8522	0.8811	0.9456
P value	0.6494	0.2334	0.3433	0.6890
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	Ns	ns	ns

Analisa Darah Tidak Cekok	Normoksi Hiposia 1		Hipoksia 3	Hipoksia 14
	a	Hari	Hari	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				
		N too		
K2		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

Analisa Darah Cekok	Normoksi	Hiposia 1	Hipoksia 3	Hipoksia 14
	a	Hari	Hari	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	N too small			
K2	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

Analisa Statistik Paru cekok: Hipoksia 1 hari dengan Normoksia

Table Analyzed	Organ +
Column B	Hipoksia 1 hari
vs.	vs.
Column A	Normoksia

Unpaired t test

P value	0.0150
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3.37 df=6
How big is the difference?	
Mean ± SEM of column A	2.88 ± 0.0929, n=4
Mean ± SEM of column B	2.51 ± 0.0589, n=4
Difference between means	-0.3708 ± 0.11
95% confidence interval	-0.6399 to -0.1016
R squared (eta squared)	0.6544
F test to compare variances	
F, DFn, Dfd	2.488, 3, 3
P value	0.4738
P value summary	ns
Significantly different (P < 0.05)?	No

Analisa Statistik Paru cekok hipoksia 7 hari dengan Normoksia

Table Analyzed	Organ +
Column C	Hipoksia 7 hari
vs.	vs.
Column A	Normoksia
Unpaired t test	
P value	0.0012
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5.719 df=6

How big is the difference?	
Mean \pm SEM of column A	2.88 \pm 0.0929, n=4
Mean \pm SEM of column C	2.25 \pm 0.0593, n=4
Difference between means	-0.6303 \pm 0.1102
95% confidence interval	-0.9 to -0.3606
R squared (eta squared)	0.845
F test to compare variances	
F, DFn, Dfd	2.455, 3, 3
P value	0.4801
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisis Statistik Paru 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=11.19 df=6

How big is the difference?	
Mean \pm SEM of column A	2.88 \pm 0.0929, n=4
Mean \pm SEM of column D	1.794 \pm 0.02803, n=4
Difference between means	-1.086 \pm 0.09704

95% confidence interval	-1.323 to -0.8484
R squared (eta squared)	0.9543
F test to compare variances	
F, DFn, Dfd	10.99, 3, 3
P value	0.0797
P value summary	ns
Significantly different (P < 0.05)?	No

Analisis Statistik Paru 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	0.0011
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=5.89 df=6
How big is the difference?	
Mean ± SEM of column A	2.171 ± 0.03163, n=4
Mean ± SEM of column B	1.922 ± 0.02803, n=4
Difference between means	-0.2489 ± 0.04226
95% confidence interval	-0.3524 to -0.1455
R squared (eta squared)	0.8526
F test to compare variances	
F, DFn, Dfd	1.274, 3, 3

P value	0.8470
P value summary	ns
Significantly different (P < 0.05)?	No

Analisa Statistik Paru 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	0.0001
P value summary	***
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=8.616 df=6
How big is the difference?	
Mean ± SEM of column A	2.171 ± 0.03163, n=4
Mean ± SEM of column C	1.8 ± 0.02917, n=4
Difference between means	-0.3708 ± 0.04303
95% confidence interval	-0.4761 to -0.2655
R squared (eta squared)	0.9252
F test to compare variances	
F, DFn, Dfd	1.176, 3, 3
P value	0.8971
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel Analisa Statistik Paru 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=11.92 df=6
How big is the difference?	
Mean ± SEM of column A	2.171 ± 0.03163, n=4
Mean ± SEM of column D	1.646 ± 0.03058, n=4
Difference between means	-0.5244 ± 0.044
95% confidence interval	-0.632 to -0.4167
R squared (eta squared)	0.9595
F test to compare variances	
F, DFn, Dfd	1.07, 3, 3
P value	0.9570
P value summary	Ns
Significantly different (P < 0.05)?	No

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	0,0084
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 \pm SEM of column A	4,105 \pm 0,04975, n=4
Mean \pm SEM of column B	3,84 \pm 0,04743, n=4
Difference between means	-0,265 \pm 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

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=6,276 df=6
How big is the difference?	
Mean \pm SEM of column A	4,105 \pm 0,04975, n=4

Mean \pm SEM of column C	3,653 \pm 0,05218, n=4
Difference between means	-0,4525 \pm 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

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 df=6
How big is the difference?	
Mean \pm SEM of column A	4,105 \pm 0,04975, n=4
Mean \pm SEM of column D	3,498 \pm 0,02394, n=4
Difference between means	-0,6075 \pm 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
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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	0,0386
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

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	0,0203
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 -
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 ± SEM of column A	3.595 ± 0.05834, n=4
Mean ± SEM of column D	3.256 ± 0.09376, n=4
Difference between means	-0.339 ± 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

Perbandingan Kadar GSH Paru dicekok dan Tidak dicekok Normoksia

Table Analyzed	perbandingan organ
Column E	Normoksia
vs.	vs.
Column A	Normoksia -
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=7.232 df=6
How big is the difference?	
Mean ± SEM of column A	2.171 ± 0.03163, n=4

Mean \pm SEM of column E	2.88 \pm 0.0929, n=4
Difference between means	0.7097 \pm 0.09814
95% confidence interval	0.4696 to 0.9499
R squared (eta squared)	0.8971
F test to compare variances	
F, DFn, Dfd	8.626, 3, 3
P value	0.1101
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Kadar GSH Paru dicekok dan Tidak dicekok Hipoksia 1 Hari

Table Analyzed	perbandingan organ
Column F	Hipoksia 1 hari
vs.	vs.
Column B	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=9.013 df=6
How big is the difference?	
Mean \pm SEM of column B	1.922 \pm 0.02803, n=4
Mean \pm SEM of column F	2.51 \pm 0.0589, n=4
Difference between means	0.5879 \pm 0.06523
95% confidence interval	0.4283 to 0.7475

R squared (eta squared)	0.9312
F test to compare variances	
F, DFn, Dfd	4.417, 3, 3
P value	0.2539
P value summary	ns
Significantly different (P < 0.05)?	No

Perbandingan Kadar GSH Paru dicekok dan Tidak dicekok Hipoksia 7 Hari

Table Analyzed	perbandingan organ
Column G	Hipoksia 7 hari
vs.	vs.
Column C	Hipoksia 7 hari -
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=6.813 df=6
How big is the difference?	
Mean ± SEM of column C	1.8 ± 0.02917, n=4
Mean ± SEM of column G	2.25 ± 0.0593, n=4
Difference between means	0.4502 ± 0.06608
95% confidence interval	0.2885 to 0.6119
R squared (eta squared)	0.8855
F test to compare variances	
F, DFn, Dfd	4.132, 3, 3
P value	0.2743
P value summary	ns

Significantly different (P < 0.05)?	No
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Perbandingan Kadar GSH Paru dicekok dan Tidak dicekok Hipoksia 14 Hari

Table Analyzed	perbandingan organ
Column H	Hipoksia 14 hari
vs.	vs.
Column D	Hipoksia 14 hari -
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=3.575 df=6
How big is the difference?	
Mean ± SEM of column D	1.646 ± 0.03058, n=4
Mean ± SEM of column H	1.794 ± 0.02803, n=4
Difference between means	0.1483 ± 0.04148
95% confidence interval	0.04681 to 0.2498
R squared (eta squared)	0.6806
F test to compare variances	
F, DFn, Dfd	1.191, 3, 3
P value	0.8894
P value summary	ns
Significantly different (P < 0.05)?	No

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

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

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 ± SEM of column C	3.299 ± 0.07415, n=4
Mean ± SEM of column G	3.659 ± 0.05297, n=4
Difference between means	0.3602 ± 0.09113

95% confidence interval	0.1372 to 0.5832
R squared (eta squared)	0.7225
F test to compare variances	
F, DFn, Dfd	1.96, 3, 3
P value	0.5944
P value summary	ns
Significantly different (P < 0.05)?	No

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 ± SEM of column D	3.256 ± 0.09376, n=4
Mean ± SEM of column H	3.5 ± 0.02288, n=4
Difference between means	0.2436 ± 0.09651
95% confidence interval	0.007494 to 0.4798
R squared (eta squared)	0.5151
F test to compare variances	
F, DFn, Dfd	16.79, 3, 3
P value	0.0445
P value summary	*
Significantly different (P < 0.05)?	Yes

Analisis Korelasi Organ dan Darah Kontrol Positif

Best-fit values \pm SE	
Slope	0.564 \pm 0.07307
Y-intercept	2.448 \pm 0.1747
X-intercept	-4.34
1/slope	1.773
95% Confidence Intervals	
Slope	0.2496 to 0.8784
Y-intercept	1.696 to 3.2
X-intercept	-12.78 to -1.936
Goodness of Fit	
R square	0.9675
Sy.x	0.05777
Is slope significantly non-zero?	
F	59.58
DFn, DFd	1, 2
P value	0.0164
Deviation from zero?	Significant
Equation	$Y = 0.564 * X + 2.448$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

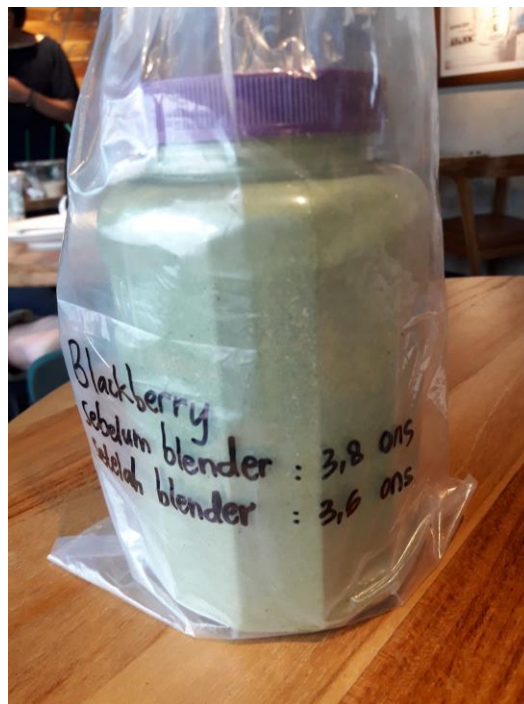
Analisis Korelasi Organ dan Darah Kontrol Negatif

Best-fit values \pm SE	
Slope	0.6557 \pm 0.1462
Y-intercept	2.137 \pm 0.277
X-intercept	-3.259
1/slope	1.525
95% Confidence Intervals	
Slope	0.02666 to 1.285
Y-intercept	0.9455 to 3.329
X-intercept	-124.6 to -0.7372
Goodness of Fit	
R square	0.9096
Sy.x	0.05609
Is slope significantly non-zero?	
F	20.12
DFn, DFd	1, 2
P value	0.0463
Deviation from zero?	Significant
Equation	$Y = 0.6557 * X + 2.137$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

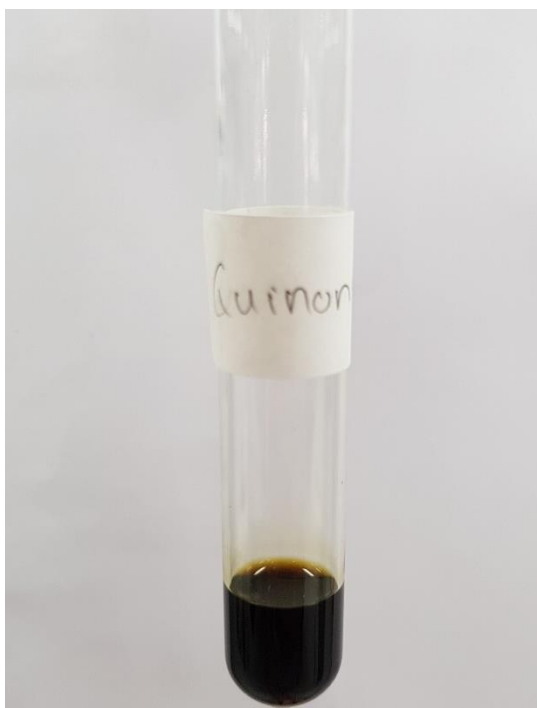
LAMPIRAN – 4 : Dokumentasi dan Alat Penelitian



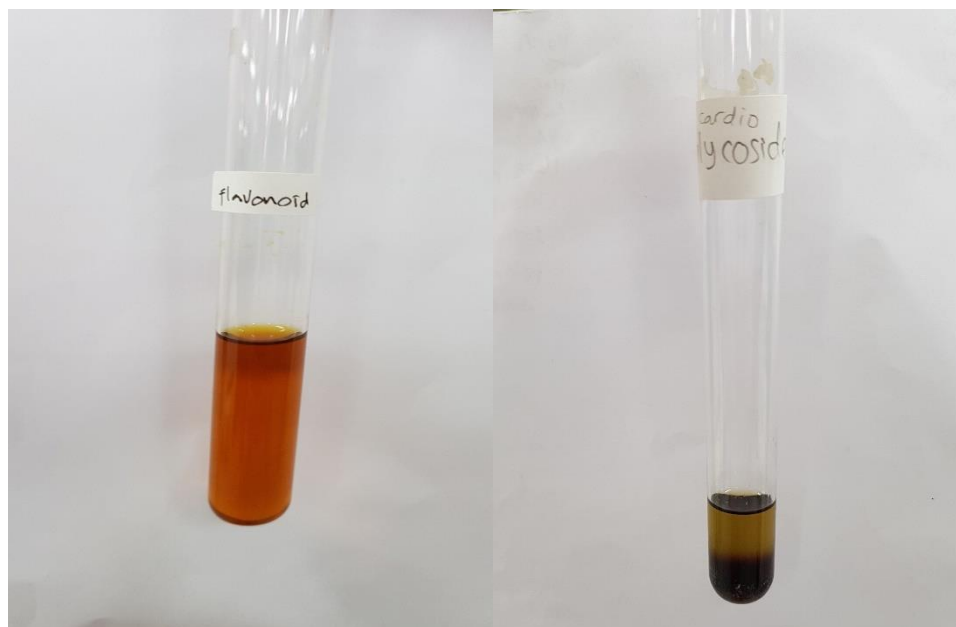
Pengeringan daun *blackberry*



Sampel Bubuk Daun *Blackberry*

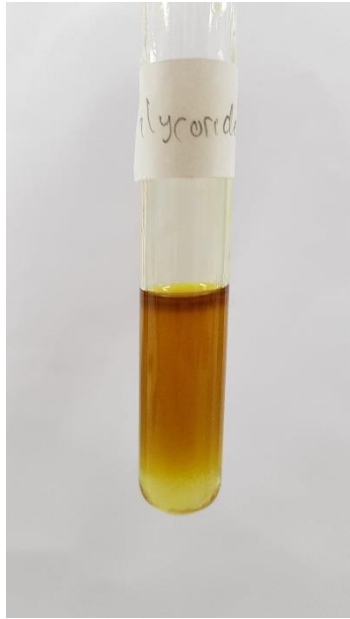


Uji Kuinon



Uji Flavonoid

Kardioglikosida



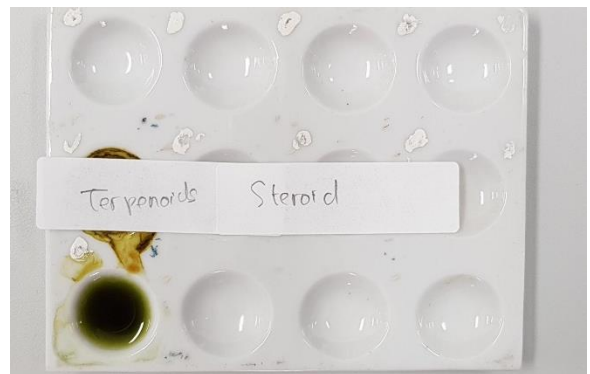
Uji Glikosida



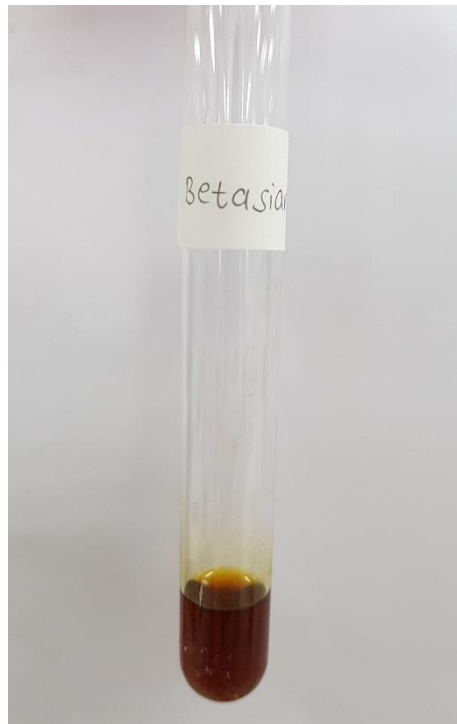
Uji Tannin



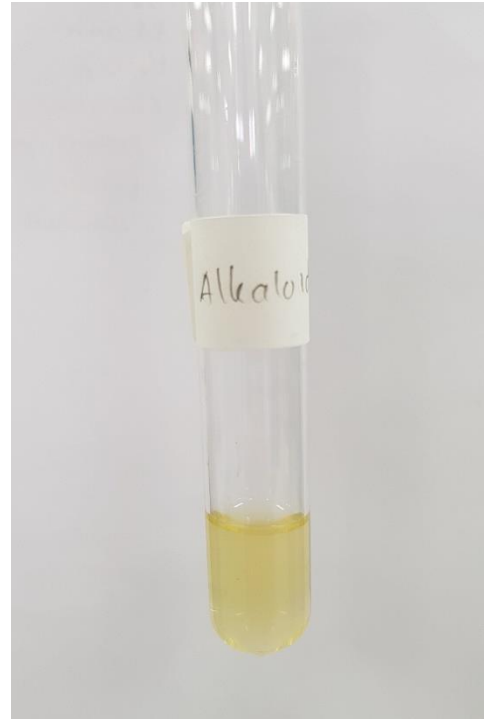
Uji Koumarins



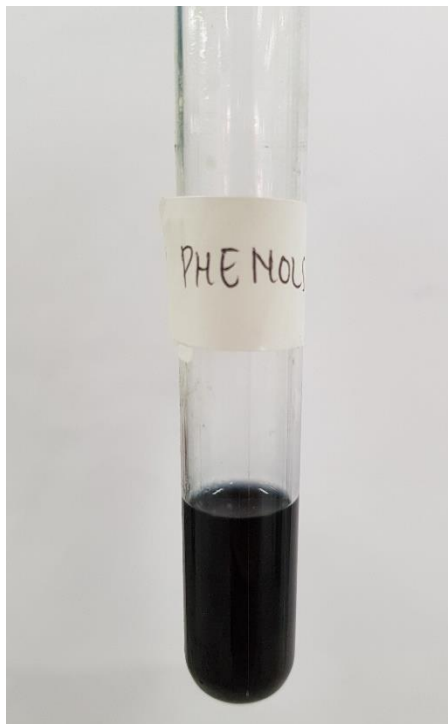
Uji Terpenoid



Uji Alkaloid



Uji Betasianin



Uji Phenol

Gas



Pemotongan Organ



Penghitungan absorbansi

DAFTAR RIWAYAT HIDUP

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