LAMPIRAN 1 – Kaji Etik

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

Prof.DR.dr.Adi Hidayat,MS   dr.Alvina.SpPK
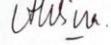
LAMPIRAN 2 – Identifikasi Tanaman

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

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Page 1 of 1

LAMPIRAN 3 – Tabel Hasil Penelitian

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

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

Tabel 3: Regresi Linear Total Alkaloid Content (Kapasitas Total Alkaloid) pada Ekstrak Daun Blackberry

Best-fit values ± 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

Tabel 4: Regresi Linear Total Phenolic Content (Kapasitas Total Fenolik) pada Ekstrak Daun Blackberry

Best-fit values ± SE	
Slope	$0{,}00073 \pm 7{,}332e\text{-}005$
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 5: Regresi Uji Toksisitas BSLT pada Ekstrak Daun Blackberry

Best-fit values ± SE	
Slope	41,67 ± 1,147
Y-intercept	-27,99 ± 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

Tabel 6: Aktivitas Spesifik Katalase Darah Cekok

Number of values	4	4	4	4
Minimum	881,7	782,7	707,2	589,0
25% Percentile	883,0	784,2	710,4	592,3
Median	898,5	796,7	728,0	605,6
75% Percentile	920,3	835,7	756,3	637,1
Maximum	923,7	846,0	763,2	646,4
Mean	900,6	805,5	731,6	611,6
Std. Deviation	19,73	28,57	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	932,0	851,0	769,9	650,8
Sum	3602	3222	2926	2447

Tabel 7: Perbandingan Aktivitas Spesifik Katalase Darah Hipoksia 1 Hari dengan Normoksia

Table Analyzed	Darah Uji
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=5,477, df=6
How big is the difference?	
Mean of column A	900,6
Mean of column B	805,5

**Tabel 8: Perbandingan Aktivitas Spesifik Katalase Darah
Hipoksia 7 Hari dengan Normoksia**

Table Analyzed	Darah Uji
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 of column A	900,6
Mean of column C	731,6

**Tabel 9: Perbandingan Aktivitas Spesifik Katalase Darah
Hipoksia 14 Hari dengan Normoksia**

Table Analyzed	Darah Uji
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 of column A	900,6
Mean of column D	611,6

Tabel 10: Aktivitas spesifik katalase darah tidak

Number of values	4	4	4	4
Minimum	39,77	26,81	20,05	15,00
25% Percentile	42,47	27,37	21,41	16,76
Median	51,10	33,12	32,22	25,56

75% Percentile	60,26	43,81	40,83	35,63
Maximum	63,15	46,02	41,46	37,82
Mean	51,28	34,76	31,49	25,98
Std. Deviation	9,556	8,729	10,36	9,760
Std. Error of Mean	4,778	4,364	5,181	4,880
Lower 95% CI of mean	36,07	20,87	15,00	10,45
Upper 95% CI of mean	66,48	48,65	47,97	41,51
Sum	205,1	139,1	125,9	103,9

Tabel 11: Perbandingan aktivitas spesifik katalase darah hipoksia 1 hari dengan normoksia

Table Analyzed	Darah Kontrol
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 of column A	51,28
Mean of column B	34,76

Tabel 12: Perbandingan aktivitas spesifik katalase darah hipoksia 7 hari dengan normoksia

Table Analyzed	Darah Kontrol
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 of column A	51,28
Mean of column C	31,49

Tabel 13: Perbandingan Aktivitas Spesifik Katalase Darah Hipoksia 14 Hari dengan Normoksia

Table Analyzed	Darah Kontrol
Column D	Hipoksia 14 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0100
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 of column A	51,28
Mean of column D	25,98
Difference between means (D - A) ± SEM	-25,29 ± 6,830
95% confidence interval	-42,01 to -8,582
R squared (eta squared)	0,6957
F test to compare variances	
F, DFn, Dfd	1,043, 3, 3
P value	0,9731
P value summary	ns
Significantly different (P < 0.05)?	No
Data analyzed	
Sample size, column A	4
Sample size, column D	4

Tabel 14: Aktivitas spesifik katalase paru cekok

Number of values	4	4	4	4
Minimum	8,288	8,122	7,489	5,358
25% Percentile	8,423	8,313	7,610	5,481
Median	9,483	9,116	7,989	5,909
75% Percentile	11,78	9,423	8,903	6,431
Maximum	12,32	9,448	9,202	6,586
Mean	9,894	8,951	8,167	5,940
Std. Deviation	1,795	0,6040	0,7291	0,5049
Std. Error of Mean	0,8977	0,3020	0,3646	0,2525
Lower 95% CI of mean	7,037	7,989	7,007	5,137
Upper 95% CI of mean	12,75	9,912	9,327	6,744
Sum	39,58	35,80	32,67	23,76

Tabel 15: Perbandingan aktivitas spesifik katalase paru cekok hipoksia 1 hari dengan normoksia

Table Analyzed	Jaringan Uji
Column B	Hipoksia 1 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,3577
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=0,9959, df=6
How big is the difference?	
Mean of column A	9,894
Mean of column B	8,951

Tabel 16: Perbandingan aktivitas spesifik katalase paru hipoksia 7 hari dengan normoksia

Table Analyzed	Jaringan Uji
Column C	Hipoksia 7 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,1250
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,782, df=6
How big is the difference?	
Mean of column A	9,894
Mean of column C	8,167

Tabel 17: Perbandingan aktivitas spesifik katalase paru hipoksia 14 hari dengan normoksia

Table Analyzed	Jaringan Uji
Column D	Hipoksia 14 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0054
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,240, df=6
How big is the difference?	
Mean of column A	9,894
Mean of column D	5,940

Tabel 18: Aktivitas spesifik katalase paru tidak cekok

Number of values	4	4	4	4
Minimum	6,805	6,462	5,925	5,191
25% Percentile	6,840	6,463	6,020	5,253
Median	7,192	6,543	6,401	5,733
75% Percentile	7,642	6,896	6,524	6,587
Maximum	7,710	6,988	6,532	6,773
Mean	7,225	6,634	6,315	5,858
Std. Deviation	0,4225	0,2473	0,2787	0,7039
Std. Error of Mean	0,2113	0,1236	0,1393	0,3520
Lower 95% CI of mean	6,552	6,241	5,872	4,738
Upper 95% CI of mean	7,897	7,028	6,758	6,978
Sum	28,90	26,54	25,26	23,43

Tabel 19: Perbandingan aktivitas spesifik katalase paru tidak cekok hipoksia 1 hari dengan normoksia

Table Analyzed	Jaringan Kontrol
Column B	Hipoksia 1 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0524
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=2,412, df=6
How big is the difference?	
Mean of column A	7,225
Mean of column B	6,634

Tabel 20: Perbandingan aktivitas spesifik katalase paru tidak cekok hipoksia 7 hari dengan normoksia

Table Analyzed	Jaringan Kontrol
Column C	Hipoksia 7 hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0114
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,595, df=6
How big is the difference?	
Mean of column A	7,225
Mean of column C	6,315

Tabel 21: Perbandingan aktivitas spesifik katalase paru tidak cekok hipoksia 14 hari dengan normoksia

Table Analyzed	Jaringan Kontrol
Column D	Hipoksia 14 Hari
vs.	vs,
Column A	Normoksia
Unpaired t test	
P value	0,0158
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,330, df=6
How big is the difference?	
Mean of column A	7,225
Mean of column D	5,858

Tabel 22: Perbandingan Aktivitas Spesifik Katalase Paru Normoksia cekok dengan tidak cekok

Table Analyzed	Normoksia Jar-Uji

	dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
Unpaired t test	
P value	0,0275
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,894, df=6
How big is the difference?	
Mean of column A	9,894
Mean of column B	7,225

Tabel 23: Perbandingan Aktivitas Spesifik Katalase Paru hipoksia 1 hari cekok dengan tidak cekok

Table Analyzed	H1 Jar-Uji dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
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=7,098, df=6
How big is the difference?	
Mean of column A	8,951
Mean of column B	6,634

Tabel 24: Perbandingan Aktivitas Spesifik Katalase Paru hipoksia 7 hari cekok dengan tidak cekok

Table Analyzed	H7 Jar-Uji dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
Unpaired t test	
P value	0,0032
P value summary	**
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=4,746, df=6
How big is the difference?	
Mean of column A	8,167
Mean of column B	6,315

Tabel 25: Perbandingan Aktivitas Spesifik Katalase Paru hipoksia 14 hari cekok dengan tidak cekok

Table Analyzed	H14 Jar-Uji dan Kontrol
Column B	Kontrol
vs.	vs,

Column A	Uji
Unpaired t test	
P value	0,8550
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=0,1907, df=6
How big is the difference?	
Mean of column A	5,940
Mean of column B	5,858

Tabel 26: Perbandingan Aktivitas Spesifik Katalase Darah normoksia cekok dengan tidak cekok

Table Analyzed	Normoksia Darah Uji dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
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 of column A	900,6
Mean of column B	51,28

Tabel 27: Perbandingan Aktivitas Spesifik Katalase Darah hipoksia 1 hari cekok dengan tidak cekok

Table Analyzed	H1 Darah-Uji dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
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 of column A	805,5
Mean of column B	34,76

Tabel 29: Perbandingan Aktivitas Spesifik Katalase Darah hipoksia 7 hari cekok dengan tidak cekok

Table Analyzed	H7 Darah-Uji dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
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 of column A	731,6
Mean of column B	31,49

Tabel 30: Perbandingan Aktivitas Spesifik Katalase Darah hipoksia 14 hari cekok dengan tidak cekok

Table Analyzed	H14 Darah-Uji dan Kontrol
Column B	Kontrol
vs.	vs,
Column A	Uji
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 of column A	611,6
Mean of column B	25,98

Tabel 31: Korelasi Aktivitas Spesifik Katalase Paru Cekok dengan Darah Cekok

Pearson r	
r	0,9854
95% confidence interval	0,4581 to 0,9997
R squared	0,9709
P value	
P (two-tailed)	0,0146
P value summary	*
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

Tabel 32: Korelasi Aktivitas Spesifik Katalase Paru Tidak Cekok dengan Darah Tidak Cekok

| Pearson r	
r	0,9691
95% confidence interval	0,1168 to 0,9994
R squared	0,9392
P value	
P (two-tailed)	0,0309
P value summary	*
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

LAMPIRAN 4 – Hasil Uji In Vitro


Gambar 1: Pengeringan daun *blackberry*
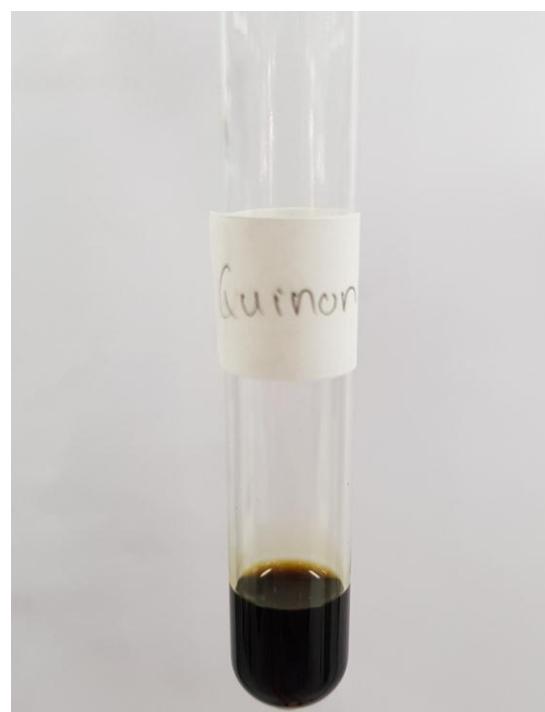

**Gambar 2: Uji Kuinon**
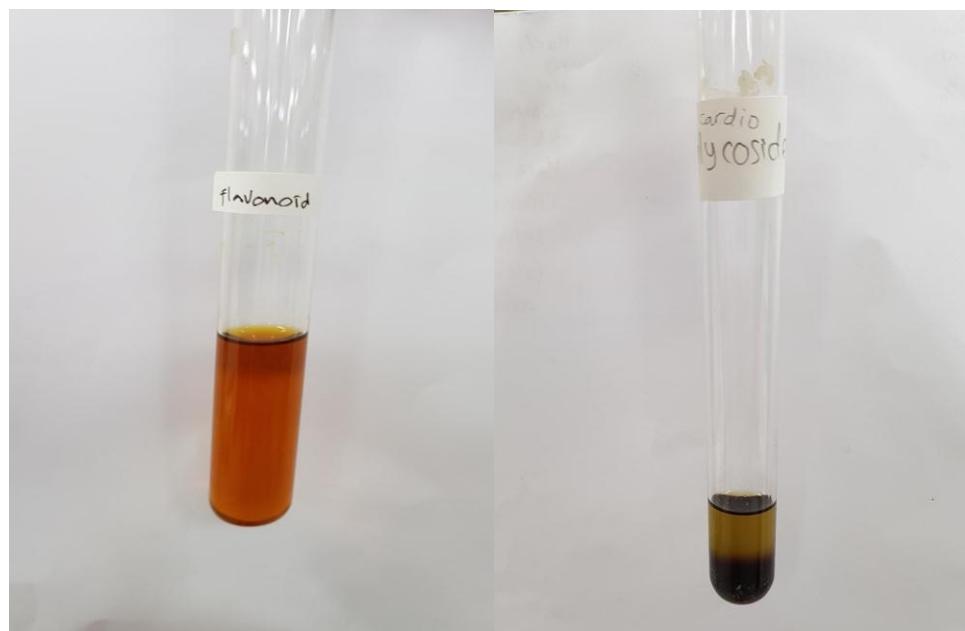
Gambar 3: Uji

Gambar 4: Uji Kardioglikosida


Gambar 5: Uji Glikosida

Gambar 6: Uji Alkaloid
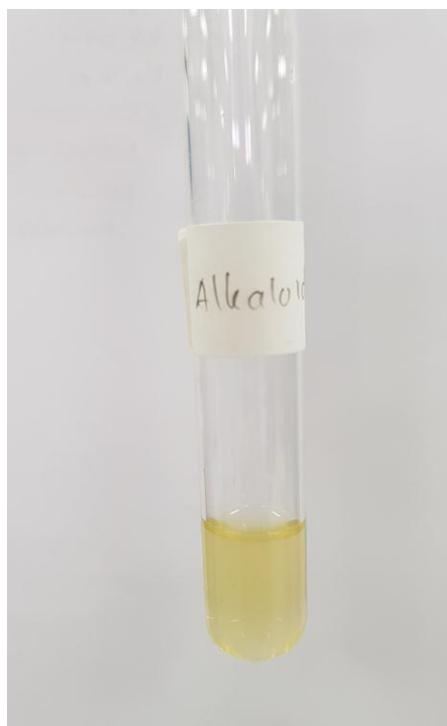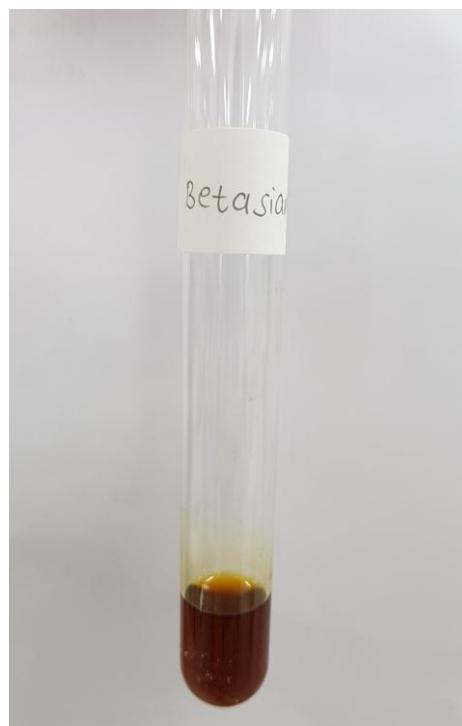
Gambar 6: Uji Betasianin
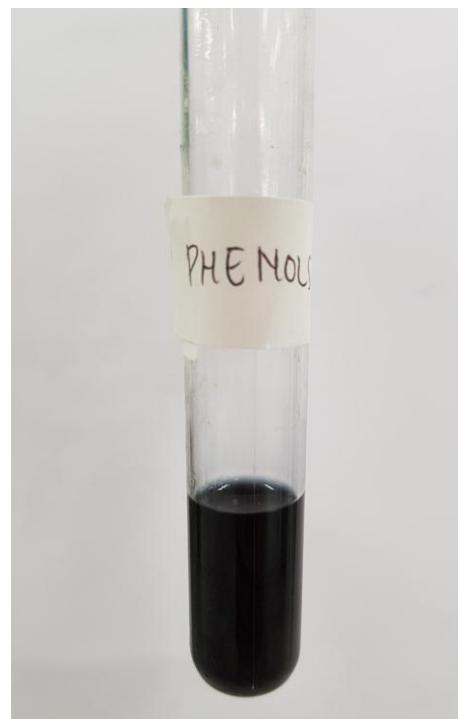
Gambar 7: Uji Phenol
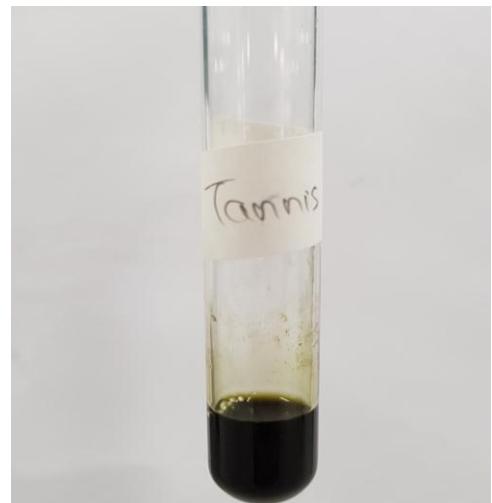
Gambar 8: Uji Tannin
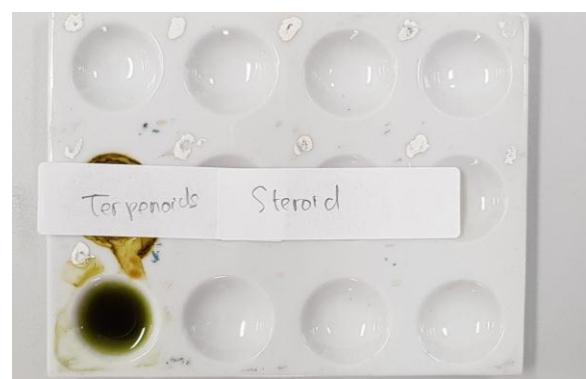
Gambar 9: Uji Terpenoid

Gambar 10: Uji Koumarins

LAMPIRAN 5 – Proses Hipoksia