



**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: 143/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 STROBERI
(*FRAGARIA VESCA*) TERHADAP KADAR MALONDIALDEHID
(MDA) PADA ORGAN PARU DAN DARAH TIKUS *SPRAGUE
DAWLEY* SETELAH DIINDUKSI HIPOKSIA"**

Peneliti Utama : Olivia Margaretha

Lembaga/Tempat penelitian : FK Universitas Tarumanagara


Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 17 Januari 2019

Ketua

Prof. DR. dr. Adi Hidayat, MS

Sekretaris


dr. Alvina SpPK

LAMPIRAN -2 : Identifikasi Tumbuhan



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

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



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 – 3 : Pengukuran Pada Sampel

Gambar 1. Panjang Gelombang Maksimum dan Absorbansi Maksimum



Tabel 1. Regresi Linear DPPH Asam Aksorbat

Konsentrasi ($\mu\text{g/mL}$)	% Inhibisi	IC_{50} ($\mu\text{g/mL}$)
2	32.6848249	
4	43.9688716	
6	58.56031128	4.781
8	70.42801556	
10	83.26848249	

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 $0,9988$

$S_{y.x}$ $0,7974$

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 Antikoksidan Ekstrak Daun Strawberi

Konsentrasi ($\mu\text{g}/\text{mL}$)	% Inhibisi	IC ₅₀ ($\mu\text{g}/\text{mL}$)
10	26.07004	
30	28.98833	
50	33.85214	128.193
70	39.29961	
90	42.02335	

Best-fit values \pm SE

Slope	$0,2111 \pm 0,01365$
Y-intercept	$23,49 \pm 0,7843$
X-intercept	-111,3
1/slope	4,737

95% Confidence Intervals

Slope	0,1676 to 0,2545
Y-intercept	21 to 25,99
X-intercept	-153,6 to -83,25

Goodness of Fit

R square	0,9876
Sy.x	0,8635

Is slope significantly non-zero?

F	239
DFn, DFd	1, 3
P value	0,0006

Deviation from zero?	Significant
Equation	$Y = 0,2111 * X + 23,49$
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 Linier Fenolik Standart Tanin

Konsentrasi ($\mu\text{g}/\text{mL}$)	Rata-rata Absorbansi
300	0.344
400	0.421
500	0.469
600	0.531
700	0.654

Best-fit values \pm SE	
Slope	$0,00073 \pm 7,332\text{e-}005$
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 4. Regresi Linier Alkaloid Standar *Berberine Chloride*

Konsentrasi ($\mu\text{g/mL}$)	Rata-rata Absorbansi
20	0.088
40	0.123
60	0.134
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 Linier Toksisitas

Slope	$33,43 \pm 4,916$
Y-intercept	$5,388 \pm 11,34$
X-intercept	-0,1612
1/slope	0,02992
95% Confidence Intervals	
Slope	12,28 to 54,58
Y-intercept	-43,41 to 54,18
X-intercept	-4,265 to 0,823
Goodness of Fit	
R square	0,9585
Sy.x	7,563
Is slope significantly non-zero?	
F	46,23
DFn, DFd	1, 2
P value	0,0210
Deviation from zero?	Significant
Equation	$Y = 33,43 * X + 5,388$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Tabel 6. Optimasi Waktu dan Pengenceran Darah

T	Abs.	Abs.	Δ Abs.	Δ Abs	Δ Abs	ΔV
	Blanko	Uji	Blanko	Uji	(AbsU- AbsB)	
1	0.407	0.878	0.000	0.000	0.000	0.0000
2	0.406	0.856	0.001	0.022	0.021	0.0210
3	0.405	0.826	0.002	0.052	0.050	0.0250
4	0.404	0.804	0.003	0.074	0.074	0.0237
5	0.403	0.784	0.004	0.094	0.094	0.0225
6	0.402	0.766	0.005	0.112	0.112	0.0214
7	0.401	0.750	0.006	0.128	0.128	0.0203
8	0.400	0.736	0.007	0.142	0.142	0.0193
9	0.399	0.723	0.008	0.155	0.155	0.0184
10	0.398	0.713	0.009	0.165	0.156	0.0173

Tabel 7. Optimasi Waktu dan Pengenceran Jantung

T	Abs.	Abs.	Δ Abs.	Δ Abs	Δ Abs	ΔV
	Blanko	Uji	Blanko	Uji	(AbsU- AbsB)	
1	0.706	1.585	0.000	0.000	0.000	0.0000
2	0.705	1.564	0.001	0.021	0.020	0.0200
3	0.705	1.542	0.001	0.043	0.042	0.210
4	0.705	1.528	0.001	0.057	0.056	0.0187
5	0.705	1.511	0.001	0.074	0.073	0.0183
6	0.705	1.479	0.001	0.106	0.105	0.0210
7	0.705	1.483	0.001	0.102	0.101	0.0168
8	0.705	1.469	0.001	0.116	0.115	0.0164
9	0.705	1.457	0.001	0.128	0.127	0.0159
10	0.706	1.446	0.000	0.139	0.139	0.0154

Tabel 8. Aktivitas Enzim Katalase, Protein, dan Aktivitas Spesifik Enzim Katalase Darah.

Kelompok	Lama Hipoksia	Tikus	Aktivitas Enzim		Aktivitas Spesifik Enzim Katalase (U/mg Protein)	
			Katalase (U/mg)	Kadar Protein		
Uji	Normoksia	1	0.042279	0.441698656	0.095719105	
		2	0.038603	0.426703455	0.090467981	
		3	0.033088	0.491482726	0.067322814	
		4	0.031122294	0.45609405	0.06823657	
	1 hari	1	0.042261709	0.522672745	0.080856922	
		2	0.046994148	0.519073896	0.0905346	
		3	0.029876216	0.504978407	0.059163353	
		4	0.026301155	0.518474088	0.050728004	
	7 hari	1	0.038603	0.508277351	0.075948692	
		2	0.045956	0.516074856	0.089049097	
		3	0.025735	0.513675624	0.05009971	
		4	0.029412	0.504978407	0.058244075	
	14 hari	1	0.020221	0.439899232	0.045967346	
		2	0.016543999	0.381118042	0.04340912	
		3	0.023897	0.478586852	0.049932421	
		4	0.022374491	0.307641555	0.072729092	
	Kontrol	Normoksia	1	0.022058824	0.349328215	0.063146412
			2	0.020220588	0.391914587	0.051594375
			3	0.036764706	0.726607486	0.050597753
			4	0.023897059	0.600947697	0.039765622
1 hari		1	0.011029412	0.296545106	0.037193033	
		2	0.016544118	0.359524952	0.046016605	
		3	0.008272059	0.308541267	0.026810219	
		4	0.006433824	0.221569098	0.029037549	
7 hari		1	0.014705882	0.377519194	0.038953999	
		2	0.011029412	0.432701536	0.025489652	
		3	0.013786765	0.332533589	0.041459766	
		4	0.009191176	0.458493282	0.02004648	
14 hari	1	0.005514706	0.367622361	0.015001008		
	2	0.017463235	0.461792226	0.037816218		
	3	0.008272059	0.375419866	0.022034153		
	4	0.011029412	0.379318618	0.029076906		

Tabel 9. Aktivitas Enzim Katalase, Protein, dan Aktivitas Spesifik Enzim Katalase Jantung.

Kelompok	Lama Hipoksia	Tikus	Aktivitas Enzim Katalase (U/mg)	Kadar Protein	Aktivitas Spesifik Enzim Katalase (U/mg Protein)
Uji	Normoksia	1	0.118676471	0.118676471	0.017602973
		2	0.115029412	0.115029412	0.015928325
		3	0.06355792	0.098970588	0.010768675
		4	0.077205882	0.077205882	0.010516148
	1 hari	1	0.132352937	0.132352941	0.008282989
		2	0.115340974	0.147058824	0.007272938
		3	0.175797392	0.191176471	0.011430944
		4	0.139954273	0.176470588	0.007665301
	7 hari	1	0.165441181	0.165441176	0.00834817
		2	0.189481059	0.150735294	0.009798475
		3	0.116935757	0.154411765	0.006240566
		4	0.128676471	0.128676471	0.007094227
	14 hari	1	0.097995935	0.132352941	0.005704568
		2	0.156293178	0.176470588	0.007745897
		3	0.150735294	0.150735294	0.008044362
		4	0.128072429	0.110294118	0.007203858
	Normoksia	1	0.092268464	14.29942418	0.0064526
		2	0.088071382	11.30038388	0.007793663
		3	0.106107593	14.17946257	0.007483189
		4	0.084736728	13.25975688	0.006390519
1 hari	1	0.082138153	13.4596929	0.006102528	
	2	0.094999986	14.97920665	0.006342124	
	3	0.06778981	13.21976967	0.005127912	
	4	0.110169923	18.25815739	0.006034011	
Kontrol	7 hari	1	0.096857007	17.17850288	0.005638268
		2	0.071751901	11.06046065	0.006487244
		3	0.081374814	14.29942418	0.005690776
		4	0.083980468	17.4184261	0.004821358
14 hari	1	0.131747488	21.85700576	0.006027701	
	2	0.076665632	15.49904031	0.004946476	
	3	0.091290341	17.53838772	0.005205173	
	4	0.104770991	18.29814459	0.005725771	

Tabel 10. Regresi Linear Absorbansi Bovine Serum Albumin

Konsentrasi	Absorbansi
0.025	0.076
0.05	0.099
0.1	0.146
0.2	0.233
0.4	0.404
0.5	0.486
0.6	0.522
0.8	0.742

Best-fit values	
Slope	0,8335
Y-intercept	0,05981
X-intercept	-0,07177
1/slope	1,200
Std. Error	
Slope	0,02395
Y-intercept	0,01024
95% Confidence Intervals	
Slope	0,7748 to 0,8921
Y-intercept	0,03475 to 0,08488
X-intercept	-0,1081 to -0,03948
Goodness of Fit	
R square	0,9951
Sy.x	0,01806
Is slope significantly non-zero?	
F	1211
DFn, DFd	1, 6
P value	<0,0001
Deviation from zero?	Significant
Equation	$Y = 0,8335 * X + 0,05981$

Tabel 11. Collumn Statistic Darah Uji

Kelompok Hipoksia	Rata – rata Aktivitas Spesifik
	Enzim Katalase (U/ mg Protein)
Normoksia	80.44 ± 7.388
Hipoksia 1 Hari	70.32 ± 9.256
Hipoksia 7 Hari	68.34 ± 8.763
Hipoksia 14 Hari	52.89 ± 6.586

	Normoksia	1 Hari	7 Hari	14 Hari
Number of values	4	4	4	4
Minimum	67,32	50,73	50,1	43,41
25% Percentile	67,55	52,84	52,14	44,05
Median	79,35	70,01	67,1	47,95
75% Percentile	94,41	88,12	85,78	66,66
Maximum	95,72	90,53	89,05	72,23
Mean	80,44	70,32	68,34	52,89
Std. Deviation	14,78	18,51	17,53	13,17
Std. Error of Mean	7,388	9,256	8,763	6,586
Lower 95% CI of mean	56,92	40,87	40,45	31,92
Upper 95% CI of mean	103,9	99,78	96,22	73,85
Sum	321,7	281,3	273,3	211,5
Shapiro-Wilk normality test				
W	0,8228	0,9328	0,9582	0,8046
P value	0,1498	0,6110	0,7673	0,1107
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 12. Column Statistic Darah Kontrol

Kelompok Hipoksia	Rata – rata Aktivitas Spesifik Enzim Katalase (U/ mg Protein)			
Normoksia	51.28 ± 4.778			
Hipoksia 1 Hari	34.76 ± 4.364			
Hipoksia 7 Hari	31.49 ± 5.181			
Hipoksia 14 Hari	25.98 ± 4.880			

	Normoksia	1 Hari	7 Hari	14 Hari
Number of values	4	4	4	4
Minimum	39,77	26,81	20,05	15
25% Percentile	42,47	27,37	21,41	16,76
Median	51,1	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	9,76
Std. Error of Mean	4,778	4,364	5,181	4,88
Lower 95% CI of mean	36,07	20,87	15	10,45
Upper 95% CI of mean	66,48	48,65	47,97	41,51
Sum	205,1	139,1	125,9	103,9
Shapiro-Wilk normality test				
W	0,9621	0,927	0,8927	0,9936
P value	0,7918	0,5769	0,3958	0,9753
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 13. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji Normoksia dengan Hipoksia
1 Hari

Table Analyzed	DARAH
Column F	h1
vs.	vs,
Column E	k+ h0
Unpaired t test	
P value	0,4258
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=0,8542 df=6
How big is the difference?	
Mean \pm SEM of column E	80,44 \pm 7,388, n=4
Mean \pm SEM of column F	70,32 \pm 9,256, n=4
Difference between means	-10,12 \pm 11,84
95% confidence interval	-39,09 to 18,86
R squared (eta squared)	0,1084
F test to compare variances	
F, DFn, Dfd	1,569, 3, 3
P value	0,7201
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 14. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji Normoksia dengan Hipoksia
7 Hari

Table Analyzed	DARAH
Column G	h7
vs.	vs,
Column E	k+ h0

Unpaired t test	
P value	0,3317
P value summary	ns
Significantly different (P < 0.05)?	No
One- or two-tailed P value?	Two-tailed
t, df	t=1,056 df=6
How big is the difference?	
Mean ± SEM of column E	80,44 ± 7,388, n=4
Mean ± SEM of column G	68,34 ± 8,763, n=4
Difference between means	-12,1 ± 11,46
95% confidence interval	-40,15 to 15,94
R squared (eta squared)	0,1567
F test to compare variances	
F, DFn, Dfd	1,407, 3, 3
P value	0,7858
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 15. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji Normoksia dengan Hipoksia 14 Hari

Table Analyzed	DARAH
Column H	h14
vs.	vs,
Column E	k+ h0
Unpaired t test	
P value	0,0318
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,784 df=6
How big is the difference?	
Mean ± SEM of column E	80,44 ± 7,388, n=4

Mean \pm SEM of column H	52,89 \pm 6,586, n=4
Difference between means	-27,55 \pm 9,898
95% confidence interval	-51,77 to -3,333
R squared (eta squared)	0,5636
F test to compare variances	
F, DFn, Dfd	1,258, 3, 3
P value	0,8547
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 16. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Kontrol Normoksia dengan Hipoksia 1 Hari

Table Analyzed	DARAH
Column B	h1
vs.	vs,
Column A	k- h0
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 \pm SEM of column A	51,28 \pm 4,778, n=4
Mean \pm SEM of column B	34,76 \pm 4,364, n=4
Difference between means	-16,51 \pm 6,471
95% confidence interval	-32,35 to -0,677
R squared (eta squared)	0,5204
F test to compare variances	
F, DFn, Dfd	1,199, 3, 3
P value	0,8852

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

Tabel 17. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Kontrol Normoksia dengan Hipoksia 7 Hari

Table Analyzed	DARAH
Column C	h7
vs.	vs,
Column A	k- h0
Unpaired t test	
P value	0,0308
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,808 df=6
How big is the difference?	
Mean ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column C	31,49 ± 5,181, n=4
Difference between means	-19,79 ± 7,048
95% confidence interval	-37,03 to -2,544
R squared (eta squared)	0,5678
F test to compare variances	
F, DFn, Dfd	1,176, 3, 3
P value	0,8973
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 18. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Kontrol Normoksia dengan Hipoksia 14 Hari

Table Analyzed	DARAH
Column D	h14
vs.	vs,
Column A	k- h0
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 ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column D	25,98 ± 4,88, n=4
Difference between means	-25,29 ± 6,83
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

Tabel 19. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji dan Kontrol

Column E	k+ h0
vs.	vs,
Column A	k- h0
Unpaired t test	
P value	0,0161
P value summary	*

Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,314 df=6
How big is the difference?	
Mean ± SEM of column A	51,28 ± 4,778, n=4
Mean ± SEM of column E	80,44 ± 7,388, n=4
Difference between means	29,16 ± 8,798
95% confidence interval	7,632 to 50,69
R squared (eta squared)	0,6467
F test to compare variances	
F, DFn, Dfd	2,391, 3, 3
P value	0,4928
P value summary	ns
Significantly different (P < 0.05)?	No

Table Analyzed	DARAH
Column F	h1
vs.	vs,
Column B	h1
Unpaired t test	
P value	0,0132
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,475 df=6
How big is the difference?	
Mean ± SEM of column B	34,76 ± 4,364, n=4
Mean ± SEM of column F	70,32 ± 9,256, n=4
Difference between means	35,56 ± 10,23
95% confidence interval	10,52 to 60,6
R squared (eta squared)	0,668
F test to compare variances	
F, DFn, Dfd	4,497, 3, 3

P value	0,2485
P value summary	ns
Significantly different (P < 0.05)?	No

Table Analyzed	DARAH
----------------	-------

Column G	h7
vs.	vs,
Column C	h7

Unpaired t test	
P value	0,0111
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,62 df=6

How big is the difference?	
Mean ± SEM of column C	31,49 ± 5,181, n=4
Mean ± SEM of column G	68,34 ± 8,763, n=4
Difference between means	36,85 ± 10,18
95% confidence interval	11,94 to 61,76
R squared (eta squared)	0,6859

F test to compare variances	
F, DFn, Dfd	2,861, 3, 3
P value	0,4109
P value summary	ns
Significantly different (P < 0.05)?	No

Table Analyzed	DARAH
----------------	-------

Column H	h14
vs.	vs,
Column D	h14

Unpaired t test	
P value	0,0168

P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,282 df=6
How big is the difference?	
Mean ± SEM of column D	25,98 ± 4,88, n=4
Mean ± SEM of column H	52,89 ± 6,586, n=4
Difference between means	26,9 ± 8,197
95% confidence interval	6,845 to 46,96
R squared (eta squared)	0,6422
F test to compare variances	
F, DFn, Dfd	1,821, 3, 3
P value	0,6346
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 20. Column statistic Jantung Uji

Kelompok Hipoksia	Rata – rata Aktivitas Spesifik
	Enzim Katalase (U/ mg Protein)
Normoksia	13.70 ± 1.801
Hipoksia 1 Hari	8.663 ± 0.9458
Hipoksia 7 Hari	7.869 ± 0.7741
Hipoksia 14 Hari	7.175 ± 0.5200

	Normoksia	1 Hari	7 Hari	14 Hari
Number of values	4	4	4	4
Minimum	10,52	7,273	6,241	5,705
25% Percentile	10,58	7,371	6,454	6,079
Median	13,35	7,974	7,721	7,475
75% Percentile	17,18	10,64	9,433	7,97
Maximum	17,6	11,43	9,795	8,044
Mean	13,7	8,663	7,869	7,175

Std. Deviation	3,602	1,892	1,548	1,04
Std. Error of Mean	1,801	0,9458	0,7741	0,52
Lower 95% CI of mean	7,972	5,653	5,406	5,52
Upper 95% CI of mean	19,44	11,67	10,33	8,83
Sum	54,82	34,65	31,48	28,7
Shapiro-Wilk normality test				
W	0,8431	0,8165	0,9776	0,8888
P value	0,2045	0,1352	0,8878	0,3776
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 21. Column statistic Jantung Kontrol

Kelompok Hipoksia	Rata – rata Aktivitas Spesifik
	Enzim Katalase (U/ mg Protein)
Normoksia	7.030 ± 0.3572
Hipoksia 1 Hari	5.902 ± 0.2662
Hipoksia 7 Hari	5.659 ± 0.3402
Hipoksia 14 Hari	5.476 ± 0.2450

	Normoksia	1 Hari	7 Hari	14 Hari
Number of values	4	4	4	4
Minimum	6,391	5,128	4,821	4,946
25% Percentile	6,406	5,354	5,026	5,011
Median	6,968	6,068	5,665	5,465
75% Percentile	7,716	6,282	6,288	5,952
Maximum	7,794	6,342	6,487	6,028
Mean	7,03	5,902	5,659	5,476
Std. Deviation	0,7143	0,5325	0,6805	0,4901
Std. Error of Mean	0,3572	0,2662	0,3402	0,245
Lower 95% CI of mean	5,893	5,054	4,577	4,696
Upper 95% CI of mean	8,167	6,749	6,742	6,256
Sum	28,12	23,61	22,64	21,91
Shapiro-Wilk normality test				

W	0,8426	0,8412	0,9581	0,9554
P value	0,2031	0,1990	0,7670	0,7500
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 22. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji Normoksia dengan Hipoksia
1 Hari

Table Analyzed	JANTUNG
Column F	h1
vs.	vs,
Column E	k+ h0
Unpaired t test	
P value	0,0479
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,478 df=6
How big is the difference?	
Mean ± SEM of column E	13,7 ± 1,801, n=4
Mean ± SEM of column F	8,663 ± 0,9458, n=4
Difference between means	-5,041 ± 2,034
95% confidence interval	-10,02 to -0,06317
R squared (eta squared)	0,5058
F test to compare variances	
F, DFn, Dfd	3,627, 3, 3
P value	0,3181
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 22. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji Normoksia dengan Hipoksia
7 Hari

Table Analyzed	JANTUNG
Column G	h7
vs.	vs,
Column E	k+ h0
Unpaired t test	
P value	0,0248
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,976 df=6
How big is the difference?	
Mean ± SEM of column E	13,7 ± 1,801, n=4
Mean ± SEM of column G	7,869 ± 0,7741, n=4
Difference between means	-5,835 ± 1,96
95% confidence interval	-10,63 to -1,038
R squared (eta squared)	0,5962
F test to compare variances	
F, DFn, Dfd	5,414, 3, 3
P value	0,1990
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 23. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Uji Normoksia dengan Hipoksia
14 Hari

Table Analyzed	JANTUNG
Column H	h14
vs.	vs,
Column E	k+ h0
Unpaired t test	

P value	0,0131
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,483 df=6
How big is the difference?	
Mean ± SEM of column E	13,7 ± 1,801, n=4
Mean ± SEM of column H	7,175 ± 0,52, n=4
Difference between means	-6,529 ± 1,875
95% confidence interval	-11,12 to -1,942
R squared (eta squared)	0,6691
F test to compare variances	
F, DFn, Dfd	12, 3, 3
P value	0,0708
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 24. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Kontrol Normoksia dengan Hipoksia 1 Hari

Table Analyzed	JANTUNG
Column B	h1
vs.	vs,
Column A	k- h0
Unpaired t test	
P value	0,0445
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,533 df=6
How big is the difference?	
Mean ± SEM of column A	7,03 ± 0,3572, n=4
Mean ± SEM of column B	5,902 ± 0,2662, n=4

Difference between means	-1,128 ± 0,4455
95% confidence interval	-2,218 to -0,03829
R squared (eta squared)	0,5167
F test to compare variances	
F, DFn, Dfd	1,8, 3, 3
P value	0,6413
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 25. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Kontrol Normoksia dengan Hipoksia 7 Hari

Table Analyzed	JANTUNG
Column C	h7
vs.	vs,
Column A	k- h0
Unpaired t test	
P value	0,0321
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,778 df=6
How big is the difference?	
Mean ± SEM of column A	7,03 ± 0,3572, n=4
Mean ± SEM of column C	5,659 ± 0,3402, n=4
Difference between means	-1,371 ± 0,4933
95% confidence interval	-2,578 to -0,1636
R squared (eta squared)	0,5627
F test to compare variances	
F, DFn, Dfd	1,102, 3, 3
P value	0,9382
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 25. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Kontrol Normoksia dengan Hipoksia 14 Hari

Table Analyzed	JANTUNG
Column D	h14
vs.	vs,
Column A	k- h0
Unpaired t test	
P value	0,0115
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,587 df=6
How big is the difference?	
Mean ± SEM of column A	7,03 ± 0,3572, n=4
Mean ± SEM of column D	5,476 ± 0,245, n=4
Difference between means	-1,554 ± 0,4331
95% confidence interval	-2,614 to -0,4938
R squared (eta squared)	0,682
F test to compare variances	
F, DFn, Dfd	2,125, 3, 3
P value	0,5518
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 26. Perbandingan Aktivitas Spesifik Enzim Katalase Jantung Uji dan Kontrol

Table Analyzed	JANTUNG
Column E	k+ h0
vs.	vs,
Column A	k- h0
Unpaired t test	
P value	0,0109

P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=3,635 df=6
How big is the difference?	
Mean ± SEM of column A	7,03 ± 0,3572, n=4
Mean ± SEM of column E	13,7 ± 1,801, n=4
Difference between means	6,674 ± 1,836
95% confidence interval	2,181 to 11,17
R squared (eta squared)	0,6877
F test to compare variances	
F, DFn, Dfd	25,43, 3, 3
P value	0,0247
P value summary	*
Significantly different (P < 0.05)?	Yes

Table Analyzed	JANTUNG
Column F	h1
vs.	vs,
Column B	h1
Unpaired t test	
P value	0,0307
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,811 df=6
How big is the difference?	
Mean ± SEM of column B	5,902 ± 0,2662, n=4
Mean ± SEM of column F	8,663 ± 0,9458, n=4
Difference between means	2,761 ± 0,9825
95% confidence interval	0,3573 to 5,166
R squared (eta squared)	0,5683
F test to compare variances	

F, DFn, Dfd	12,62, 3, 3
P value	0,0660
P value summary	ns
Significantly different (P < 0.05)?	No

Table Analyzed	JANTUNG
Column G	h7
vs.	vs,
Column C	h7
Unpaired t test	
P value	0,0399
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,614 df=6
How big is the difference?	
Mean ± SEM of column C	5,659 ± 0,3402, n=4
Mean ± SEM of column G	7,869 ± 0,7741, n=4
Difference between means	2,21 ± 0,8456
95% confidence interval	0,141 to 4,279
R squared (eta squared)	0,5324
F test to compare variances	
F, DFn, Dfd	5,177, 3, 3
P value	0,2101
P value summary	ns
Significantly different (P < 0.05)?	No

Table Analyzed	JANTUNG
Column H	h14
vs.	vs,
Column D	h14
Unpaired t test	

P value	0,0255
P value summary	*
Significantly different (P < 0.05)?	Yes
One- or two-tailed P value?	Two-tailed
t, df	t=2,955 df=6
How big is the difference?	
Mean ± SEM of column D	5,476 ± 0,245, n=4
Mean ± SEM of column H	7,175 ± 0,52, n=4
Difference between means	1,698 ± 0,5748
95% confidence interval	0,2918 to 3,105
R squared (eta squared)	0,5927
F test to compare variances	
F, DFn, Dfd	4,503, 3, 3
P value	0,2481
P value summary	ns
Significantly different (P < 0.05)?	No

Tabel 27. Korelasi Hubungan Jantung Uji dan Darah Uji

r	0,9941
95% confidence interval	0,7415 to 0,9999
R squared	0,9883
P value	
P (two-tailed)	0,0059
P value summary	**
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

Tabel 28. Korelasi Hubungan Jantung Kontrol dan Darah kontrol

Pearson r	
r	0,8394
95% confidence interval	-0,6297 to 0,9965
R squared	0,7045
P value	
P (two-tailed)	0,1606
P value summary	ns
Significant? (alpha = 0.05)	No
Number of XY Pairs	4

LAMPIRAN – 4 : Dokumentasi Selama Pekerjaan

Gambar 1. Maserasi pada Simplisia



Gambar 2. Evaporasi pada Filtrat Maserasi



Gambar 3. Anestesi Tikus



Gambar 4. Bedah tikus

