

LAMPIRAN 1 : Kaji Etik



KOMISI ETIK RISET
FAKULTAS KEDOKTERAN
UNIVERSITAS TRISAKTI
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PERSETUJUAN ETIK
Ethical Clearance
Nomor: 145/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:

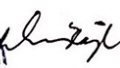
**"PENGARUH INDUKSI HIPOKSIA KRONIK SISTEMIK
TERHADAP KADAR MALONDIALDEHIDA (MDA) HATI DAN
DARAH TIKUS *SPRAGUE DAWLEY* YANG DIBERI EKSTRAK
DAUN RASBERI (*RUBUS IDAEUS L*)**

Peneliti Utama : Ria Nata Sia

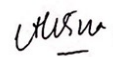
Lembaga/Tempat penelitian : FK Universitas Tarumanagara

Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 17 Januari 2019

Ketua

Ketua Komisi Etik Riset
Fakultas Kedokteran
Universitas Trisakti
Dr. Adi Hidayat, MS

Sekretaris


dr. Alvina SpPK

LAMPIRAN 2 : 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



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

Cibinong, 6 April 2018

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. Joemi Setijo Rahajoe
NIP. 196706241993032004

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

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LAMPIRAN 3 : Hasil Uji In Vitro dan In Vivo



Gambar 1 Uji Anthocyanin dan Betacyanin



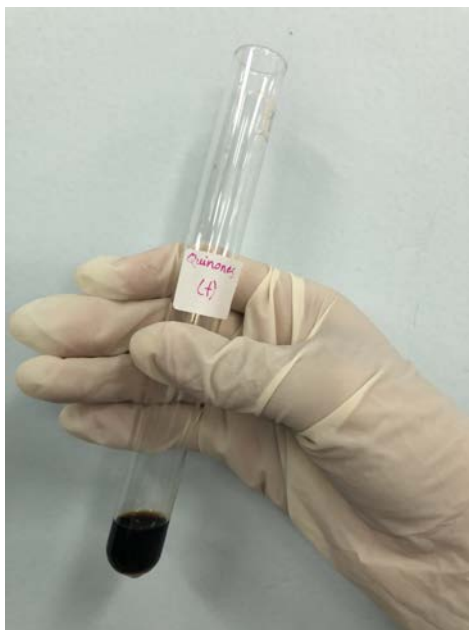
Gambar 2 Uji Cardioglycosides



Gambar 3 Coumarins



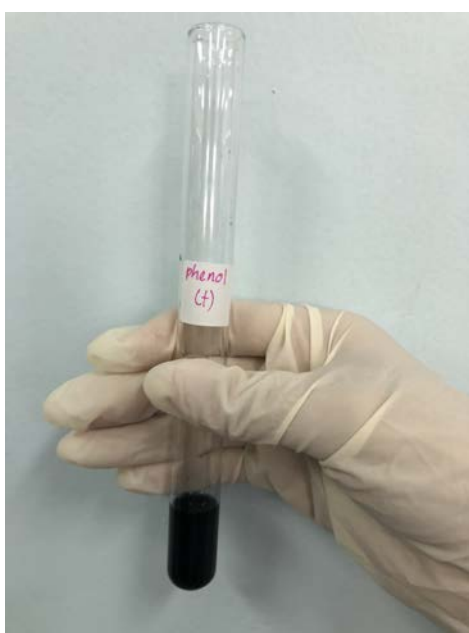
Gambar 4 Glycosides



Gambar 5 Uji *Quinones*



Gambar 6 Uji *Tannins*



Gambar 7 Uji *Phenols*



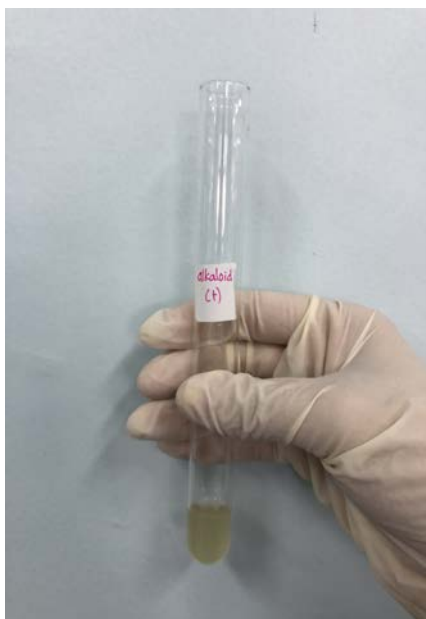
Gambar 8 Uji *Flavonoids*



Gambar 9 Uji Steroids



Gambar 10 Uji Terpenoids



Gambar 11 Uji Alkaloids



Gambar 12 Panjang Gelombang dan Absorbansi DPPH

Tabel 1 Regresi Linier dari Asam Askorbat Pengujian DPPH

Best-fit values $\pm$ SE	
Slope	6.382 ± 0.1258
Y-intercept	19.49 ± 0.8347
X-intercept	-3.054
1/slope	0.1567
95% Confidence Intervals	
Slope	5.982 to 6.782
Y-intercept	16.83 to 22.15
X-intercept	-3.687 to -2.492
Goodness of Fit	
R square	0.9988
Sy.x	0.7958
Is slope significantly non-zero?	
F	2572
DFn, DFd	1, 3
P value	<0.0001
Deviation from zero?	Significant
Equation	$Y = 6.382 * X + 19.49$
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 Linier DPPH Ekstrak daun *raspberry*

Best-fit values $\pm$ SE	
Slope	0.4447 ± 0.03783
Y-intercept	7.184 ± 2.173
X-intercept	-16.16
1/slope	2.249
95% Confidence Intervals	
Slope	0.3243 to 0.565
Y-intercept	0.2672 to 14.1
X-intercept	-42.29 to -0.4862
Goodness of Fit	
R square	0.9787
Sy.x	2.393
Is slope significantly non-zero?	
F	138.1
DFn, DFd	1, 3
P value	0.0013
Deviation from zero?	Significant
Equation	$Y = 0.4447 * X + 7.184$
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 Standar *Tannins* Pengujian Fenolik

Best-fit values $\pm$ SE	
Slope	$0.00073 \pm 7.332\text{e-}005$
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	$Y = 0.00073 \cdot X + 0.1188$
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 *Berberine Chloride* Pengujian *Alkaloids*

Best-fit values $\pm$ SE	
Slope	0.001715 ± 0.0002174
Y-intercept	0.0481 ± 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 Pengujian BSLT

Best-fit values $\pm$ SE	
Slope	45.73 $\pm$ 9.258
Y-intercept	-49.1 $\pm$ 21.35
X-intercept	1.074
1/slope	0.02187
95% Confidence Intervals	
Slope	5.899 to 85.56
Y-intercept	-141 to 42.78
X-intercept	-6.588 to 1.814
Goodness of Fit	
R square	0.9242
Sy.x	14.24
Is slope significantly non-zero?	
F	24.4
DFn, DFd	1, 2
P value	0.0386
Deviation from zero?	Significant
Equation	$Y = 45.73 \cdot X - 49.1$
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Tabel 6 Hasil Pengukuran Standar *Superoxide dismutase*

Standar CAL					
	A1	A2	% Inhibisi	Kadar (U/mL)	Log Kadar
S1	0.016	0.049	-	-	-
S2	0.021	0.047	21.211	0.22	-0.66
S3	0.015	0.034	42.42	0.66	-0.18
S4	0.007	0.021	57.58	1.32	0.12
S5	0.009	0.018	72.73	2.64	0.42
S6	0.008	0.01	93.94	5.27	0.72

Tabel 7. Hasil Pengukuran Kadar *Superoxide dismutase* Darah Kontrol

50x		Darah		
Normoksia	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.056	0.064	75.76	135.88
T2	0.028	0.036	75.76	135.88
T3	0.04	0.049	72.73	118.56
T4	0.067	0.074	78.79	155.73

50x		Darah		
H1	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.012	0.025	60.61	68.72
T2	0.04	0.052	63.64	78.76
T3	0.053	0.064	66.67	90.26
T4	0.061	0.072	66.67	90.26

50x		Darah		
H7	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.026	0.042	51.52	45.65
T2	0.013	0.028	54.55	52.31
T3	0.014	0.028	57.58	59.96
T4	0.026	0.042	51.52	45.65

50x	Darah			
H14	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.045	0.063	45.45	34.75
T2	0.066	0.082	51.52	45.65
T3	0.055	0.072	48.48	39.83
T4	0.074	0.093	42.42	30.32

Tabel 8 Hasil Pengukuran Kadar *Superoxide dismutase* Darah Uji

50x	Darah			
Normoksia	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.042	0.049	78.79	154.51
T2	0.029	0.037	75.76	137.71
T3	0.031	0.037	81.82	177.41
T4	0.039	0.049	69.70	104.46

50x	Darah			
H1	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.016	0.025	72.73	119.94
T2	0.016	0.024	75.76	137.71
T3	0.014	0.026	63.64	79.24
T4	0.02	0.03	69.70	104.46

50x	Darah			
H7	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.016	0.028	63.64	79.24
T2	0.021	0.031	69.70	104.46
T3	0.016	0.025	72.73	119.94
T4	0.031	0.042	66.67	90.99

50x	Darah			
H14	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.003	0.019	51.52	46.66
T2	0.012	0.026	57.58	61.51
T3	0.009	0.024	54.55	53.58
T4	0.019	0.032	60.61	69.02

Tabel 9 Hasil Pengukuran Kadar *Superoxide dismutase* Jaringan Kontrol

50x	Jaringan			
Normoksia	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.024	0.034	69.70	103.45
T2	0.028	0.04	63.64	78.76
T3	0.015	0.026	66.67	90.26
T4	0.042	0.053	66.67	90.26

50x	Jaringan			
H1	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.018	0.031	60.61	68.72
T2	0.029	0.043	57.58	59.96
T3	0.019	0.032	60.61	68.72
T4	0.017	0.032	54.55	52.31

50x	Jaringan			
H7	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.025	0.043	45.45	34.75
T2	0.025	0.041	51.52	45.65
T3	0.035	0.054	42.42	30.32
T4	0.038	0.055	48.48	39.83

50x	Jaringan			
H14	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.032	0.055	30.30	17.57
T2	0.036	0.058	33.33	20.14
T3	0.018	0.043	24.24	13.38
T4	0.039	0.059	39.39	26.46

Tabel 10 Hasil Pengukuran Kadar *Superoxide dismutase* Jaringan Uji

50x	Jaringan			
Normoksia	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.034	0.042	75.76	137.71
T2	0.017	0.026	72.73	119.94
T3	0.022	0.031	72.73	119.94
T4	0.016	0.024	75.76	137.71

50x	Jaringan			
H1	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.012	0.023	66.67	90.99
T2	0.003	0.016	60.61	69.02
T3	0.023	0.037	57.58	61.51
T4	0.013	0.023	69.70	104.46

50x	Jaringan			
H7	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.034	0.049	54.55	53.58
T2	0.041	0.052	66.67	90.99
T3	0.041	0.053	63.64	79.24
T4	0.045	0.058	60.61	69.02

50x	Jaringan			
H14	A1	A2	% Inhibisi	Kadar (U/mL)
T1	0.016	0.035	42.42	30.83
T2	0.018	0.035	48.48	40.64
T3	0.013	0.031	45.45	35.40
T4	0.018	0.034	51.52	46.66

Tabel 11 Regresi Linier Standar *Superoxide dismutase*

Best-fit values $\pm$ SE	
Slope	51.91 $\pm$ 2.774
Y-intercept	53.15 $\pm$ 1.347
X-intercept	-1.024
1/slope	0.01926
95% Confidence Intervals	
Slope	43.09 to 60.74
Y-intercept	48.87 to 57.44
X-intercept	-1.268 to -0.8459
Goodness of Fit	
R square	0.9915
Sy.x	2.964
Is slope significantly non-zero?	
F	350.3
DFn, DFd	1, 3
P value	0.0003
Deviation from zero?	Significant
Equation	$Y = 51.91 \cdot X + 53.15$
Data	
Number of X values	5
Maximum number of Y replicates	1
Total number of values	5
Number of missing values	0

Tabel 12 Uji *Collum Statistic* Darah Kontrol Pengujian *Superoxide dismutase*

		Hipoksia 1	Hipoksia 7	Hipoksia 14
	Normoksia	Hari	Hari	Hari
Number of values	4	4	4	4
Minimum	118.6	68.72	45.65	30.32
25% Percentile	122.9	71.23	45.65	31.43
Median	135.9	84.51	48.98	37.29
75% Percentile	150.8	90.26	58.05	44.2
Maximum	155.7	90.26	59.96	45.65
Mean	136.5	82	50.89	37.64
Std. Deviation	15.19	10.38	6.812	6.605
Std. Error of Mean	7.596	5.191	3.406	3.303
Lower 95% CI of mean	112.3	65.48	40.05	27.13
Upper 95% CI of mean	160.7	98.52	61.73	48.15
Sum	546.1	328	203.6	150.6
Shapiro-Wilk normality test				
W	0.9425	0.8643	0.8602	0.9895
P value	0.6695	0.2760	0.2610	0.9551
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 13 Uji *Collum Statistic* Darah Uji Pengujian *Superoxide dismutase*

		Hipoksia 1	Hipoksia 7	Hipoksia 14
	Normoksia	Hari	Hari	Hari
Number of values	4	4	4	4
Minimum	104.5	79.24	79.24	46.66
25% Percentile	112.8	85.55	82.18	48.39
Median	146.1	112.2	97.72	57.54
75% Percentile	171.7	133.3	116.1	67.14
Maximum	177.4	137.7	119.9	69.02
Mean	143.5	110.3	98.66	57.69
Std. Deviation	30.7	24.78	17.54	9.687
Std. Error of Mean	15.35	12.39	8.768	4.843
Lower 95% CI of mean	94.67	70.9	70.76	42.28
Upper 95% CI of mean	192.4	149.8	126.6	73.11
Sum	574.1	441.4	394.6	230.8
Shapiro-Wilk normality test				
W	0.9904	0.992	0.9895	0.989
P value	0.9595	0.9676	0.9547	0.9522
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 14 Uji *Collum Statistic* Jaringan Kontrol Pengujian *Superoxide dismutase*

		Hipoksia 1	Hipoksia 7	Hipoksia 14
	Normoksia	Hari	Hari	Hari
Number of values	4	4	4	4
Minimum	78.76	52.31	30.32	13.38
25% Percentile	81.64	54.22	31.43	14.43
Median	90.26	64.34	37.29	18.86
75% Percentile	100.2	68.72	44.2	24.88
Maximum	103.5	68.72	45.65	26.46
Mean	90.68	62.43	37.64	19.39
Std. Deviation	10.09	7.909	6.605	5.477
Std. Error of Mean	5.046	3.954	3.303	2.738
Lower 95% CI of mean	74.62	49.84	27.13	10.67
Upper 95% CI of mean	106.7	75.01	48.15	28.1
Sum	362.7	249.7	150.6	77.55
Shapiro-Wilk normality test				
W	0.9425	0.8643	0.9895	0.9855
P value	0.6694	0.2760	0.9551	0.9336
Passed normality test (alpha=0.05)?	Yes	Yes	Yes	Yes
P value summary	ns	ns	ns	ns

Tabel 15 Uji *Collum Statistic* Jaringan Uji Pengujian *Superoxide dismutase*

		Hipoksia 1	Hipoksia 7	Hipoksia 14
	Normoksia	Hari	Hari	Hari
Number of values	4	4	4	4
Minimum	119.9	61.51	53.58	30.83
25% Percentile	119.9	63.39	57.44	31.97
Median	128.8	80	74.13	38.02
75% Percentile	137.7	101.1	88.05	45.16
Maximum	137.7	104.5	90.99	46.66
Mean	128.8	81.5	73.21	38.38
Std. Deviation	10.26	19.77	15.87	6.822
Std. Error of Mean	5.13	9.885	7.934	3.411
Lower 95% CI of mean	112.5	50.04	47.96	27.53
Upper 95% CI of mean	145.2	113	98.46	49.24
Sum	515.3	326	292.8	153.5
Shapiro-Wilk normality test				
W	0.7286	0.9385	0.9946	0.9895
P value	0.0239	0.6450	0.9797	0.9547
Passed normality test (alpha=0.05)?	No	Yes	Yes	Yes
P value summary	*	ns	ns	ns

Tabel 16 Perbandingan Kadar SOD Darah Kontrol Normoksia Dengan Hipoksia 1 Hari

Table Analyzed	Darah Kontrol
	Hipoksia 1
Column B	Hari
vs.	vs.
Column A	Normoksia
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 A,B	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	135.9, n=4
Median of column B	84.51, n=4
Difference: Actual	-51.37
Difference: Hodges-Lehmann	-53.48
97.14% CI of difference	-87.01 to -28.3
Exact or approximate CI?	Exact

Tabel 17 Perbandingan Kadar SOD Darah Kontrol Normoksia Dengan Hipoksia 7 Hari

Table Analyzed	Darah Kontrol
	Hipoksia 7
Column C	Hari
vs.	vs.
Column A	Normoksia
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 A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	135.9, n=4
Median of column C	48.98, n=4
Difference: Actual	-86.9
Difference: Hodges-Lehmann	-86.9
97.14% CI of difference	-110.1 to -58.6
Exact or approximate CI?	Exact

Tabel 18 Perbandingan Kadar SOD Darah Kontrol Normoksia Dengan Hipoksia 14 Hari

Table Analyzed	Darah Kontrol
	Hipoksia 14
Column D	Hari
vs.	vs.
Column A	Normoksia
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 A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	135.9, n=4
Median of column D	37.29, n=4
Difference: Actual	-98.59
Difference: Hodges-Lehmann	-98.59
	-125.4 to -
97.14% CI of difference	72.91
Exact or approximate CI?	Exact

Tabel 19 Perbandingan Kadar SOD Darah Uji Normoksia Dengan Hipoksia 1 Hari

Table Analyzed	Darah Uji
Column B	Hipoksia 1 Hari
vs.	vs.
Column A	Normoksia
Mann Whitney test	
P value	0.2286
Exact or approximate P value?	Exact
P value summary	ns
Significantly different ($P < 0.05$)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,B	23 , 13
Mann-Whitney U	3
Difference between medians	
Median of column A	146.1, n=4
Median of column B	112.2, n=4
Difference: Actual	-33.91
Difference: Hodges-Lehmann	-33.91
97.14% CI of difference	-98.16 to 33.25
Exact or approximate CI?	Exact

Tabel 20 Perbandingan Kadar SOD Darah Uji Normoksia Dengan Hipoksia 7 Hari

Table Analyzed	Darah Uji
Column C	Hipoksia 7 Hari
vs.	vs.
Column A	Normoksia
Mann Whitney test	
P value	0.0857
Exact or approximate P value?	Exact
P value summary	ns
Significantly different ($P < 0.05$)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,C	24.5 , 11.5
Mann-Whitney U	1.5
Difference between medians	
Median of column A	146.1, n=4
Median of column C	97.72, n=4
Difference: Actual	-48.39
Difference: Hodges-Lehmann	-48.39
97.14% CI of difference	-98.16 to 15.48
Exact or approximate CI?	Exact

Tabel 21 Perbandingan Kadar SOD Darah Uji Normoksia Dengan Hipoksia 14 Hari

Table Analyzed	Darah Uji
Column D	Hipoksia 14 Hari
vs.	vs.
Column A	Normoksia
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 A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	146.1, n=4
Median of column D	57.54, n=4
Difference: Actual	-88.57
Difference: Hodges-Lehmann	-88.27
97.14% CI of difference	-130.7 to -35.45
Exact or approximate CI?	Exact

Tabel 22 Perbandingan Kadar SOD Jaringan Kontrol Normoksia Dengan Hipoksia 1 Hari

Table Analyzed	Jaringan Kontrol
Column B	Hipoksia 1 Hari
vs.	vs.
Column A	Normoksia
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 A,B	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	90.26, n=4
Median of column B	64.34, n=4
Difference: Actual	-25.92
Difference: Hodges-Lehmann	-28.38
97.14% CI of difference	-51.14 to -10.04
Exact or approximate CI?	Exact

Tabel 23 Perbandingan Kadar SOD Jaringan Kontrol Normoksia Dengan Hipoksia 7 Hari

Table Analyzed	Jaringan Kontrol
Column C	Hipoksia 7 Hari
vs.	vs.
Column A	Normoksia
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 A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	90.26, n=4
Median of column C	37.29, n=4
Difference: Actual	-52.97
Difference: Hodges-Lehmann	-52.97
97.14% CI of difference	-73.13 to -33.11
Exact or approximate CI?	Exact

Tabel 24 Perbandingan Kadar SOD Jaringan Kontrol Normoksia Dengan Hipoksia 14 Hari

Table Analyzed	Jaringan Kontrol
Column D	Hipoksia 14 Hari
vs.	vs.
Column A	Normoksia
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 A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	90.26, n=4
Median of column D	18.86, n=4
Difference: Actual	-71.41
Difference: Hodges-Lehmann	-71.41
97.14% CI of difference	-90.07 to -52.3
Exact or approximate CI?	Exact

Tabel 25 Perbandingan Kadar SOD Jaringan Uji Normoksia Dengan Hipoksia 1 Hari

Table Analyzed	Jaringan Uji
Column B	Hipoksia 1 Hari
vs.	vs.
Column A	Normoksia
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 A,B	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	128.8, n=4
Median of column B	80, n=4
Difference: Actual	-48.82
Difference: Hodges-Lehmann	-48.82
97.14% CI of difference	-76.2 to -15.48
Exact or approximate CI?	Exact

Tabel 26 Perbandingan Kadar SOD Jaringan Uji Normoksia Dengan Hipoksia 7 Hari

Table Analyzed	Jaringan Uji
Column C	Hipoksia 7 Hari
vs.	vs.
Column A	Normoksia
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 A,C	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	128.8, n=4
Median of column C	74.13, n=4
Difference: Actual	-54.69
Difference: Hodges-Lehmann	-54.69
97.14% CI of difference	-84.14 to -28.96
Exact or approximate CI?	Exact

Tabel 25 Perbandingan Kadar SOD Jaringan Uji Normoksia Dengan Hipoksia 14 Hari

Table Analyzed	Jaringan Uji
Column D	Hipoksia 14 Hari
vs.	vs.
Column A	Normoksia
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 A,D	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column A	128.8, n=4
Median of column D	38.02, n=4
Difference: Actual	-90.81
Difference: Hodges-Lehmann	-90.08
97.14% CI of difference	-106.9 to -73.28
Exact or approximate CI?	Exact

Tabel 26 Perbandingan Kadar SOD Darah Normoksia Kontrol Dan Uji

Table Analyzed	Darah Kontrol vs Uji
Column E	Normoksia Cekok
vs.	vs.
Column A	Normoksia Tidak Cekok
Mann Whitney test	
P value	0.6286
Exact or approximate P value?	Exact
P value summary	ns
Significantly different ($P < 0.05$)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column A,E	16 , 20
Mann-Whitney U	6
Difference between medians	
Median of column A	135.9, n=4
Median of column E	146.1, n=4
Difference: Actual	10.23
Difference: Hodges-Lehmann	10.23
97.14% CI of difference	-51.27 to 58.85
Exact or approximate CI?	Exact

Tabel 27 Perbandingan Kadar SOD Darah Hipoksia 1 Hari Kontrol Dan Uji

Table Analyzed	Darah Kontrol vs Uji
Column F	Hipoksia 1 Hari Cekok
vs.	vs.
Column B	Hipoksia 1 Hari Tidak Cekok
Mann Whitney test	
P value	0.1143
Exact or approximate P value?	Exact
P value summary	ns
Significantly different ($P < 0.05$)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column B,F	12 , 24
Mann-Whitney U	2
Difference between medians	
Median of column B	84.51, n=4
Median of column F	112.2, n=4
Difference: Actual	27.69
Difference: Hodges-Lehmann	29.68
97.14% CI of difference	-11.02 to 68.99
Exact or approximate CI?	Exact

Tabel 28. Perbandingan Kadar SOD Darah Hipoksia 7 Hari Kontrol Dan Uji

Table Analyzed	Darah Kontrol vs Uji
Column G	Hipoksia 7 Hari Cekok
vs.	vs.
Column C	Hipoksia 7 Hari Tidak Cekok
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	48.98, n=4
Median of column G	97.72, n=4
Difference: Actual	48.74
Difference: Hodges-Lehmann	45.34
97.14% CI of difference	19.28 to 74.29
Exact or approximate CI?	Exact

Tabel 29. Perbandingan Kadar SOD Darah Hipoksia 14 Hari Kontrol Dan Uji

Table Analyzed	Darah Kontrol vs Uji
Column H	Hipoksia 14 Hari Cekok
vs.	vs.
Column D	Hipoksia 14 Hari Tidak Cekok
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	37.29, n=4
Median of column H	57.54, n=4
Difference: Actual	20.25
Difference: Hodges-Lehmann	20.25
97.14% CI of difference	1.013 to 38.7
Exact or approximate CI?	Exact

Tabel 30. Perbandingan Kadar SOD Jaringan Normoksia Kontrol Dan Uji

Table Analyzed	Jaringan Kontrol vs Uji
Column E	Normoksia Cekok
vs.	vs.
Column A	Normoksia Tidak Cekok
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 A,E	10 , 26
Mann-Whitney U	0
Difference between medians	
Median of column A	90.26, n=4
Median of column E	128.8, n=4
Difference: Actual	38.57
Difference: Hodges-Lehmann	37.72
97.14% CI of difference	16.49 to 58.95
Exact or approximate CI?	Exact

Tabel 31. Perbandingan Kadar SOD Jaringan Hipoksia 1 Hari Kontrol Dan Uji

Table Analyzed	Jaringan Kontrol vs Uji
Column F	Hipoksia 1 Hari Cekok
vs.	vs.
Column B	Hipoksia 1 Hari Tidak Cekok
Mann Whitney test	
P value	0.1143
Exact or approximate P value?	Exact
P value summary	ns
Significantly different ($P < 0.05$)?	No
One- or two-tailed P value?	Two-tailed
Sum of ranks in column B,F	12 , 24
Mann-Whitney U	2
Difference between medians	
Median of column B	64.34, n=4
Median of column F	80, n=4
Difference: Actual	15.66
Difference: Hodges-Lehmann	19.49
97.14% CI of difference	-7.207 to 52.15
Exact or approximate CI?	Exact

Tabel 32. Perbandingan Kadar SOD Jaringan Hipoksia 7 Hari Kontrol Dan Uji

Table Analyzed	Jaringan Kontrol vs Uji
Column G	Hipoksia 7 Hari Cekok
vs.	vs.
Column C	Hipoksia 7 Hari Tidak Cekok
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	37.29, n=4
Median of column G	74.13, n=4
Difference: Actual	36.84
Difference: Hodges-Lehmann	36.48
97.14% CI of difference	7.926 to 60.67
Exact or approximate CI?	Exact

Tabel 33. Perbandingan Kadar SOD Jaringan Hipoksia 14 Hari Kontrol Dan Uji

Table Analyzed	Jaringan Kontrol vs Uji
Column H	Hipoksia 14 Hari Cekok
vs.	vs.
Column D	Hipoksia 14 Hari Tidak Cekok
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	18.86, n=4
Median of column H	38.02, n=4
Difference: Actual	19.16
Difference: Hodges-Lehmann	19.02
97.14% CI of difference	4.37 to 33.28
Exact or approximate CI?	Exact

Tabel 34. Uji Korelasi Kadar SOD Darah dan Jaringan Jantung Tikus Kontrol

	Jaringan tdk cekok
	vs.
	Darah tdk cekok
Pearson r	
r	0.9833
95% confidence interval	0.4029 to 0.9997
R squared	0.9668
P value	
P (two-tailed)	0.0167
P value summary	*
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

Tabel 35. Uji Korelasi Kadar SOD Darah dan Jaringan Jantung Tikus Uji

Jaringan Cekok	
vs.	
Darah Cekok	
Pearson r	
r	0.9863
95% confidence interval	0.4831 to 0.9997
R squared	0.9727
P value	
P (two-tailed)	0.0137
P value summary	*
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	4

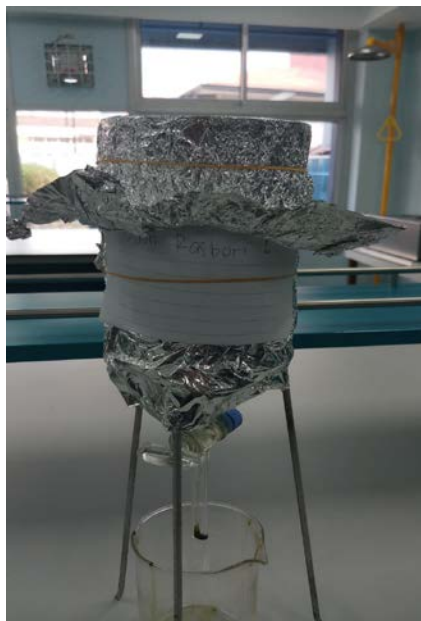
LAMPIRAN – 4 : Dokumentasi dan Alat Penelitian



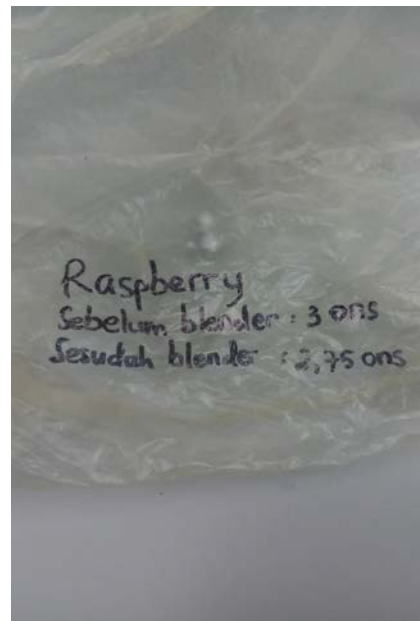
Gambar 1 Evaporasi



Gambar 2 Maserasi



Gambar 3 Maserasi *Raspberry*



Gambar 4 Pengukuran Berat *Raspberry*



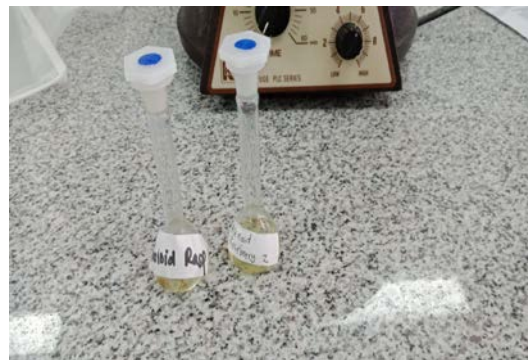
Gambar 5. Uji DPPH

No	Tgl	Waktu	Nama
1	12	08.00	Yusuf, Rio, Ade
2	13	08.00	Nia, Safira, Eri
3	14	08.00	Ade, Maria, Rio
4	15	08.00	Ade, Rio, Wili, Nia
5	16	08.00	Eri, Safira, Rio
6	17	08.00	Wili, Maria, Rio
7	18	08.00	Ade, Na, Rio, Nia
8	19	08.00	Wili, Yusra, Safira, Rio
9	20	08.00	Ade, Nia, Maria
10	21	08.00	Eri, Safira, Rio
11	22	08.00	Eri, Rio, Yusra
12	23	08.00	Ade, Safira, Yusra
13	24	08.00	Wili, Yusra, Rio
14	25	08.00	Wili, Rio, Maria
15	26	08.00	Eri, Rio, Rio
16	27	08.00	Eri, Rio, Safira
17	28	08.00	Ade, Nia, Maria
18	29	08.00	Wili, Rio, Rio
19	30	08.00	Eri, Nia, Yusra
20	31	08.00	Ade, Maria, Safira
21	1	Nov	Wili, Rio, Wili, Nia, Yusra
22	2	Nov	Eri, Safira, Maria, Rio

Gambar 6. Jadwal Pencetakan Tikus



Gambar 7. Uji Fitokimia



Gambar 8. Uji Kadar *Alkaloids*

DAFTAR RIWAYAT HIDUP

DATA PRIBADI

1. Nama : William Wijaya Herlin Saputra
2. NIM : 405160223
3. Jenis Kelamin : Laki-laki
4. Tempat, Tanggal Lahir : Yogyakarta, 3 Febuari 1998
5. Agama : Katholik
6. Status : Belum Menikah
7. Pendidikan Terakhir : SMA
8. Alamat : Jalan Tawakal Ujung Raya No. 8, Grogol,
Jakarta Barat
9. Nomor Telepon :087883905985 (HP)
10. Email : anginbiru37@gmail.com

DATA PENDIDIKAN

1. 2001 - 2002 : Playgroup Mutiara Persada
2. 2002 - 2004 : TK Mutiara Persada
3. 2004 - 2010 : SD Bopkri Gondolayu
4. 2010 - 2013 : SMP Stella Duce 1
5. 2013 - 2016 : SMA Bopkri 1
6. 2016 - Sekarang : Universitas Tarumanagara

PENGALAMAN ORGANISASI

1. 2016 - 2017 : Anggota Muda Dewan Perwakilan Mahasiswa FK UNTAR
2. 2016 - 2017 : Anggota *Asian Medical Students Association* (AMSA) UNTAR Divisi *Publication and Promotion* (PnP)
3. 2017 - 2018 : Anggota Komisi I Aspirasi dan Advokasi Dewan perwakilan Mahasiswa FK UNTAR
4. 2017 - 2018 : Vice Executive Board Divisi *Publication and Promotion* (PnP) *Asian Medical Students Assoociation* (AMSA) UNTAR
5. 2018 - 2019 : Anggota Komisi II Hubungan Masyarakat Dewan Perwakilan Mahasiwa FK UNTAR
6. 2016 : Peserta Kegiatan Pembentukan Karakter Mahasiswa “*United as One*” 2016 BEM UNTAR

7. 2016 : Peserta Pelatihan Penyusunan Proposal, LPJ, dan *Photoshop Training* DPM FK UNTAR
8. 2016 : Peserta Seminar *East Asian Medical Student's Conference* AMSA Indonesia "*Climate Change on Medicine*"
9. 2016 : Peserta Seminar Gramedia "*Inspiring Your Mind, Get the Best Achievement*"
10. 2016 : Panitia Divisi Acara *Antibiotic Awareness Day* AMSA UNTAR
11. 2016 : Peserta *Legislative Training* 2016 DPM FK UNTAR
12. 2017 : Peserta *Five Star Doctor Training* 2016 FK UNTAR
13. 2017 : Peserta Seminar FK UNTAR "*Tropical Infection - We Know, We Treat, We Prevent*"
14. 2017 : Panitia Divisi Publikasi dan Dokumentasi Musyawarah Kerja Mahasiswa DPM FK UNTAR 2017
15. 2017 : Panitia Divisi Publikasi dan Dokumentasi *Legislative Training* 2017 DPM FK UNTAR
16. 2017 : Koordinator Divisi Logistik *Dyslexia Awareness Day* AMSA UNTAR
17. 2017 : Panitia Divisi Publikasi dan Dokumentasi LOSER VII AMSA UNTAR
18. 2017 : Koordinator Divisi Logistik dan Konsumsi Tutorial Ganjil 2017 DPM FK UNTAR
19. 2018 : Koordinator Divisi Publikasi dan Dokumentasi *Local Paper and Poster Training* AMSA UNTAR 2018
20. 2018 : Peserta *Local Paper and Poster Training* AMSA UNTAR 2018 "*Maternal and Neonatal Health*"
21. 2018: Koordinator Divisi Publikasi dan Dokumentasi Gerakan Masyarakat Sehat (GERMAS) AMSA UNTAR 2018
22. 2018 : Peserta *National Legislative Training* "THALAMUS" AMSA Indonesia
23. 2018 : Koordinator Divisi Publikasi dan Dokumentasi Seminar FK UNTAR "*The Role of Immunization and Nutrition for Good Health*"
24. 2018 : Peserta Seminar FK UNTAR "*The Role of Immunization and Nutrition for Good Health*"
25. 2018 : Panitia Divisi Publikasi dan Dokumentasi *Legislative Training* 2018 DPM FK UNTAR
26. 2018 : Peserta Lomba Poster Seminar Nasional FK UNTAR 2018 *Medical Update : Improving Quality of Life in Elderly*
27. 2018 : Panitia Divisi Hubungan Masyarakat Forum Komunikasi 2018 DPM FK UNTAR