

Lampiran 1 Kaji Etik



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PERSETUJUAN ETIK *Ethical Clearance* Nomor: 125/KER/FK/XII/2017

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 *CRESCENTIA CUJETE* TERHADAP STRES OKSIDATIF PADA JANTUNG DAN OTAK TIKUS *SPRAGUE DAWLEY* YANG DIINDUKSI HIPOKSIA"

Peneliti Utama : Alfred H Alphanto


Lembaga/Tempat penelitian : FK Universitas Tarumanagara

Dinyatakan memenuhi persyaratan etik untuk dilaksanakan.

Jakarta, 18 Desember 2017

Ketua

Prof. DR. dr. Adi Hidayat, MS

Sekretaris

dr. Alvina SpPK

Lampiran 2 Identifikasi Tumbuhan



LEMBAGA ILMU PENGETAHUAN INDONESIA
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Cibinong, Agustus 2017

Nomor : 1986/IPH.1.01/If.07/VIII/2017
Lampiran : -
Perihal : Hasil identifikasi/determinasi Tumbuhan

Kepada Yth.
Bpk./Ibu/Sdr(i). **Alfred H. Alphanto**
Univ. TARUMANAGARA
Jl. Letjen S. Parman No. 1
Jakarta 11440

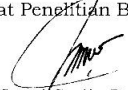
Dengan hormat,

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	Berenuk	<i>Crescentia cujete</i> L.	Bignoniaceae

Demikian, semoga berguna bagi Saudara.

Kepala Bidang Botani
Pusat Penelitian Biologi-LIPI,


Dr. Joeny Setiyo Rahajoe
NIP. 196706241993032004

Lampiran 3 Tabel Berat Badan dan Berat Otak Tikus

Tabel 1. Berat Badan Tikus Kontrol Normoksia

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Kontrol Normoksia	Tikus 1		257
	Tikus 2		308
	Tikus 3		278
	Tikus 4		225
	Rata-rata		267

Tabel 2. Berat Badan Tikus Kontrol Hipoksia 3 Hari

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Kontrol Hipoksia 3 Hari	Tikus 1	235	205
	Tikus 2	219	203
	Tikus 3	269	280
	Tikus 4	245	234
	Rata-rata	242	230.5

Tabel 3. Berat Badan Tikus Kontrol Hipoksia 7 Hari

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Kontrol Hipoksia 7 Hari	Tikus 1	267	240
	Tikus 2	254	205
	Tikus 3	287	210
	Tikus 4	248	240
	Rata-rata	264	223.75

Tabel 4. Berat Badan Tikus Kontrol Hipoksia 14 Hari

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Kontrol Hipoksia 14 Hari	Tikus 1	308	310
	Tikus 2	334	320
	Tikus 3	224	250
	Tikus 4	218	230
	Rata-rata	271	277.5

Tabel 5. Berat Badan Tikus Cekok Normoksia

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Cekok Normoksia	Tikus 1		318
	Tikus 2		360
	Tikus 3		312
	Tikus 4		263
	Rata-rata		313.25

Tabel 6. Berat Badan Tikus Cekok Hipoksia 3 Hari

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Cekok Hipoksia 3 Hari	Tikus 1	320	280
	Tikus 2	250	270
	Tikus 3	317	380
	Tikus 4	375	260
	Rata-rata	315.5	297.5

Tabel 7. Berat Badan Tikus Cekok Hipoksia 7 Hari

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Cekok Hipoksia 7 Hari	Tikus 1	284	260
	Tikus 2	200	210
	Tikus 3	260	200
	Tikus 4	303	250
	Rata-rata	261.75	230

Tabel 8. Berat Badan Tikus Cekok Hipoksia 14 Hari

Kelompok	Sampel	BB sebelum perlakuan (g)	BB sesudah perlakuan (g)
Cekok Hipoksia 14 Hari	Tikus 1	296	290
	Tikus 2	273	250
	Tikus 3	320	350
	Tikus 4	278	270
	Rata-rata	291.75	290

Tabel 9. Berat Otak Tikus Perlakuan Cekok

Sampel	Berat Otak Tikus Cekok (g)			
	Normoksia	3 Hari	7 Hari	14 Hari
Tikus 1	1.2099	0.7191	1.2688	1.6741
Tikus 2	1.1457	1.0334	1.4630	0.6937
Tikus 3	1.0916	1.4433	0.9051	1.3487
Tikus 4	1.0838	1.4652	1.4848	0.8730
Rata-rata	1.13275	1.16525	1.28043	1.14738

Tabel 10. Berat Otak Tikus Perlakuan Tidak Cekok

Sampel	Berat Otak Tikus Tidak Cekok (g)			
	Normoksia	3 Hari	7 Hari	14 Hari
Tikus 1	1.5490	1.4030	1.6147	1.5589
Tikus 2	1.6959	1.4740	1.6479	1.5601
Tikus 3	1.2555	1.6103	1.0363	1.4552
Tikus 4	1.5190	1.5874	1.2598	1.5473
Rata-rata	1.50485	1.518675	1.389675	1.530375

Lampiran 4 Pengukuran pada Sampel

Tabel 1. Regresi Linier DPPH Vitamin C

Regresi Linier	
Best-fit values \pm SE	
Slope	15,07 \pm 0,5829
Y-intercept	-6,266 \pm 2,473
X-intercept	0,4157
1/slope	0,06634
95% Confidence Intervals	
Slope	13,22 to 16,93
Y-intercept	-14,14 to 1,604
X-intercept	-0,1204 to 0,8416
Goodness of Fit	
R square	0,9955
Sy.x	1,843
Is slope significantly non-zero?	
F	668,7
DFn, DFd	1, 3
P value	0,0001
Deviation from zero?	Significant
Equation	$Y = 15,07 * X - 6,266$
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 Berenuk

Regresi Linier	
Best-fit values \pm SE	
Slope	0,349 \pm 0,03886
Y-intercept	-5,302 \pm 4,762
X-intercept	15,19
1/slope	2,865
95% Confidence Intervals	
Slope	0,2254 to 0,4727
Y-intercept	-20,46 to 9,854
X-intercept	-40,86 to 46,32
Goodness of Fit	
R square	0,9641
Sy.x	5,904
Is slope significantly non-zero?	
F	80,67
DFn, DFd	1, 3
P value	0,0029
Deviation from zero?	Significant
Equation	$Y = 0,349 * X - 5,302$
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

Regresi Linier	
Best-fit values ± SE	
Slope	0,000728 ± 4,881e-005
Y-intercept	0,1254 ± 0,02536
X-intercept	-172,3
1/slope	1374
95% Confidence Intervals	
Slope	0,0005727 to 0,0008833
Y-intercept	0,04468 to 0,2061
X-intercept	-357,8 to -50,89
Goodness of Fit	
R square	0,9867
Sy.x	0,01544
Is slope significantly non-zero?	
F	222,4
DFn, DFd	1, 3
P value	0,0007
Deviation from zero?	Significant
Equation	Y = 0,000728*X + 0,1254
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 Flavonoid Standart Kuersetin

Regresi Linier	
Best-fit values ± SE	0,01248 ± 0,0003456
Slope	0,0003456
Y-intercept	0,0056 ± 0,004233
X-intercept	-0,4487
1/slope	80,13
95% Confidence Intervals	
Slope	0,01138 to 0,01358
Y-intercept	-0,007872 to 0,01907
X-intercept	-1,65 to 0,5888
Goodness of Fit	
R square	0,9977
Sy.x	0,005465
Is slope significantly non-zero?	
F	1304
DFn, DFd	1, 3
P value	<0,0001
Deviation from zero?	Significant
Equation	Y = 0,01248*X + 0,0056
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

Regresi Linier	
Best-fit values \pm SE	
Slope	0.0007796 \pm 0.0001427
Y-intercept	0.2012 \pm 0.0801
X-intercept	-258.1
1/slope	1283
95% Confidence Intervals	
Slope	0.0001655 to 0.001394
Y-intercept	-0.1434 to 0.5459
X-intercept	-2797 to 121.3
Goodness of Fit	
R square	0.9372
Sy.x	0.1117
Is slope significantly non-zero?	
F	29.84
DFn, DFd	1, 2
P value	0.0319
Deviation from zero?	Significant
Equation	
	Y = 0.0007796*X + 0.2012
Data	
Number of X values	4
Maximum number of Y replicates	1
Total number of values	4
Number of missing values	0

Tabel 6. Regresi Linier Standart Protein

Uji Mann Whitney	
Best-fit values \pm SE	
Slope	0,8335 \pm 0,02395
Y-intercept	0,05981 \pm 0,01024
X-intercept	-0,07177
1/slope	1,2
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
Data	
Number of X values	8
Maximum number of Y replicates	1
Total number of values	8
Number of missing values	0

Tabel 7. Optimasi Waktu dan Pengenceran Darah

T	ΔV			
	5x	8x	10x	50x
1				
2	0.0020	0.0010	0.0010	0.0160
3	0.0020	0.0015	0.0010	0.0090
4	0.0037	0.0017	0.0017	0.0087
5	0.0033	0.0043	0.0020	0.0085
6	0.0026	0.0034	0.0018	0.0084
7	0.0023	0.0035	0.0020	0.0057
8	0.0021	0.0034	0.0021	0.0010
9	0.0020	0.0033	0.0024	0.0041
10	0.0019	0.0032	0.0023	0.0032

Tabel 8. Optimasi Waktu dan Pengenceran Otak

T	ΔV		
	5x	10x	20x
1			
2	0.0100	0.0010	0.0000
3	0.0070	-0.0025	0.0010
4	0.0060	0.0007	0.0013
5	0.0058	0.0013	0.0018
6	0.0056	0.0006	0.0016
7	0.0053	0.0017	0.0020
8	0.0051	0.0017	0.0020
9	0.0050	0.0005	0.0023
10	0.0049	0.0014	0.0022

Tabel 9. Aktivitas Enzim Katalase, Protein, dan Aktivitas Spesifik ENzim Katalase Darah

Perlakuan	Lama Hipoksia	Tikus	Aktivitas Enzim Katalase (U/mg)	Kadar Protein	Aktivitas Spesifik Enzim Katalase (U/mg Protein)
Cekok	0	1	125.77	1.23	102.44
		2	114.77	1.30	88.46
		3	123.77	1.03	120.39
		4	115.77	1.11	104.50
	3	1	68.77	1.29	53.49
		2	63.77	1.11	57.66
		3	74.77	1.19	63.03
		4	67.77	1.30	52.31
	7	1	57.77	1.42	40.85
		2	48.77	1.51	32.45
		3	49.77	1.55	32.26
		4	49.77	1.32	37.88
	14	1	25.77	1.51	17.22
		2	30.77	1.59	19.50
		3	32.77	1.67	19.76
		4	31.77	1.48	21.62
Tidak Cekok	0	1	115.77	1.27	91.34
		2	94.77	0.87	109.20
		3	92.77	0.99	93.94
		4	84.77	1.09	77.98
	3	1	48.77	1.26	38.89
		2	38.77	1.11	35.14
		3	78.77	1.17	67.52
		4	91.77	1.30	70.77
	7	1	49.77	1.23	40.65
		2	40.77	1.42	28.57
		3	35.77	1.55	23.23
		4	38.77	1.59	24.53
	14	1	31.77	1.93	16.58
		2	13.77	2.07	6.76
		3	21.77	1.91	11.52
		4	19.77	1.99	10.05

Tabel 10. Aktivitas Enzim Katalase, Protein, dan Aktivitas Spesifik Enzim Katalase Otak

Perlakuan	Lama Hipoksia	Tikus	Aktivitas Enzim Katalase (U/mg)	Kadar Protein	Aktivitas Spesifik Enzim Katalase (U/mg Protein)
Cekok	0	1	33.09	48.25	0.6857
		2	36.76	49.81	0.7381
		3	22.06	38.18	0.5778
		4	29.41	44.89	0.6551
	3	1	20.22	34.22	0.5910
		2	20.22	41.77	0.4840
		3	18.38	35.06	0.5244
		4	18.38	44.89	0.4095
	7	1	14.71	44.89	0.3276
		2	14.71	31.82	0.4622
		3	18.38	35.30	0.5208
		4	14.71	36.86	0.3990
	14	1	14.71	36.62	0.4016
		2	14.71	32.18	0.4570
		3	11.03	28.10	0.3925
		4	11.03	32.78	0.3365
Tidak Cekok	0	1	14.71	32.06	0.4587
		2	12.87	25.34	0.5079
		3	36.76	60.01	0.6126
		4	29.41	47.53	0.6188
	3	1	27.57	54.01	0.5105
		2	14.71	35.90	0.4097
		3	25.74	58.81	0.4376
		4	25.74	58.09	0.4430
	7	1	7.35	21.02	0.3498
		2	7.35	26.06	0.2822
		3	14.71	32.30	0.4553
		4	7.35	22.82	0.3222
	14	1	11.03	52.93	0.2084
		2	18.38	56.65	0.3245
		3	18.38	45.49	0.4041
		4	18.38	44.17	0.4161

Tabel 11. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Normoksia dengan Darah Tidak Cekok Hipoksia 3 Hari

Mann-Whitney test	
Table Analyzed	Kontrol Darah
Column B	3 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	92.64, n=4
Median of column B	53.21, n=4
Difference: Actual	-39.44
Difference: Hodges-Lehmann	-40.39

Tabel 12. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Normoksia dengan Darah Tidak Cekok Hipoksia 7 Hari

Mann-Whitney test	
Table Analyzed	Kontrol Darah
Column C	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	92.64, n=4
Median of column C	26.7, n=4
Difference: Actual	-65.94
Difference: Hodges-Lehmann	-65.94

Tabel 13. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Normoksia dengan Darah Tidak Cekok Hipoksia 14 Hari

Mann-Whitney test	
Table Analyzed	Kontrol Darah
Column D	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	92.64, n=4
Median of column D	10.79, n=4
Difference: Actual	-81.86
Difference: Hodges-Lehmann	-81.86

Tabel 14. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Cekok Normoksia dengan Darah Cekok Hipoksia 3 Hari

Mann-Whitney test	
Table Analyzed	Cekok Darah
Column B	3 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	103.5, n=4
Median of column B	55.58, n=4
Difference: Actual	-47.9
Difference: Hodges-Lehmann	-47.9

Tabel 15. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Cekok Normoksia dengan Darah Cekok Hipoksia 7 Hari

Mann-Whitney test	
Table Analyzed	Cekok Darah
Column C	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	103.5, n=4
Median of column C	35.17, n=4
Difference: Actual	-68.31
Difference: Hodges-Lehmann	-68.31

Tabel 16. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Cekok Normoksia dengan Darah Cekok Hipoksia 14 Hari

Mann-Whitney test	
Table Analyzed	Cekok Darah
Column D	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	103.5, n=4
Median of column D	19.63, n=4
Difference: Actual	-83.84
Difference: Hodges-Lehmann	-83.84

Tabel 17. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Normoksia dengan Darah Cekok Berenek Normoksia

Mann-Whitney test	
Table Analyzed	Kontrol - Cekok Darah
Column E	Normoksia Tidak Cekok
vs.	vs.
Column A	Normoksia Cekok
Mann Whitney test	
P value	0.4857
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	21 , 15
Mann-Whitney U	5
Difference between medians	
Median of column A	103.5, n=4
Median of column E	92.64, n=4
Difference: Actual	-10.83
Difference: Hodges-Lehmann	-10.83

Tabel 18. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Hipoksia 3 Hari dengan Darah Cekok Berenek Hipoksia 3 Hari

Mann-Whitney test	
Table Analyzed	Kontrol - Cekok Darah
Column F	3 Hari Tidak Cekok
vs.	vs.
Column B	3 Hari Cekok
Mann Whitney test	
P value	>0.9999
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	18 , 18
Mann-Whitney U	8
Difference between medians	
Median of column B	55.58, n=4
Median of column F	53.21, n=4
Difference: Actual	-2.37
Difference: Hodges-Lehmann	-4.465

Tabel 19. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Hipoksia 7 Hari dengan Darah Cekok Berenek Hipoksia 7 Hari

Mann-Whitney test	
Table Analyzed	Kontrol - Cekok Darah
Column G	7 Hari Tidak Cekok
vs.	vs.
Column C	7 Hari Cekok
Mann Whitney test	
P value	0.2000
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 C,G	23 , 13
Mann-Whitney U	3
Difference between medians	
Median of column C	35.17, n=4
Median of column G	26.7, n=4
Difference: Actual	-8.465
Difference: Hodges-Lehmann	-8.465

Tabel 20. Perbandingan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok Hipoksia 14 Hari dengan Darah Cekok Berenek Hipoksia 14 Hari

Mann-Whitney test	
Table Analyzed	Kontrol - Cekok Darah
Column H	14 Hari Tidak Cekok
vs.	vs.
Column D	14 Hari 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	26 , 10
Mann-Whitney U	0
Difference between medians	
Median of column D	19.63, n=4
Median of column H	10.79, n=4
Difference: Actual	-8.845
Difference: Hodges-Lehmann	-8.845

Tabel 21. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Normoksia dengan Otak Tidak Cekok Hipoksia 3 Hari

Mann-Whitney test	
Table Analyzed	Kontrol Otak
Column B	3 Hari
vs.	vs.
Column A	Normoksia
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 A,B	24 , 12
Mann-Whitney U	2
Difference between medians	
Median of column A	0.5616, n=4
Median of column B	0.4449, n=4
Difference: Actual	-0.1168
Difference: Hodges-Lehmann	-0.09345

Tabel 22. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Normoksia dengan Otak Tidak Cekok Hipoksia 7 Hari

Mann-Whitney test	
Table Analyzed	Kontrol Otak
Column C	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	0.5616, n=4
Median of column C	0.3199, n=4
Difference: Actual	-0.2417
Difference: Hodges-Lehmann	-0.2028

Tabel 23. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Normoksia dengan Otak Tidak Cekok Hipoksia 14 Hari

Mann-Whitney test	
Table Analyzed	Kontrol Otak
Column D	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	0.5616, n=4
Median of column D	0.3567, n=4
Difference: Actual	-0.2049
Difference: Hodges-Lehmann	-0.2118

Tabel 24. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Cekok Berenek Normoksia dengan Otak Cekok Berenek Hipoksia 3 Hari

Mann-Whitney test	
Table Analyzed	Cekok Otak
Column B	3 Hari
vs.	vs.
Column A	Normoksia
Mann Whitney test	
P value	0.0571
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	25 , 11
Mann-Whitney U	1
Difference between medians	
Median of column A	0.665, n=4
Median of column B	0.544, n=4
Difference: Actual	-0.121
Difference: Hodges-Lehmann	-0.1454

Tabel 25. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Cekok Berenek Normoksia dengan Otak Cekok Berenek Hipoksia 7 Hari

Mann-Whitney test	
Table Analyzed	Cekok Otak
Column C	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	0.665, n=4
Median of column C	0.4393, n=4
Difference: Actual	-0.2257
Difference: Hodges-Lehmann	-0.2359

Tabel 26. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Cekok Berenek Normoksia dengan Otak Cekok Berenek Hipoksia 14 Hari

Mann-Whitney test	
Table Analyzed	Cekok Otak
Column D	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	0.665, n=4
Median of column D	0.4006, n=4
Difference: Actual	-0.2644
Difference: Hodges-Lehmann	-0.2644

Tabel 27. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Normoksia dengan Otak Cekok Berenek Normoksia

Mann-Whitney Test	
Table Analyzed	Kontrol - Cekok Otak
Column E	Normoksia Tidak Cekok
vs.	vs.
Column A	Normoksia 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 A,E	24 , 12
Mann-Whitney U	2
Difference between medians	
Median of column A	0.665, n=4
Median of column E	0.5616, n=4
Difference: Actual	-0.1034
Difference: Hodges-Lehmann	-0.1173

Tabel 28. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Hipoksia 3 Hari dengan Otak Cekok Berenek Hipoksia 3 Hari

Mann-Whitney Test	
Table Analyzed	Kontrol - Cekok Otak
Column F	3 Hari Tidak Cekok
vs.	vs.
Column B	3 Hari Cekok
Mann Whitney test	
P value	0.4857
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	21 , 15
Mann-Whitney U	5
Difference between medians	
Median of column B	0.544, n=4
Median of column F	0.4449, n=4
Difference: Actual	-0.09915
Difference: Hodges-Lehmann	-0.06875

Tabel 29. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Hipoksia 7 Hari dengan Otak Cekok Berenuk Hipoksia 7 Hari

Mann-Whitney test	
Table Analyzed	Kontrol - Cekok Otak
Column G	7 Hari Tidak Cekok
vs.	vs.
Column C	7 Hari 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 C,G	24 , 12
Mann-Whitney U	2
Difference between medians	
Median of column C	0.4393, n=4
Median of column G	0.3199, n=4
Difference: Actual	-0.1194
Difference: Hodges-Lehmann	-0.0871

Tabel 30. Perbandingan Aktivitas Spesifik Enzim Katalase Otak Tidak Cekok Hipoksia 14 Hari dengan Otak Cekok Berenuk Hipoksia 14 Hari

Mann Whitney test	
Table Analyzed	Kontrol - Cekok Otak
Column H	14 Hari Tidak Cekok
vs.	vs.
Column D	14 Hari Cekok
Mann Whitney test	
P value	0.3429
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 D,H	22 , 14
Mann-Whitney U	4
Difference between medians	
Median of column D	0.4006, n=4
Median of column H	0.3567, n=4
Difference: Actual	-0.0439
Difference: Hodges-Lehmann	-0.0646

Tabel 31. Hubungan Aktivitas Spesifik Enzim Katalase Darah Tidak Cekok dengan Darah Tidak Cekok

Pearson R	
R	0.9805
95% confidence interval	0.3366 to 0.9996
R squared	0.9614
P value	
P (two-tailed)	0.0195
P value summary	*
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	
	4

Tabel 32. Hubungan Aktivitas Spesifik Enzim Katalase Darah Cekok Berenuk dengan Darah Cekok Berenuk

Pearson R	
R	0.9961
95% confidence interval	0.8215 to 0.9999
R squared	0.9923
P value	
P (two-tailed)	0.0039
P value summary	**
Significant? (alpha = 0.05)	Yes
Number of XY Pairs	
	4

Lampiran 5 Foto Alat dan Dokumentasi Selama Pengerjaan

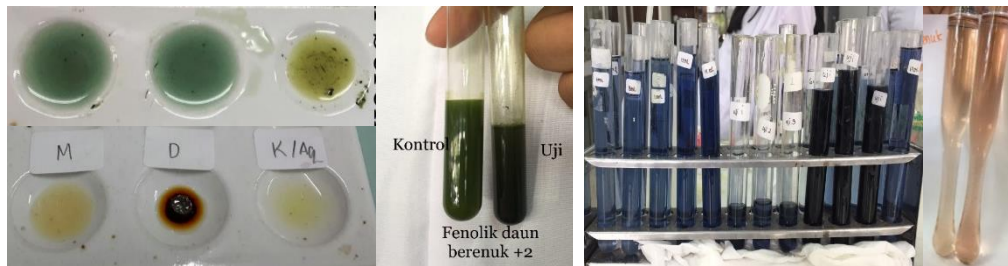
Gambar 1. Maserasi pada Simplisia



Gambar 2. Maserasi pada Simplisia



Gambar 3. Uji Fitokimia dan Uji Kuantitatif



Gambar 4. Panjang Gelombang Optimum DPPH



Gambar 5. Pencekakan Tikus



Gambar 6. Tikus Dihipoksia



Gambar 8. Pengambilan Organ



Gambar 7. Tikus Dianestesi



Gambar 9. Pewarnaan sediaan PA



Gambar 10. Pembuatan Blok Parafin



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