

LAMPIRAN

Lampiran 1 *Ethical Clearance*

**KOMISI BIOETIKA PENELITIAN KEDOKTERAN/KESEHATAN
FAKULTAS KEDOKTERAN**

UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG

Sekretariat : Gedung C Lantai I Fakultas Kedokteran Unissula
Jl. Raya Kaligawe Km 4 Semarang, Telp. 024-6583584, Fax 024-6594366

Ethical Clearance

No. 215/III/2019/Komisi Bioetik

Komisi Bioetika Penelitian Kedokteran/Kesehatan Fakultas Kedokteran Universitas Islam Sultan Agung Semarang, setelah melakukan pengkajian atas usulan penelitian yang berjudul :

PENGARUH PEMBERIAN EKSTRAK CMCE PROPOLIS TERHADAP AKTIVITAS ENZIM SUPEROKSIDA DISMUTASE (SOD) DAN DERAJAT FIBROSIS SEL HEPAR (Studi Eksperimental Pada Tikus Galur Wistar (*Rattus Norvegicus*) Diinduksi oleh Carbo Tetraklorida (CCI4)

Peneliti Utama : Elsayanti Wani
Pembimbing : Prof. Dr. dr. Taufiq R. Nasihun, M.Kes., Sp.And
Dr. Dra. Atina Hussaana, M.Si., Apt
Tempat Penelitian : Pusat Studi Pangan dan Gizi Pusat Antar Unit Mahasiswa Universitas Gajah Mada Yogyakarta

dengan ini menyatakan bahwa usulan penelitian diatas telah memenuhi prasyarat etik penelitian. Oleh karena itu Komisi Bioetika merekomendasikan agar penelitian ini dapat dilaksanakan dengan mempertimbangkan prinsip-prinsip yang dinyatakan dalam Deklarasi Helsinki dan panduan yang tertuang dalam Pedoman Nasional Etik Penelitian Kesehatan (PNEPK) Departemen Kesehatan RI tahun 2004.

Semarang, 14 Maret 2019

Komisi Bioetika Penelitian Kedokteran/Kesehatan
Fakultas Kedokteran Unissula



(dr. Sofwan Dahlan, Sp.F(K))

Lampiran 2



UNIVERSITAS GADJAH MADA

Pusat Studi Pangan dan Gizi
 Jln. Teknika Utara, Berek, YOGYAKARTA 55281
 Telepon : 0274-589242, Web : www.cfns.ugm.ac.id
 Email : cfns@ugm.ac.id

SURAT KETERANGAN BEBAS PEMINJAMAN

Menerangkan bahwa :

Nama Mahasiswa/Peneliti

: Elsayanti Wani

No. Mahasiswa

: 17.9.01.0116

Jurusan/Fakultas/Universitas

: BIOMEDIK / FAKULTAS KEDOKTERAN /
UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG

Alamat Rumah & Nomor Telpon/HP

: Jl. Padi Bakal Raja No 838
08531110091

Tidak mempunyai pinjaman peralatan dan bon bahan di laboratorium Pusat Studi Pangan dan Gizi Universitas Gadjah Mada

Yogyakarta, 13 Mei 2019

Teknisi,
Laboratorium Mikrobiologi

[Signature]
Asep S

Teknisi,
Laboratorium Kimia dan Biokimia

[Signature]
PURWADI

Teknisi,
Laboratorium Gizi

[Signature]
Yuli Yanto

Teknisi,
Laboratorium Rekayasa Pangan,

[Signature]
Sugou

Mengetahui :
Sekretaris,

[Signature]

Dr. Ir. Setyastuti Purwanti, SU
 NIP. 195203021979032001

Lampiran 3**LABORATORIUM PATOLOGI ANATOMI****SURAT KETERANGAN**

Yang bertanda tangan dibawah ini, Bagian Laboratorium Patologi Anatomi Rumah Sakit Islam Sultan Agung Semarang menerangkan bahwa mahasiswa di bawah ini :

Nama : Elsavanti Wani
NIM : 17.9.01.0116
Fakultas/Universitas : Program Studi Magister Biomedik
Universitas Islam Sultan Agung Semarang
Judul Penelitian : PENGARUH PEMBERIAN EKSTRAK CMCE PROPOLIS
TERHADAP AKTIVITAS ENZIM SUPEROKSIDA
DISMUTASE (SOD) DAN DERAJAT FIBROSIS SEL HEPAR
(Studi Eksperimental Pada tikus Galur Wistar (Ratus Norvegicus)
yang Diinduksi Karbon Tetaklorida (CCl₄))

Telah melakukan pembacaan preparat di Laboratorium Patologi Anatomi Rumah Sakit Islam Sultan Agung Semarang pada bulan April 2019 dengan hasil terlampir

Demikian surat keterangan ini kami buat untuk digunakan sebagaimana perlunya.

Semarang, 29 April 2019



dr.Susilorini, Msi,Med,SpPA

Lampiran 4



UNIVERSITAS GADJAH MADA

Pusat Studi Pangan dan Gizi

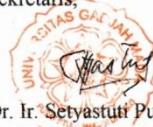
Jln. Teknik Utara, Berek, YOGYAKARTA 55281

Telepon : 0274-589242, Web : www.cfns.ugm.ac.idEmail : cfns@ugm.ac.id

Kelompok	SOD	
	%	Abs
K1	25,53	1,080
	19,15	1,093
	23,40	1,087
	21,28	1,100
	17,02	1,190
	27,66	1,088
	31,91	1,094
P1	55,32	0,874
	51,06	0,840
	57,45	0,862
	48,94	0,859
	44,68	0,855
	51,06	0,857
	53,19	0,860
P2	76,60	0,630
	61,70	0,692
	72,34	0,710
	78,72	0,621
	70,21	0,625
	63,83	0,730
	68,09	0,675
P3	85,11	0,539
	80,85	0,565
	82,98	0,540
	76,60	0,558
	74,47	0,537
	87,23	0,545
	78,72	0,548

Mengetahui :

Sekretaris.

Dr. Ir. Setyastuti Purwanti, SU
NIP. 195203021979032001

Lampiran 5



**RSI SULTAN
AGUNG**
ISLAMIC TEACHING HOSPITAL

LABORATORIUM PATOLOGI ANATOMI

Hasil Pembacaan Derajat Fibrosis Sel Hepar

No	LP1	LP2	LP3	LP4	LP5	Keterangan	SKOR	
1	K1.1	0	1,64% periporta	0	0	Fibrosis periporta	1	
2	K1.2	Periporta 1,84%	Bridging fibrosis 1,50%	Periporta dan interlobaris 1,25%	0	0	Fibrosis periporta, bridging fibrosis dan interlobaris	3
3	K1.3	Periporta 1,35%	0	Periporta dan interlobaris 1,54%	Periporta 0,45%	0	Periporta dan interlobaris	3
4	K1.4	1,38 interlobaris	1,87% Bridging fibrosis	1,74% periporta	1,73% periporta	1,64% periporta	Fibrosis periporta, bridging fibrosis dan interlobaris	3
5	K1.5	0	0	0	0	Tidak ada fibrosis	0	
6	K1.6	0	Periporta 0,72	Briging fibrosis 1,28	Periporta 0,52%	periporta 1,59%	Fibrosis periporta, bridging fibrosis dan interlobaris	3
7	K1.7	Periporta 0,43%	0	Periporta 0,52%	0	Bridging fibrosis dan interlobaris 4,53%	Fibrosis periporta, bridging fibrosis dan interlobaris	3
8	P1.1	Bridging fibrosis 0,64%	0	0	Periporta 0,46%	Periporta 2,34%	Fibrosis periporta, bridging fibrosis	2
9	P1.2	0	0	0	Periporta 0,35%	0	Periporta	1
10	P1.3	0	0	0	0	0	0	
11	P1.4	0	0	0	0	0	0	
12	P1.5	0	0	Periporta 0,46%	0	0	Periporta	1
13	P1.6	Periporta 1,34%	Periporta 0,42%	Periporta 0,53%	Periporta 0,75%	Periporta 1,32%	Periporta	1
14	P1.7	Periporta 0,56%	0	Periporta 1,73%	Periporta 1,23%	0	Periporta	1
15	P2.1	Bridging fibrosis 4,38%	0	0 Periporta 0,28%	Periporta 0,12%	Periporta 0,15%	Periporta dan bridging fibrosis	2
16	P2.2	Periporta 0,21%	0	0 Periporta 2,38%	0	0	Periporta	1
17	P2.3	0	0	0	Periporta 2,86%	Periporta 4,59%	Periporta	1
18	P2.4	0	0	Periporta 0,34	0	0	Periporta	1
19	P2.5	Periporta 0,12%	0	0	Periporta 0,15%	Periporta 0,15%	Periporta	1
20	P2.6	Periporta 2,23%	0	0	0	0	Periporta	1
21	P2.7	Periporta 1,83%	Periporta 0,15%	0	0	0	Periporta	1
22	P3.1	0	Periporta 0,15%	Periporta 1,56%	0	0	Periporta	1
23	P3.2	0	0	0	0	Periporta 1,35%	Periporta	1
24	P3.3	Periporta 0,15%	Periporta 0,25%	0	0	0	Periporta	1
25	P3.4	0	0	0	0	Periporta 0,17%	Periporta	1
26	P3.5	0	0	0	0	0	Tidak ada fibrosis	0
27	P3.6	0	Periporta 1,67%	0	0	0	Periporta	1
28	P3.7	0	0	0	0	0	Tidak ada fibrosis	0

Semarang, 29 April 2019



dr. Susilorningsih, MSc, Med, SpPA

KELOMPOK AKTIVITAS ENZIM SOD

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	KELOMPOK	N	Percent	N	Percent	N	Percent
SOD	KONTROL POSITIF	7	100,0%	0	0,0%	7	100,0%
	DOSIS EKSTRAK PROPOLIS 3,6 mg	7	100,0%	0	0,0%	7	100,0%
	DOSIS EKSTRAK PROPOLIS 7,2 mg	7	100,0%	0	0,0%	7	100,0%
	DOSIS EKSTRAK PROPOLIS 14,4 mg	7	100,0%	0	0,0%	7	100,0%

Descriptives

KELOMPOK				Statistic	Std. Error
SOD	KONTROL POSITIF	Mean		23,7071	1,93775
		95% Confidence Interval for Mean	Lower Bound	18,9656	
			Upper Bound	28,4487	
		5% Trimmed Mean		23,6229	
		Median		23,4000	
		Variance		26,284	
		Std. Deviation		5,12682	
		Minimum		17,02	
		Maximum		31,91	
		Range		14,89	
		Interquartile Range		8,51	
		Skewness		,367	,794
		Kurtosis		-,504	1,587
		DOSIS EKSTRAK PROPOLIS 3,6 mg		Mean	
95% Confidence Interval for Mean	Lower Bound			47,7823	
	Upper Bound			55,5605	
5% Trimmed Mean				51,7388	
Median				51,0600	
Variance				17,683	
Std. Deviation				4,20513	
Minimum				44,68	
Maximum				57,45	
Range				12,77	
Interquartile Range				6,38	
Skewness				-,369	,794
Kurtosis				,186	1,587
DOSIS EKSTRAK PROPOLIS 7,2 mg				Mean	
		95% Confidence Interval for Mean	Lower Bound	64,4198	
			Upper Bound	76,0059	

	5% Trimmed Mean		70,2132	
	Median		70,2100	
	Variance		39,235	
	Std. Deviation		6,26376	
	Minimum		61,70	
	Maximum		78,72	
	Range		17,02	
	Interquartile Range		12,77	
	Skewness		-,001	,794
	Kurtosis		-1,200	1,587
DOSIS EKSTRAK PROPOLIS 14,4 mg	Mean		80,8514	1,73681
	95% Confidence Interval for Mean	Lower Bound	76,6016	
		Upper Bound	85,1012	
	5% Trimmed Mean		80,8516	
	Median		80,8500	
	Variance		21,115	
	Std. Deviation		4,59515	
	Minimum		74,47	
	Maximum		87,23	
	Range		12,76	
	Interquartile Range		8,51	
	Skewness		,000	,794
	Kurtosis		-1,202	1,587

Tests of Normality

	KELOMPOK	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
SOD	KONTROL POSITIF	,111	7	,200	,984	7	,976
	DOSIS EKSTRAK PROPOLIS 3,6 mg	,156	7	,200*	,979	7	,954
	DOSIS EKSTRAK PROPOLIS 7,2 mg	,132	7	,200*	,965	7	,863
	DOSIS EKSTRAK PROPOLIS 14,4 mg	,109	7	,200*	,978	7	,949

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
SOD	Based on Mean	,478	3	24	,701
	Based on Median	,493	3	24	,691
	Based on Median and with adjusted df	,493	3	22,383	,691
	Based on trimmed mean	,472	3	24	,704

Oneway

Descriptives

SOD

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KONTROL POSITIF	7	23,7071	5,12682	1,93775	18,9656	28,4487	17,02	31,91
DOSIS EKSTRAK PROPOLIS 3,6 mg	7	51,6714	4,20513	1,58939	47,7823	55,5605	44,68	57,45
DOSIS EKSTRAK PROPOLIS 7,2 mg	7	70,2129	6,26376	2,36748	64,4198	76,0059	61,70	78,72
DOSIS EKSTRAK PROPOLIS 14,4 mg	7	80,8514	4,59515	1,73681	76,6016	85,1012	74,47	87,23
Total	28	56,6107	22,59434	4,26993	47,8495	65,3719	17,02	87,23

Test of Homogeneity of Variances

SOD

Levene Statistic	df1	df2	Sig.
,478	3	24	,701

ANOVA

SOD

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13157,705	3	4385,902	168,175	,000
Within Groups	625,905	24	26,079		
Total	13783,609	27			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SOD

LSD

(I) KELOMPOK	(J) KELOMPOK	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
KONTROL POSITIF	DOSIS EKSTRAK PROPOLIS 3,6 mg	-27,96429*	2,72970	,000	-33,5981	-22,3305
	DOSIS EKSTRAK PROPOLIS 7,2 mg	-46,50571*	2,72970	,000	-52,1395	-40,8719
	DOSIS EKSTRAK PROPOLIS 14,4 mg	-57,14429*	2,72970	,000	-62,7781	-51,5105
DOSIS EKSTRAK PROPOLIS 3,6 mg	KONTROL POSITIF	27,96429	2,72970	,000	22,3305	33,5981
	DOSIS EKSTRAK PROPOLIS 7,2 mg	-18,54143*	2,72970	,000	-24,1752	-12,9076
	DOSIS EKSTRAK PROPOLIS 14,4 mg	-29,18000*	2,72970	,000	-34,8138	-23,5462
DOSIS EKSTRAK PROPOLIS 7,2 mg	KONTROL POSITIF	46,50571	2,72970	,000	40,8719	52,1395
	DOSIS EKSTRAK PROPOLIS 3,6 mg	18,54143*	2,72970	,000	12,9076	24,1752
	DOSIS EKSTRAK PROPOLIS 14,4 mg	-10,63857*	2,72970	,001	-16,2724	-5,0048
DOSIS EKSTRAK PROPOLIS 14,4 mg	KONTROL POSITIF	57,14429	2,72970	,000	51,5105	62,7781
	DOSIS EKSTRAK PROPOLIS 3,6 mg	29,18000*	2,72970	,000	23,5462	34,8138
	DOSIS EKSTRAK PROPOLIS 7,2 mg	10,63857*	2,72970	,001	5,0048	16,2724

*. The mean difference is significant at the 0.05 level.

KELOMPOK DERAJAT FIBROSIS SEL HEPAR
Case Processing Summary

	KELOMPOK	Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
SKOR	K	7	100,0%	0	0,0%	7	100,0%
	P1	7	100,0%	0	0,0%	7	100,0%
	P2	7	100,0%	0	0,0%	7	100,0%
	P3	7	100,0%	0	0,0%	7	100,0%

Descriptives

KELOMPOK		Statistic	Std. Error		
SKOR	K	Mean	2,286	,4738	
		95% Confidence Interval for Mean	Lower Bound	1,126	
			Upper Bound	3,445	
		5% Trimmed Mean		2,373	
		Median		3,000	
		Variance		1,571	
		Std. Deviation		1,2536	
		Minimum		,0	
		Maximum		3,0	
		Range		3,0	
		Interquartile Range		2,0	
		Skewness		-1,450	,794
		Kurtosis		,521	1,587
P1	P1	Mean	,857	,2608	
		95% Confidence Interval for Mean	Lower Bound	,219	
			Upper Bound	1,495	
		5% Trimmed Mean		,841	
		Median		1,000	
		Variance		,476	
		Std. Deviation		,6901	
		Minimum		,0	
		Maximum		2,0	
		Range		2,0	
		Interquartile Range		1,0	
		Skewness		,174	,794
		Kurtosis		,336	1,587
P2	P2	Mean	1,143	,1429	
		95% Confidence Interval for Mean	Lower Bound	,793	
			Upper Bound	1,492	
		5% Trimmed Mean		1,103	
		Median		1,000	
		Variance		,143	
		Std. Deviation		,3780	
		Minimum		1,0	
		Maximum		2,0	
		Range		1,0	

	Interquartile Range		,0	
	Skewness		2,646	,794
	Kurtosis		7,000	1,587
P3	Mean		,714	,1844
	95% Confidence Interval for Mean	Lower Bound	,263	
		Upper Bound	1,166	
	5% Trimmed Mean		,738	
	Median		1,000	
	Variance		,238	
	Std. Deviation		,4880	
	Minimum		,0	
	Maximum		1,0	
	Range		1,0	
	Interquartile Range		1,0	
	Skewness		-1,230	,794
	Kurtosis		-,840	1,587

Tests of Normality

	KELOMPOK	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
SKOR	K	,430	7	,000	,650	7	,001
	P1	,296	7	,063	,840	7	,099
	P2	,504	7	,000	,453	7	,000
	P3	,435	7	,000	,600	7	,000

a. Lilliefors Significance Correction

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
SKOR	Based on Mean	4,708	3	24	,010
	Based on Median	,745	3	24	,536
	Based on Median and with adjusted df	,745	3	11,436	,547
	Based on trimmed mean	3,823	3	24	,023

SKOR DERAJAT FIBROSIS SEL HEPAR

Oneway

Test of Homogeneity of Variances

DERAJAT FIBROSIS SEL HEPAR

Levene Statistic	df1	df2	Sig.
4,708	3	24	,010

ANOVA

DERAJAT FIBROSIS SEL HEPAR

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10,679	3	3,560	5,863	,004
Within Groups	14,571	24	,607		
Total	25,250	27			

Kruskal-Wallis Test

Ranks

	KELOMPOK	N	Mean Rank
SKOR	K	7	20,93
	P1	7	11,79
	P2	7	14,79
	P3	7	10,50
	Total	28	

Test Statistics^{a,b}

	SKOR
Chi-Square	8,348
df	3
Asymp. Sig.	,039

a. Kruskal Wallis Test

b. Grouping Variable:

Mann-Whitney Test

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	K	7	9,71	68,00
	P1	7	5,29	37,00
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	9,000
Wilcoxon W	37,000
Z	-2,084
Asymp. Sig. (2-tailed)	,037
Exact Sig. [2*(1-tailed Sig.)]	,053 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test

Ranks

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	K	7	9,43	66,00
	P2	7	5,57	39,00
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	11,000
Wilcoxon W	39,000
Z	-1,890
Asymp. Sig. (2-tailed)	,059
Exact Sig. [2*(1-tailed Sig.)]	,097 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	K	7	9,79	68,50
	P3	7	5,21	36,50
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	8,500
Wilcoxon W	36,500
Z	-2,191
Asymp. Sig. (2-tailed)	,028
Exact Sig. [2*(1-tailed Sig.)]	,038 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	K	7	9,71	68,00
	P1	7	5,29	37,00
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	9,000
Wilcoxon W	37,000
Z	-2,084
Asymp. Sig. (2-tailed)	,037
Exact Sig. [2*(1-tailed Sig.)]	,053 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	P1	7	6,64	46,50
	P2	7	8,36	58,50
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	18,500
Wilcoxon W	46,500
Z	-,964
Asymp. Sig. (2-tailed)	,335
Exact Sig. [2*(1-tailed Sig.)]	,456 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	P1	7	7,86	55,00
	P3	7	7,14	50,00
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	22,000
Wilcoxon W	50,000
Z	-,378
Asymp. Sig. (2-tailed)	,705
Exact Sig. [2*(1-tailed Sig.)]	,805 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	K	7	9,43	66,00
	P2	7	5,57	39,00
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	11,000
Wilcoxon W	39,000
Z	-1,890
Asymp. Sig. (2-tailed)	,059
Exact Sig. [2*(1-tailed Sig.)]	,097 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	P1	7	6,64	46,50
	P2	7	8,36	58,50
	Total	14		

Test Statistics^a

	SKOR
Mann-Whitney U	18,500
Wilcoxon W	46,500
Z	-,964
Asymp. Sig. (2-tailed)	,335
Exact Sig. [2*(1-tailed Sig.)]	,456 ^b

a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Mann-Whitney Test**Ranks**

	KELOMPOK	N	Mean Rank	Sum of Ranks
SKOR	P2	7	8,86	62,00
	P3	7	6,14	43,00
	Total	14		

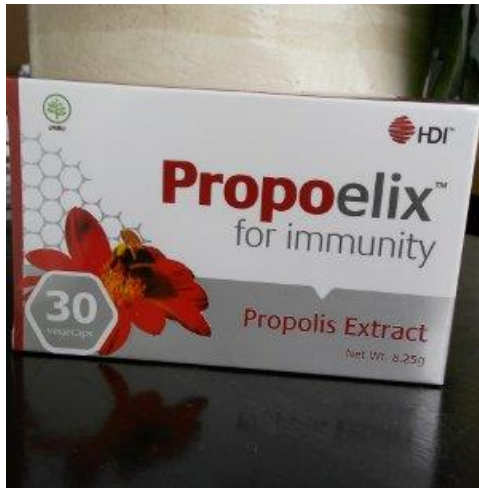
Test Statistics^a

	SKOR
Mann-Whitney U	15,000
Wilcoxon W	43,000
Z	-1,693
Asymp. Sig. (2-tailed)	,091
Exact Sig. [2*(1-tailed Sig.)]	,259 ^b

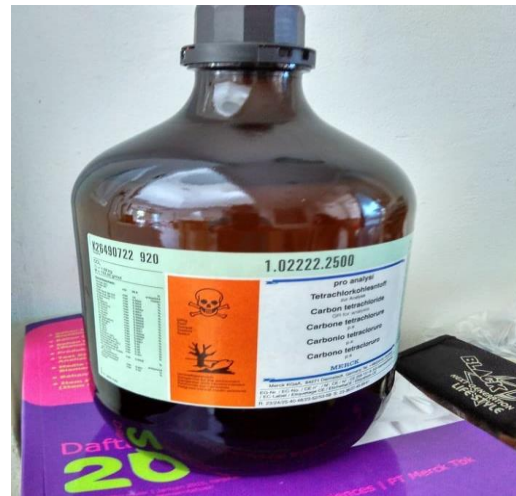
a. Grouping Variable: KELOMPOK

b. Not corrected for ties.

Lampiran 6 Dokumentasi



Ekstrak CMCE Propolis



Karbon Tetraklorida



Sampel Darah Tikus



Alat Sentrifuge



Darah Setelah *Disentrifuge*



Pembedahan Tikus



Pengambilan Organ



Organ Hati



Peneliti



Tim Peneliti Ekstrak CMCE Propolis Pada Tikus Jantan Wistar Yang Diinduksi Karbon Tetraklorida (CCL₄)