

**Lampiran 1 Foto-foto percobaan**



*Mencit Swiss Webster*



*sarung tangan*



*Improved Neubouer*



*syringe 1 mL*



*Neraca analitis digital*



*Mikropipet*



*Kaset organ*



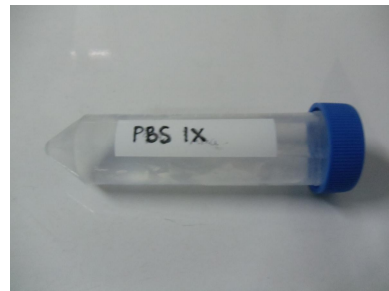
*Mencit dan kandang*



Kandang mencit

*Dissecting set*

Minyak buah merah



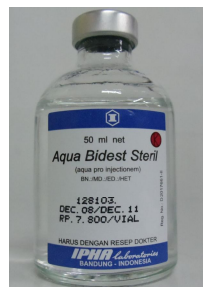
PBS 1%



Mikroskop cahaya



Kaca Arloji



Aquabidest



pembedahan mencit

**Lampiran 2 Perhitungan Dosis Minyak Buah Merah**

Dosis Minyak Buah Merah

Dosis manusia 70 kg = 2 x 15 mL (1 sendok makan) = 30 mL

Dosis Mencit 20 g = 30 mL x 0,0026 = 0,078 mL

Dosis Mencit 25 g = 25 : 20 x 0,078 = 0,0975 mL → 0,1mL.

Maka : Dosis 1 = 0,1 mL/hari (BM 1)

Dosis 2 = 0,1 mL/hari x 2 = 0,2 mL/hari (BM 2)

Dosis 3 = 0,1 mL/hari x 2 x 2 = 0,4 mL/hari (BM 3)

**Lampiran 3 Hasil Analisis Rata-rata Berat Testis dengan Menggunakan Analisis Varian (ANOVA) Satu Arah**

ONEWAY HASIL BY PERLAKUAN  
/STATISTICS DESCRIPTIVES HOMOGENEITY  
/MISSING ANALYSIS  
/POSTHOC=TUKEY LSD ALPHA(0.05).

**Oneway - BERAT TESTIS**

**Descriptives**

HASIL

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KONTROL NEGATIF	6	.2133	.01033	.00422	.2025	.2242	.20	.23
BM 1	6	.1950	.03017	.01232	.1633	.2267	.16	.25
BM 2	6	.2933	.08847	.03612	.2005	.3862	.18	.38
BM 3	6	.3550	.03017	.01232	.3233	.3867	.32	.39
Total	24	.2642	.08010	.01635	.2303	.2980	.16	.39

**Test of Homogeneity of Variances**

HASIL

Levene Statistic	df1	df2	Sig.
8.744	3	20	.001

**ANOVA**

HASIL

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.099	3	.033	13.509	.000
Within Groups	.049	20	.002		
Total	.148	23			

#### Lampiran 4 Hasil Analisis Rata-rata Berat Testis Menggunakan Uji Beda Rata-rata Tukey HSD

##### Multiple Comparisons

HASIL  
Tukey HSD

(I) PERLAKUAN	(J) PERLAKUAN	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
KN	BM1	.01833	.02851	.917	-.0615	.0981
	BM2	-.08000	.02851	.049	-.1598	-.0002
	BM3	-.14167	.02851	.000	-.2215	-.0619
BM1	KN	-.01833	.02851	.917	-.0981	.0615
	BM2	-.09833	.02851	.012	-.1781	-.0185
	BM3	-.16000	.02851	.000	-.2398	-.0802
BM2	KN	.08000	.02851	.049	.0002	.1598
	BM1	.09833	.02851	.012	.0185	.1781
	BM3	-.06167	.02851	.168	-.1415	.0181
BM3	KN	.14167	.02851	.000	.0619	.2215
	BM1	.16000	.02851	.000	.0802	.2398
	BM2	.06167	.02851	.168	-.0181	.1415

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

##### Homogeneous Subsets

HASIL

PERLAKUAN	N	Subset for alpha = 0.05	
		1	2
Tukey HSD <sup>a</sup>			
BM 1	6	.1950	
KONTROL NEGATIF	6	.2133	
BM 2	6		.2933
BM 3	6		.3550
Sig.		.917	.168

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Lampiran 5 Hasil Analisis Rata-rata Motilitas Spermatozoa Menggunakan Analisis Varians (ANOVA) Satu Arah**

ONEWAY HASIL BY PERLAKUAN  
/STATISTICS DESCRIPTIVES HOMOGENEITY  
/MISSING ANALYSIS  
/POSTHOC=TUKEY LSD ALPHA(0.05).

**Oneway - MOTILITAS SPERMA**

**Descriptives**

HASIL	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KONTROL NEGATIF	6	.00823117	.001370395	.000559462	.00679302	.00966931	.006522	.010000
BM 1	6	.00838717	.000680870	.000277964	.00767264	.00910170	.007500	.009434
BM 2	6	.01133833	.000671962	.000274328	.01063315	.01204351	.010714	.012500
BM 3	6	.01236033	.002227321	.000909300	.01002290	.01469776	.009375	.015015
Total	24	.01007925	.002257099	.000460728	.00912616	.01103234	.006522	.015015

**Test of Homogeneity of Variances**

HASIL	Levene Statistic	df1	df2	Sig.
	4.313	3	20	.017

**ANOVA**

HASIL	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.000	3	.000	13.482	.000
Within Groups	.000	20	.000		
Total	.000	23			

**Lampiran 6 Hasil Analisis Rata-rata Motilitas Spermatozoa menggunakan Uji beda Rata-rata Tukey**

**Multiple Comparisons**

HASIL  
Tukey HSD

(I) PERLAKUAN	(J) PERLAKUAN	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
KN	BM1	-.00450	.00363	.609	-.0147	.0057
	BM2	-.00217	.00363	.932	-.0123	.0080
	BM3	-.00367	.00363	.745	-.0138	.0065
BM1	KN	.00450	.00363	.609	-.0057	.0147
	BM2	.00233	.00363	.917	-.0078	.0125
	BM3	.00083	.00363	.996	-.0093	.0110
BM2	KN	.00217	.00363	.932	-.0080	.0123
	BM1	-.00233	.00363	.917	-.0125	.0078
	BM3	-.00150	.00363	.976	-.0117	.0087
BM3	KN	.00367	.00363	.745	-.0065	.0138
	BM1	-.00083	.00363	.996	-.0110	.0093
	BM2	.00150	.00363	.976	-.0087	.0117

**Homogeneous Subsets**

HASIL

PERLAKUAN	N	Subset for alpha = 0.05	
		1	2
Tukey HSD <sup>a</sup>	KONTROL NEGATIF	6	.00823117
	BM 1	6	.00838717
	BM 2	6	.01133833
	BM 3	6	.01236033
	Sig.	.997	.591

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Lampiran 7 Hasil Analisis Rata-rata Viabilitas Spermatozoa  
Menggunakan Analisis Varian (ANOVA) Satu Arah**

**Oneway - VIABILITAS SPERMA**

ONEWAY HASIL BY PERLAKUAN  
/STATISTICS DESCRIPTIVES HOMOGENEITY  
/MISSING ANALYSIS  
/POSTHOC=TUKEY LSD ALPHA(0.05).

**Descriptives**

HASIL

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KONTROL NEGATIF	6	37.6667	17.61155	7.18988	19.1845	56.1489	11.50	56.00
BM 1	6	28.0833	10.38950	4.24149	17.1802	38.9864	11.50	41.00
BM 2	6	47.1667	7.78888	3.17980	38.9927	55.3406	34.00	57.50
BM 3	6	62.5833	9.73867	3.97579	52.3632	72.8034	51.50	80.50
Total	24	43.8750	17.14468	3.49964	36.6354	51.1146	11.50	80.50

**Test of Homogeneity of Variances**

HASIL

Levene Statistic	df1	df2	Sig.
2.650	3	20	.077

**ANOVA**

HASIL

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3892.542	3	1297.514	9.048	.001
Within Groups	2868.083	20	143.404		
Total	6760.625	23			



**Lampiran 8 Hasil Analisis Rata-rata Viabilitas Spermatozoa menggunakan Uji beda Rata-rata Tukey**

**Multiple Comparisons**

HASIL

Tukey HSD

(I) PERLAKUAN	(J) PERLAKUAN	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
KN	BM1	9.58333	6.91385	.522	-9.7681	28.9348
	BM2	-9.50000	6.91385	.529	-28.8514	9.8514
	BM3	-24.91667	6.91385	.009	-44.2681	-5.5652
BM1	KN	-9.58333	6.91385	.522	-28.9348	9.7681
	BM2	-19.08333	6.91385	.054	-38.4348	.2681
	BM3	-34.50000	6.91385	.000	-53.8514	-15.1486
BM2	KN	9.50000	6.91385	.529	-9.8514	28.8514
	BM1	19.08333	6.91385	.054	-.2681	38.4348
	BM3	-15.41667	6.91385	.149	-34.7681	3.9348
BM3	KN	24.91667	6.91385	.009	5.5652	44.2681
	BM1	34.50000	6.91385	.000	15.1486	53.8514
	BM2	15.41667	6.91385	.149	-3.9348	34.7681

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

**Homogeneous Subsets**

HASIL

	PERLAKUAN	N	Subset for alpha = 0.05	
			1	2
Tukey HSD <sup>a</sup>	BM 1	6	28.0833	
	KONTROL NEGATIF	6	37.6667	
	BM 2	6	47.1667	47.1667
	BM 3	6		62.5833
	Sig.		.054	.149

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Lampiran 9 Hasil Analisis Rata-rata Jumlah Spermatozoa Menggunakan Analisis Varian (ANOVA) Satu Arah**

ONEWAY HASIL BY PERLAKUAN  
/STATISTICS DESCRIPTIVES HOMOGENEITY  
/MISSING ANALYSIS  
/POSTHOC=TUKEY LSD ALPHA(0.05).

**Oneway - JUMLAH SPERMA**

**Descriptives**

HASIL

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
KONTROL NEGATIF	6	501.0000	49.10397	20.04661	449.4685	552.5315	408.00	540.00
BM 1	6	512.8333	19.98416	8.15850	491.8612	533.8054	480.00	534.00
BM 2	6	607.0000	50.80945	20.74287	553.6788	660.3212	534.00	692.00
BM 3	6	457.3333	43.55533	17.78139	411.6248	503.0418	414.00	520.00
Total	24	519.5417	68.49054	13.98057	490.6206	548.4627	408.00	692.00

**Test of Homogeneity of Variances**

HASIL

	Levene Statistic	df1	df2	Sig.
	.649	3	20	.593

**ANOVA**

HASIL

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	71445.792	3	23815.264	13.069	.000
Within Groups	36446.167	20	1822.308		
Total	107891.958	23			

**Lampiran 10 Hasil Analisis Rata-rata Jumlah Spermatozoa menggunakan Uji beda Rata-rata Tukey**

**Multiple Comparisons**

HASIL  
Tukey HSD

(I) PERLAKUAN	(J) PERLAKUAN	Mean Difference (I- J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
KN	BM1	-11.83333	24.64622	.963	-80.8165	57.1499
	BM2	-106.00000	24.64622	.002	-174.9832	-37.0168
	BM3	43.66667	24.64622	.315	-25.3165	112.6499
BM1	KN	11.83333	24.64622	.963	-57.1499	80.8165
	BM2	-94.16667	24.64622	.005	-163.1499	-25.1835
	BM3	55.50000	24.64622	.144	-13.4832	124.4832
BM2	KN	106.00000	24.64622	.002	37.0168	174.9832
	BM1	94.16667	24.64622	.005	25.1835	163.1499
	BM3	149.66667	24.64622	.000	80.6835	218.6499
BM3	KN	-43.66667	24.64622	.315	-112.6499	25.3165
	BM1	-55.50000	24.64622	.144	-124.4832	13.4832
	BM2	-149.66667	24.64622	.000	-218.6499	-80.6835

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

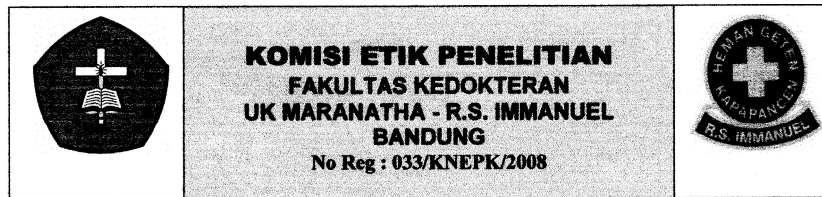
**Homogeneous Subsets**

HASIL		N	Subset for alpha = 0.05	
PERLAKUAN			1	2
Tukey HSD <sup>a</sup>	BM 3	6	457.3333	
	KONTROL NEGATIF	6	501.0000	
	BM 1	6	512.8333	
	BM 2	6		607.0000
	Sig.		.144	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 6,000.

**Lampiran 11 Surat Keputusan Persetujuan Komisi Etik**



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## **SURAT KEPUTUSAN**

NO: 120/KEP FK UKM - RSI/IV/2011

- Menimbang:
- Bahwa dalam upaya melindungi hak asasi dan kesejahteraan subjek penelitian kesehatan harus mendapat penilaian dan rekomendasi etik penelitian kesehatan dari Komite Etik Penelitian Kesehatan
  - bahwa sehubungan dengan butir (a) tersebut diatas telah diajukan permohonan penilaian dan rekomendasi etik penelitian kesehatan berjudul:
 

**Pengaruh Minyak Buah Merah (Pandanus conoideus Lam.) Terhadap Berat Testis, Jumlah, Viabilitas, dan Motilitas Spermatozoa pada Mencit Jantan Galur SWISS WEBSTER**

oleh Christian Kurniawan

selaku penanggung jawab penelitian
  - bahwa terhadap permohonan tersebut pada butir (b) telah dilakukan pengkajian yang mendalam oleh Komite Etik Penelitian Kesehatan
  - bahwa sehubungan dengan butir (a), (b) dan (c) perlu dikeluarkan surat keputusan hasil penilaian dan rekomendasi kelayakan etik penelitian (*ethical approval*)
- Mengingat:
- Surat Keputusan Dekan Fakultas Kedokteran Universitas Kristen Maranatha No. 317/III/S.Kep./FK-UKM/2011, tentang PEMBENTUKAN DAN PENGANGKATAN PENGURUS KOMISI ETIK PENELITIAN FAKULTAS KEDOKTERAN UNIVERSITAS KRISTEN MARANATHA – RUMAH SAKIT IMMANUEL (KEP FK UKM-RSI).

### **MEMUTUSKAN**

- Menetapkan
- Pertama Menyetujui dan mengizinkan pelaksanaan penelitian berjudul:
 

**Pengaruh Minyak Buah Merah (Pandanus conoideus Lam.) Terhadap Berat Testis, Jumlah, Viabilitas, dan Motilitas Spermatozoa pada Mencit Jantan Galur SWISS WEBSTER**

dengan penanggung jawab:  
**Christian Kurniawan**
  - Kedua Surat keputusan ini berlaku sejak ditetapkan dengan ketentuan akan ditinjau kembali apabila di kemudian hari ternyata terdapat kekeliruan

Ditetapkan di : Bandung  
Pada tanggal : 2 April 2011

Ketua

Prof. DR H.R Muchtan Sujatno, dr, SpFK(K)

Sekretaris



Dr. Diana Krisanti Jasaputra, dr, M Kes

## **RIWAYAT HIDUP**

Nama : Christian Kurniawan

NRP : 0810054

Tempat dan Tanggal Lahir : Jember, 24 September 1989

Alamat : Jalan Baros Pasar No. 30-32, Cimahi Selatan.

Riwayat Pendidikan :

Tahun 1996 lulus TKK Santa Theresia Cimahi

Tahun 2002 lulus SD Santo Yusup Cimahi

Tahun 2005 lulus SMP Santo Mikael Cimahi

Tahun 2008 lulus SMA Kristen BPK PENABUR Bandung