

DAFTAR PUSTAKA

- Arome, D., Chinedu, E., 2014. The importance of toxicity testing. *J. Pharm. Biosci.* 4, 146–148.
- Aufia W., Surya A., Nurul M. 2018. Uji toksisitas sub akut infusa daun afrika (*Vernonia amygdalina* Del.) terhadap histopatologi hati mencit (*Mus musculus*) galur BALB/c. *Pharmasipha*. Vol.2 No.1: 1-3.
- Baker, H.J., Lindsey, J.R., dan Weisbroth S.H. 2013, *The Laboratory Rat Volume I Biology ang Disease*. Academic Press, New York, London. Hlm : 38.
- BPOM (Badan Pengawas Obat dan Makanan). 2014. Peraturan Kepala Badan Pengawas Obat dan Makanan Republik Indonesia Nomor 13 Tahun 2014 Tentang Pedoman Uji Klinik Obat Herbal. Kepala Badan Pengawas Obat dan Makanan Republik Indonesia.
- Brunzel N.A. 2013. Fundamentals of urine and Body Fluid Analysis. 3rd edition. Elsevier Saunders.
- Brunzel AN, 2004. Fundamental on urine and Body Analysis. 2nd edition. USA: Saunders.
- Chandran, 2015. Evaluation of in vivo anticancer activity of scaevola taccada roxb against ehrlich ascites carcinoma in swiss albino mice. *J. Pharm. Sci. Res.* 7, 626–632.
- Chandri, B. 2008. Studi Kandungan Urine Anjing Kampung (*Canis familiaris*) Umur 3 Bulan dan 6 Bulan dengan Menggunakan Reagen Strip Test. Skripsi. Fakultas Kedokteran Hewan Institut Pertanian Bogor. Bogor
- Cunny H, Hodgson E. Toxicity testing. In: Hodgson E, (ed). A test book on modern toxicology. 3rd edition. A John Wiley & Sons. Inc. Publication. 353-384.
- Davey, Patrick. 2005. Medicine At A Glance. Alih Bahasa: Rahmalia. A,dkk. Jakarta: Erlangga
- Departemen Kesehatan Republik Indonesia. 2011. Pedoman Pengendalian

- Tikus.<http://www.depkes.go.id/downloads/Pengendalian%20Tikus.pdf>.
(15 April 2021)
- Devkota BP. Ketones. October 30th 2015. [cited 2016 Dec 14]. Available from: <http://emedicine.medscape.com/article/2087982-overview#showall>
- DiBartola, S. P. (2005). Urinary system. In Ettinger, S. J. and Feldman, E. C. (Eds.), Veterinary Internal Medicine. Elsevier/W. B. Saunders, St. Louis, pp. 257–268.
- Ferdhyanti, A. U. 2019. Teknik Hitung Leukosit dan Eritrosit Urine. Sidoarjo: Uwais Inspirasi Indonesia.
- Gandasoebrata, R. 2013. Penuntun Laboratorium Klinis. Jakarta: Dian Rakyat.
- Gosselin, S., Ramaiah, L., Earl, L., 2009. Clinical Chemistry in Toxicity Testing: Scope and Methods, General and Applied Toxicology.
- Guyton A. C., Hall J. E. 1997. Buku Ajar Fisiologi Kedokteran. Edisi 9. Jakarta : EGC.
- Harkness, J. E., Turner, P. V., Wounde, S.V., & Wheler, C.L., 2010, Biology and Medicine of Rabbits and Rodent, Fifth Edition, United States of America, Wiley Blackwell.
- Henry J.B. 2001. Clinical Diagnosis and Management by Laboratory Methode. W. B.Saunders Company, Philadelphia.
- Kementerian Kesehatan, 2011. Pelayanan Kefarmasian. Pedoman Interpretasi Data Klinik.
- Kosman, R. 2012. Isolasi Dan Identifikasi Golongan Senyawa Kimia Fraksi Dietil Eter Daun Beruwash Laut (*Scaevola taccada* (Gaertn) Roxb.) Asal Kabupaten Pinrang Sulawesi Selatan. *As-Syifaa* vol.4, Fakultas Farmasi Universitas Muslim Indonesia, Makassar. Hlm: 219-227.
- LIPI. 2011. Hasil Identifikasi/determinasi Tumbuhan Beruwash Laut. Pusat Penelitian Biologi, Bogor.
- Loeshinari, R. 2012. Peran Analisa Urin dan Penanganan Penyakit Ginjal dan Traktus Urinarius. Majalah Kedokteran Nusantara. 45. (3): 167- 176

- Lotan Y, Daudon M, Bruye F, Talaska G, Strippoli G, Richard JJ, Tack I. 2013. Impact of fluid intake in the prevention of urinary system diseases: a brief review. *Lipp Will & Wilk.* 22(1): 1-10.
- Lu, Frank C. 2010. Toksikologi Dasar, Asas, Organ, Sasaran dan Penilaian Risiko. Edisi II. Penerjemah Edi Nugroho, UI Press, Jakarta. Hlm. 358, 360-361.
- Maysatria. 2011. *Scaevola taccada (online)*. National forest monitoring system, diakses tanggal 21 Februari 2021
- Mohammed, F., Dinna, J.M., Rasha, K.M., 2012, Detection The Ratio of Bilirubin in Human Body Using Laser Technology, International Journal of Modern Engineering Research (IJMER), Vol 2
- Moore, D. 2000. *Laboratory Animal Medicine and Science Series II*. University of Washington Health Science Centre. Washington.
- Moisio and E.W Moisio. 1998. Understanding Laboratory and Diagnostic Tests. Delmar Publishers.
- Mundt, A. L. and Shanahan, K. 2011. Graff's Textbook of Routine Urinalysis and Body Fluids. 2th Edition. Philadelphia: Lippincott Williams and Wilkins.
- Nugraha, J., Marpaung, F. R., Edijanto, S. P., Soehita, S., dan Anniwati, L. 2019. Analisis Cairan Tubuh & Urine. Surabaya: Airlangga University Press.
- Oktarlina, R.Z., Tarigan, A., Carolia, N., Utami, E.R., 2018. Hubungan Pengetahuan Keluarga dengan Penggunaan Obat Tradisional di Desa Nunggalrejo Kecamatan Punggur Kabupaten Lampung Tengah. JK Unila 2, 42–46.
- Ong, H. C. 2004. Tumbuhan liar: Khasiat obatan & kegunaan, (Online), (<http://www.scribd.com/doc/64909444/Bio-Divers-It-As>, Diakses 2 September 2016).
- OECD. 2008. Repeated Dose28– Day Oral Toxicity Studyin Rodents. *Organization for Economic Cooperation and Development Guidelines for the Testing of Chemicals.* 407(1) :1-13.

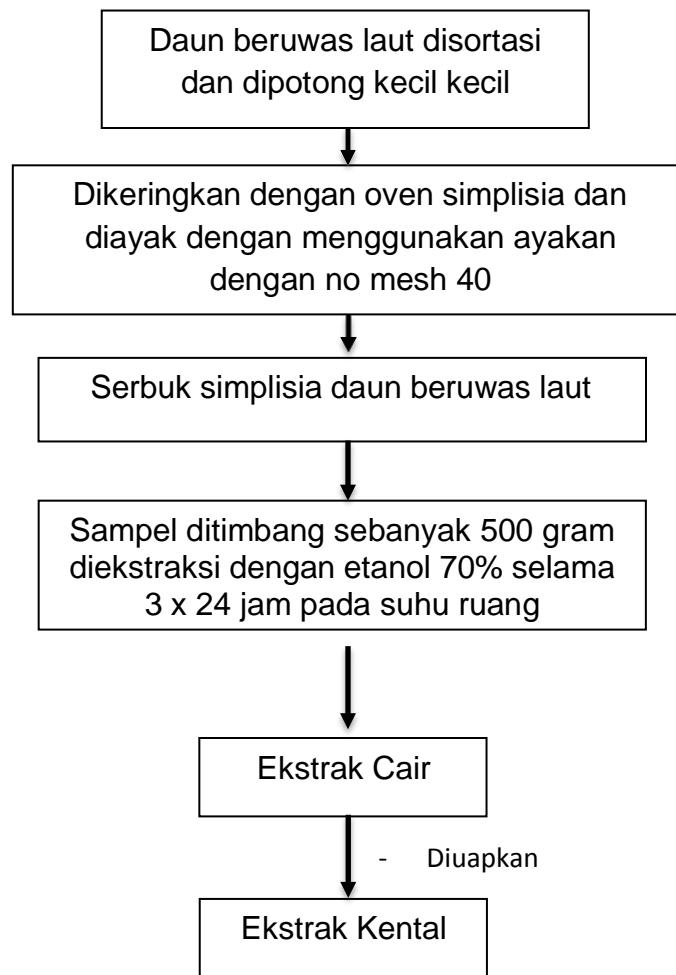
- Prajapati N.D, Purohit S.S, Arun Sharma K, Kumar T, Agrobios A. 2003. Hand Book of Medicinal Plants, A Complete Source Book, Jodhpur, pp. 463.
- Praptomo, A. J. 2018. Pengendalian Mutu Laboratorium Medis. Edisi 1. Yogyakarta: Deepublish.
- Priyanto. 2009. *Toksikologi :Mekanisme, Terapi Antidotum dan Penilaian Resiko*. Leskonfi, Depok.
- Quesenberry, K.E. & Carpenter, J. W., 2012, Ferrets, Rabbits, and Rodents: Clinical Medicine and Surgery, Third Edition, United States of America, Elsevier saunders
- Rahmawati. 2013. Aktivitas Antioksi dan Ekstrak Daun beruwas laut (*Scaevola taccada* (Gaertn.) Roxb) Pada Tikus Putih Diabetes.*jurnal JST Kesehatan* Bagian kedokteran Universitas Hasanuddin, Makassar. Vol.3 No.4 : 313–319.
- Rahmawati. 2014. Uji Efek Antiinflamasi Ekstrak n-Heksan Daun Beruwas Laut (*Scaevola taccada* (Gaertn.) Roxb) Pada Mencit Jantan (*Mus musculus*) Yang Dinduksi Dengan Karagen. *as-Syifaa* 06, 198–205.
- Rotoro, S.R. 1992. Tinjauan Beberapa Manfaat Klinik dari Analisa Urine Anjing Melalui Pemahaman Proses Pembentukan Urine dan Penetapan Nilai Urine Sehat. Skripsi. Fakultas Kedokteran Hewan Institut Pertanian Bogor.Bogor.
- Rudianto, Putri, R. marwit. S., Aswin, A., 2019. Aktivitas Antioksidan Dari Tanaman “Beruas Laut” (*Scaevola taccada*) Antioxidant analysis of *Scaevola taccada* (Beruas Laut). *Marinade* 02, 29–38.
- Said, S.S., El-Halfawy, O.M., El-Gowelli, H.M., Aloufy, A.K., Boraei, N.A., El-Khordagui, L.K., 2012. Bioburden-responsive antimicrobial PLGA ultrafine fibers for wound healing. *Eur. J. Pharm. Biopharm.* 80, 85–94.
- Sari, L.O.R.K., 2006. Pemanfaatan Obat Tradisional Dan Keamanannya. Maj. Ilmu Kefarmasian III, 1–7.
- Sastyarina, Y., 2013. Uji Toksisitas Akut dan Subakut Pada Pemberian Ekstrak Etanol Bawang Tiwai(*Eleutherine Americana* Merr.). *J. Trop. Pharm. Chem.* 2, 118–124.

- Sharp, P.E. and La Regina, M.C. 1998. The Laboratory Rat. Florida: CRC Press.
- Simerville, Jeff A., Pahira, John J., 2005. Urinalysis a comprehensive review. Available from : http://www.drplace.com/Urinalysis_a_comprehensive_review.16.30279.htm.
- Siswandi, GraceSS.2018. Uji Toksisitas Akut Ekstrak Etanol Kulit Batang Faloak (*Sterculia quadrifida* R.Br) Pada Tikus Sprague-Dawley. Traditional Medicine Journal. 23(2), p 127-134.
- Strasinger, S. K. and Lorenzo, S.D. 2008 Urinalysis and Body Fluids. 5 th Edition. Philadelphia: F. A. Davis Company.
- Wardini, T. H., 2011. Medicinal and Poisonous Plants (Online) (<http://www.proseanet.org/florakit/a/browser.php?docsid=747> , Diakses 20 Maret 2012)

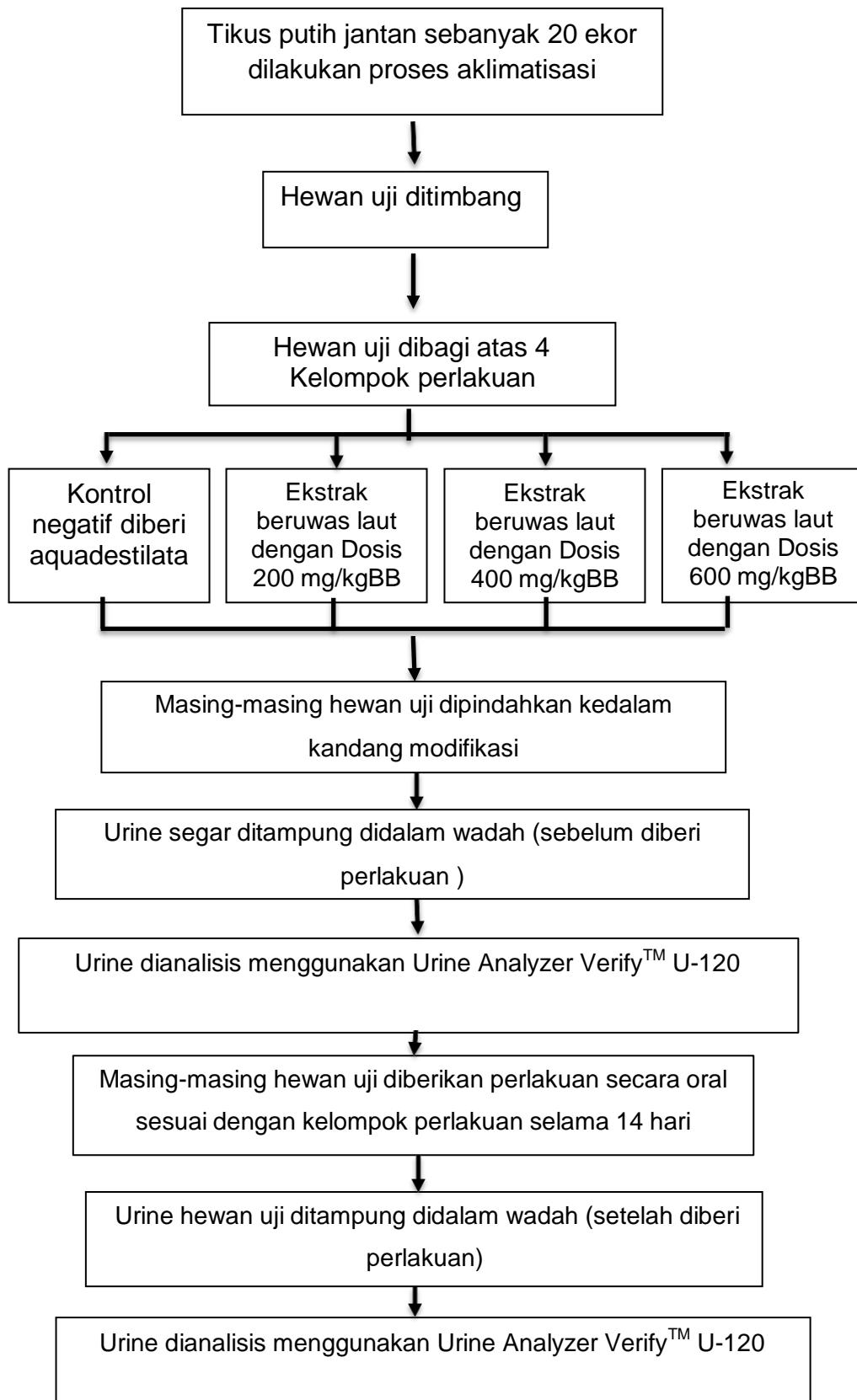
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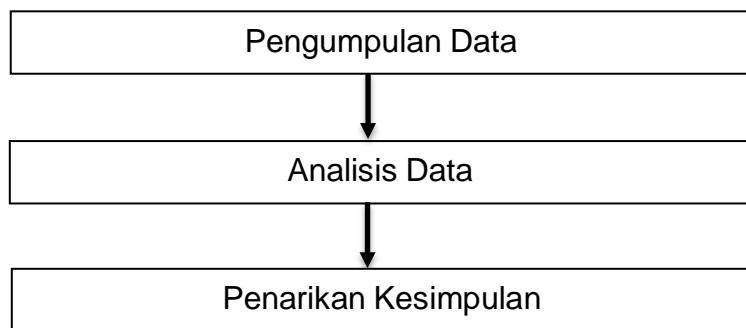
Lampiran 1. Skema Kerja

1. Penyiapan Sampel



2. Pengujian Toksisitas subakut





Lampiran 2. Perhitungan Dosis

Perhitungan dosis ekstrak etanol daun beruwas laut (*Scaevola taccada* (Gaertn.) Roxb.) Terhadap tikus wistar dengan bobot badan rerata 200 gram.

1. Dosis ekstrak etanol daun beruwas laut (*Scaevola taccada* (Gaertn.) Roxb.) 200 mg/kgBB

$$= \frac{200 \text{ mg}}{1000 \text{ gram}}$$

$$= \frac{40 \text{ mg}}{200 \text{ gram}}$$

Untuk tikus 200 mg volume pemberian 2 ml dibuat dalam stok 15 ml

$$= \frac{40 \text{ mg}}{2 \text{ ml}} \times 15 \text{ ml}$$

= 300 mg dalam larutan stok 15 ml

2. Dosis ekstrak etanol daun beruwas laut (*Scaevola taccada* (Gaertn.) Roxb.) 400 mg/kgBB

$$= \frac{400 \text{ mg}}{1000 \text{ gram}}$$

$$= \frac{80 \text{ mg}}{200 \text{ gram}}$$

Untuk tikus 400 mg volume pemberian 2 ml dibuat dalam stok 15 ml

$$= \frac{80 \text{ mg}}{2 \text{ ml}} \times 15 \text{ ml}$$

= 600 mg dalam larutan stok 15 ml

3. Dosis s ekstrak etanol daun beruwas laut (*Scaevola taccada* (Gaertn.) Roxb.) 600 mg/kgBB

$$= \frac{400 \text{ mg}}{1000 \text{ gram}}$$

Untuk tikus 600 mg volume pemberian 2 ml dibuat dalam stok 15 ml

$$\begin{aligned} &= \frac{120 \text{ mg}}{200 \text{ gram}} \\ &= \frac{120 \text{ mg}}{2 \text{ ml}} \times 15 \text{ ml} \\ &= 900 \text{ mg dalam larutan stok } 15 \text{ ml} \end{aligned}$$

Lampiran 3. Output Analisis Statistik

Tabel 4. Data hasil distribusi kolmogorov-sminrov

		Kelompok Perlakuan	Leukosit Awal	Leukosit Akhir	Selisih Leukosit	Nitrit Awal	Nitrit Akhir	Nitrit Selisih	Urobilin ogen Awal	Urobilinog en Akhir	Selisih Urobilinog en
N		12	12	12	12	12	12	12	12	12	12
Normal Parameters ^{a,b}	Mean	2.5000	3.7500	24.5833	20.8333	.0833	.3333	.2500	14.7500	22.2500	.5958
	Std. Deviation	1.16775	6.78401	33.80817	31.10344	.28868	.49237	.62158	5.25487	12.26136	.43089
Most Extreme	Absolute	.166	.460	.350	.415	.530	.417	.323	.499	.267	.326
Differences	Positive	.166	.460	.350	.415	.530	.417	.323	.334	.249	.254
	Negative	-.166	-.290	-.244	-.251	-.386	-.249	-.260	-.499	-.267	-.326
Test Statistic		.166	.460	.350	.415	.530	.417	.323	.499	.267	.204
Asymp. Sig. (2-tailed)		.200 ^{c,d}	.000 ^c	.000 ^c	.000 ^c	.000 ^c	.000 ^c	.001 ^c	.000 ^c	.018 ^c	.181 ^c

	Protein Akhir	Selisih Protein	pH Awal	pH Akhir	Selisih pH	Blood Awal	Blood Akhir	Selisih Blood	SG Awal	SG Akhir
N	12	12	12	12	12	12	12	12	12	12
Normal Parameters ^{a,b}	Mean	1.4917	1.0125	8.2500	8.4583	.2083	4.1667	21.6667	17.5000	1002.5000
	Std. Deviation	1.15086	1.00003	.50000	.14434	.54181	9.73124	56.98219	59.10315	3.37100
Most Extreme Differences	Absolute	.332	.211	.441	.530	.400	.499	.393	.366	.354
	Positive	.332	.211	.309	.386	.400	.499	.393	.366	.354
	Negative	-.238	-.172	-.441	-.530	-.267	-.334	-.352	-.236	-.229
Test Statistic		.332	.211	.441	.530	.400	.499	.393	.366	.354
Asymp. Sig. (2-tailed)		.001 ^c	.145 ^c	.000 ^c						

One-Sample Kolmogorov-Smirnov Test

	Selisih SG	Keton Awal	Keton Akhir	Selisih Keton	Bilirubn Awal	Bilirubin Akhir	Selisih Bilirubin	Glukosal Awal	Glukos a Akhir	Selisih Glukos a
N	12	12	12	12	12	12	12	12	12	12
Normal Parameters ^{a,b}	Mean	-1.2500	.1250	.5417	.4167	12.7500	30.5000	17.7500	.0000	.0000
	Std. Deviation	4.33013	.22613	.62006	.63365	7.68854	30.93836	33.32519	.00000 ^e	.000
Most Extreme Differences	Absolute	.280	.460	.277	.245	.460	.252	.203		
	Positive	.220	.460	.277	.245	.290	.252	.203		
	Negative	-.280	-.290	-.191	-.172	-.460	-.232	-.188		
Test Statistic		.280	.460	.277	.245	.460	.252	.203		
Asymp. Sig. (2-tailed)		.010 ^c	.000 ^c	.012 ^c	.046 ^c	.000 ^c	.034 ^c	.186 ^c		

Tabel 5. paired t-test glukosa, protein, bilirubin, urobilinogen, pH, darah, keton, nitrit, dan leukosit esterase

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Leukosit Awal	3.7500	12	6.78401	1.95837
	Leukosit Akhir	24.5833	12	33.80817	9.75958
Pair 2	Nitrit Awal	.0833	12	.28868	.08333
	Nitrit Akhir	.3333	12	.49237	.14213
Pair 3	Urobilinogen Awal	14.7500	12	5.25487	1.51695
	Urobilinogen Akhir	22.2500	12	12.26136	3.53955
Pair 4	Protein Awal	.5958	12	.43089	.12439
	Protein Akhir	1.4917	12	1.15086	.33222
Pair 5	pH Awal	8.2500	12	.50000	.14434
	pH Akhir	8.4583	12	.14434	.04167
Pair 6	Blood Awal	4.1667	12	9.73124	2.80917
	Blood Akhir	21.6667	12	56.98219	16.44934
Pair 7	SG Awal	1002.5000	12	3.37100	.97312
	SG Akhir	1001.2500	12	2.26134	.65279
Pair 8	Keton Awal	.1250	12	.22613	.06528
	Keton Akhir	.5417	12	.62006	.17899
Pair 9	Bilirubin Awal	12.7500	12	7.68854	2.21949
	Bilirubin Akhir	30.5000	12	30.93836	8.93113
Pair 10	Glukosal Awal	.0000 ^a	12	.00000	.00000
	Glukosa Akhir	.0000 ^a	12	.00000	.00000

Tabel 6. anova kadar leukosit

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2641.667	3	880.556	.881	.491
Within Groups	8000.000	8	1000.000		
Total	10641.667	11			

Tabel 7. post hoc kadar leukosit**Multiple Comparisons**

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	`Mean		Sig.	95% Confidence Interval	
		Difference (I-J)	Std. Error		Lower Bound	Upper Bound
Kontrol Negatif	Dosis 200 mg/kgBB	-23.33333	25.81989	.804	-106.0177	59.3510
	Dosis 400 mg/kgBB	-18.33333	25.81989	.890	-101.0177	64.3510
	Dosis 600 mg/kgBB	-41.66667	25.81989	.423	-124.3510	41.0177
Dosis 200 mg/kgBB	Kontrol Negatif	23.33333	25.81989	.804	-59.3510	106.017
	Dosis 400 mg/kgBB	5.00000	25.81989	.997	-77.6844	87.6844
	Dosis 600 mg/kgBB	-18.33333	25.81989	.890	-101.0177	64.3510
Dosis 400 mg/kgBB	Kontrol Negatif	18.33333	25.81989	.890	-64.3510	101.017
	Dosis 200 mg/kgBB	-5.00000	25.81989	.997	-87.6844	77.6844
	Dosis 600 mg/kgBB	-23.33333	25.81989	.804	-106.0177	59.3510
Dosis 600 mg/kgBB	Kontrol Negatif	41.66667	25.81989	.423	-41.0177	124.351
	Dosis 200 mg/kgBB	18.33333	25.81989	.890	-64.3510	101.017
	Dosis 400 mg/kgBB	23.33333	25.81989	.804	-59.3510	106.017

Tabel 8. anova kadar nitrit

Nitrit Selisih

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	2.917	3	.972	5.833	.021
Within Groups	1.333	8	.167		
Total	4.250	11			

Tabel 9. post hoc kadar nitrit**Multiple Comparisons**

Dependent Variable: Nitrit Selisih

Tukey HSD

(I) Kelompok		Mean	Std. Error	Sig.	95% Confidence Interval	
Perlakuan	(J) Kelompok Perlakuan				Lower Bound	Upper Bound
Kontrol Negatif	Dosis 200 mg/kgBB	-1.33333*	.33333	.017	-2.4008	-.2659
	Dosis 400 mg/kgBB	-.66667	.33333	.264	-1.7341	.4008
	Dosis 600 mg/kgBB	-.33333	.33333	.754	-1.4008	.7341
Dosis 200 mg/kgBB	Kontrol Negatif	1.33333*	.33333	.017	.2659	2.4008
	Dosis 400 mg/kgBB	.66667	.33333	.264	-.4008	1.7341
	Dosis 600 mg/kgBB	1.00000	.33333	.067	-.0675	2.0675
Dosis 400 mg/kgBB	Kontrol Negatif	.66667	.33333	.264	-.4008	1.7341
	Dosis 200 mg/kgBB	-.66667	.33333	.264	-1.7341	.4008
	Dosis 600 mg/kgBB	.33333	.33333	.754	-.7341	1.4008
Dosis 600 mg/kgBB	Kontrol Negatif	.33333	.33333	.754	-.7341	1.4008
	Dosis 200 mg/kgBB	-1.00000	.33333	.067	-2.0675	.0675
	Dosis 400 mg/kgBB	-.33333	.33333	.754	-1.4008	.7341

Tabel 10. anova kadar urobilinogen

Selisih Urobilinogen

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	958.500	3	319.500	2.127	.175
Within Groups	1201.500	8	150.188		
Total	2160.000	11			

Tabel 11. post hoc kadar urobilinogen**Multiple Comparisons**

Dependent Variable: Selisih Urobilinogen

Tukey HSD

(I) Kelompok		Mean	Std. Error	Sig.	95% Confidence Interval	
Perlakuan	(J) Kelompok Perlakuan				Lower Bound	Upper Bound
Kontrol Negatif	Dosis 200 mg/kgBB	-21.00000	10.00625	.232	-53.0435	11.0435
	Dosis 400 mg/kgBB	1.50000	10.00625	.999	-30.5435	33.5435
	Dosis 600 mg/kgBB	-4.50000	10.00625	.968	-36.5435	27.5435
Dosis 200 mg/kgBB	Kontrol Negatif	21.00000	10.00625	.232	-11.0435	53.0435
	Dosis 400 mg/kgBB	22.50000	10.00625	.190	-9.5435	54.5435
	Dosis 600 mg/kgBB	16.50000	10.00625	.407	-15.5435	48.5435
Dosis 400 mg/kgBB	Kontrol Negatif	-1.50000	10.00625	.999	-33.5435	30.5435
	Dosis 200 mg/kgBB	-22.50000	10.00625	.190	-54.5435	9.5435
	Dosis 600 mg/kgBB	-6.00000	10.00625	.929	-38.0435	26.0435
Dosis 600 mg/kgBB	Kontrol Negatif	4.50000	10.00625	.968	-27.5435	36.5435
	Dosis 200 mg/kgBB	-16.50000	10.00625	.407	-48.5435	15.5435
	Dosis 400 mg/kgBB	6.00000	10.00625	.929	-26.0435	38.0435

Tabel 12. anova kadar protein

Selisih Protein

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.556	3	2.519	5.849	.020
Within Groups	3.445	8	.431		
Total	11.001	11			

Tabel 13. post hoc kadar protein**Multiple Comparisons**

Dependent Variable: Selisih Protein

Tukey HSD

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol Negatif	Dosis 200 mg/kgBB	-1.43333	.53580	.105	-3.1492	.2825
	Dosis 400 mg/kgBB	.61667	.53580	.671	-1.0992	2.3325
	Dosis 600 mg/kgBB	.36667	.53580	.900	-1.3492	2.0825
Dosis 200 mg/kgBB	Kontrol Negatif	1.43333	.53580	.105	-.2825	3.1492
	Dosis 400 mg/kgBB	2.05000*	.53580	.021	.3342	3.7658
	Dosis 600 mg/kgBB	1.80000*	.53580	.040	.0842	3.5158
Dosis 400 mg/kgBB	Kontrol Negatif	-.61667	.53580	.671	-2.3325	1.0992
	Dosis 200 mg/kgBB	-2.05000*	.53580	.021	-3.7658	-.3342
	Dosis 600 mg/kgBB	-.25000	.53580	.964	-1.9658	1.4658
Dosis 600 mg/kgBB	Kontrol Negatif	-.36667	.53580	.900	-2.0825	1.3492
	Dosis 200 mg/kgBB	-1.80000*	.53580	.040	-3.5158	-.0842
	Dosis 400 mg/kgBB	.25000	.53580	.964	-1.4658	1.9658

Tabel 14. anova kadar pH

Selisih pH

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.729	3	.243	.778	.539
Within Groups	2.500	8	.313		
Total	3.229	11			

Tabel 15. post hoc kadar pH**Multiple Comparisons**

Dependent Variable: Selisih pH

Tukey HSD

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol Negatif	Dosis 200 mg/kgBB	-.50000	.45644	.702	-1.9617	.9617
	Dosis 400 mg/kgBB	-.66667	.45644	.501	-2.1283	.7950
	Dosis 600 mg/kgBB	-.33333	.45644	.882	-1.7950	1.1283
Dosis 200 mg/kgBB	Kontrol Negatif	.50000	.45644	.702	-.9617	1.9617
	Dosis 400 mg/kgBB	-.16667	.45644	.982	-1.6283	1.2950
	Dosis 600 mg/kgBB	.16667	.45644	.982	-1.2950	1.6283
Dosis 400 mg/kgBB	Kontrol Negatif	.66667	.45644	.501	-.7950	2.1283
	Dosis 200 mg/kgBB	.16667	.45644	.982	-1.2950	1.6283
	Dosis 600 mg/kgBB	.33333	.45644	.882	-1.1283	1.7950
Dosis 600 mg/kgBB	Kontrol Negatif	.33333	.45644	.882	-1.1283	1.7950
	Dosis 200 mg/kgBB	-.16667	.45644	.982	-1.6283	1.2950
	Dosis 400 mg/kgBB	-.33333	.45644	.882	-1.7950	1.1283

Tabel 16. anova kadar blood

Selisih Blood

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	11025.000	3	3675.000	1.073	.413
Within Groups	27400.000	8	3425.000		
Total	38425.000	11			

Tabel 17. post hoc kadar blood**Multiple Comparisons**

Dependent Variable: Selisih Blood

Tukey HSD

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Difference (I-J)	Mean		Lower Bound	Upper Bound
			Std. Error	Sig.		
Kontrol Negatif	Dosis 200 mg/kgBB	.00000	47.78424	1.000	-153.0219	153.0219
	Dosis 400 mg/kgBB	-70.00000	47.78424	.498	-223.0219	83.0219
	Dosis 600 mg/kgBB	.00000	47.78424	1.000	-153.0219	153.0219
Dosis 200 mg/kgBB	Kontrol Negatif	.00000	47.78424	1.000	-153.0219	153.0219
	Dosis 400 mg/kgBB	-70.00000	47.78424	.498	-223.0219	83.0219
	Dosis 600 mg/kgBB	.00000	47.78424	1.000	-153.0219	153.0219
Dosis 400 mg/kgBB	Kontrol Negatif	70.00000	47.78424	.498	-83.0219	223.0219
	Dosis 200 mg/kgBB	70.00000	47.78424	.498	-83.0219	223.0219
	Dosis 600 mg/kgBB	70.00000	47.78424	.498	-83.0219	223.0219
Dosis 600 mg/kgBB	Kontrol Negatif	.00000	47.78424	1.000	-153.0219	153.0219
	Dosis 200 mg/kgBB	.00000	47.78424	1.000	-153.0219	153.0219
	Dosis 400 mg/kgBB	-70.00000	47.78424	.498	-223.0219	83.0219

Tabel 18. anova kadar spesific gravity

Selisih SG

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	106.250	3	35.417	2.833	.106
Within Groups	100.000	8	12.500		
Total	206.250	11			

Tabel 19. post hoc kadar specific gravity**Multiple Comparisons**

Dependent Variable: Selisih SG

Tukey HSD

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Mean Differenc e (I-J)	95% Confidence Interval			
			Std. Error	Sig.	Lower	Upper
					Bound	Bound
Kontrol Negatif	Dosis 200 mg/kgBB	5.00000	2.88675	.369	-4.2444	14.2444
	Dosis 400 mg/kgBB	6.66667	2.88675	.175	-2.5777	15.9111
	Dosis 600 mg/kgBB	.00000	2.88675	1.000	-9.2444	9.2444
Dosis 200 mg/kgBB	Kontrol Negatif	-5.00000	2.88675	.369	-14.2444	4.2444
	Dosis 400 mg/kgBB	1.66667	2.88675	.936	-7.5777	10.9111
	Dosis 600 mg/kgBB	-5.00000	2.88675	.369	-14.2444	4.2444
Dosis 400 mg/kgBB	Kontrol Negatif	-6.66667	2.88675	.175	-15.9111	2.5777
	Dosis 200 mg/kgBB	-1.66667	2.88675	.936	-10.9111	7.5777
	Dosis 600 mg/kgBB	-6.66667	2.88675	.175	-15.9111	2.5777
Dosis 600 mg/kgBB	Kontrol Negatif	.00000	2.88675	1.000	-9.2444	9.2444
	Dosis 200 mg/kgBB	5.00000	2.88675	.369	-4.2444	14.2444
	Dosis 400 mg/kgBB	6.66667	2.88675	.175	-2.5777	15.9111

Tabel 20. anova kadar keton

Selisih Keton

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.417	3	1.139	9.111	.006
Within Groups	1.000	8	.125		
Total	4.417	11			

Tabel 21. post hoc kadar keton**Multiple Comparisons**

Dependent Variable: Selisih Keton

Tukey HSD

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Difference (I-J)	Mean Error	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol Negatif	Dosis 200 mg/kgBB	-1.33333*	.28868	.007	-2.2578	-.4089
	Dosis 400 mg/kgBB	-.16667	.28868	.936	-1.0911	.7578
	Dosis 600 mg/kgBB	-.16667	.28868	.936	-1.0911	.7578
Dosis 200 mg/kgBB	Kontrol Negatif	1.33333*	.28868	.007	.4089	2.2578
	Dosis 400 mg/kgBB	1.16667*	.28868	.016	.2422	2.0911
	Dosis 600 mg/kgBB	1.16667*	.28868	.016	.2422	2.0911
Dosis 400 mg/kgBB	Kontrol Negatif	.16667	.28868	.936	-.7578	1.0911
	Dosis 200 mg/kgBB	-1.16667*	.28868	.016	-2.0911	-.2422
	Dosis 600 mg/kgBB	.00000	.28868	1.000	-.9244	.9244
Dosis 600 mg/kgBB	Kontrol Negatif	.16667	.28868	.936	-.7578	1.0911
	Dosis 200 mg/kgBB	-1.16667*	.28868	.016	-2.0911	-.2422
	Dosis 400 mg/kgBB	.00000	.28868	1.000	-.9244	.9244

Tabel 22. anova kadar bilirubin

Selisih Bilirubin

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	7180.917	3	2393.639	3.803	.058
Within Groups	5035.333	8	629.417		
Total	12216.250	11			

Tabel 23. post hoc kadar bilirubin
Multiple Comparisons

Dependent Variable: Selisih Bilirubin

Tukey HSD

(I) Kelompok Perlakuan	(J) Kelompok Perlakuan	Difference (I-J)	Mean Std. Error	95% Confidence Interval		
				Lower Bound	Upper Bound	
Kontrol Negatif	Dosis 200 mg/kgBB	-46.66667	20.48441	.182	-112.2650	18.9316
	Dosis 400 mg/kgBB	6.00000	20.48441	.991	-59.5983	71.5983
	Dosis 600 mg/kgBB	17.66667	20.48441	.824	-47.9316	83.2650
Dosis 200 mg/kgBB	Kontrol Negatif	46.66667	20.48441	.182	-18.9316	112.2650
	Dosis 400 mg/kgBB	52.66667	20.48441	.122	-12.9316	118.2650
	Dosis 600 mg/kgBB	64.33333	20.48441	.055	-1.2650	129.9316
Dosis 400 mg/kgBB	Kontrol Negatif	-6.00000	20.48441	.991	-71.5983	59.5983
	Dosis 200 mg/kgBB	-52.66667	20.48441	.122	-118.2650	12.9316
	Dosis 600 mg/kgBB	11.66667	20.48441	.938	-53.9316	77.2650
Dosis 600 mg/kgBB	Kontrol Negatif	-17.66667	20.48441	.824	-83.2650	47.9316
	Dosis 200 mg/kgBB	-64.33333	20.48441	.055	-129.9316	1.2650
	Dosis 400 mg/kgBB	-11.66667	20.48441	.938	-77.2650	53.9316

Tabel 24. anova kadar glukosa

Selisih Glukosa

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.000	3	.000	.	.
Within Groups	.000	8	.000		
Total	.000	11			

LAMPIRAN 4. DOKUMENTASI PENELITIAN

Gambar 4. Adaptasi tikus putih



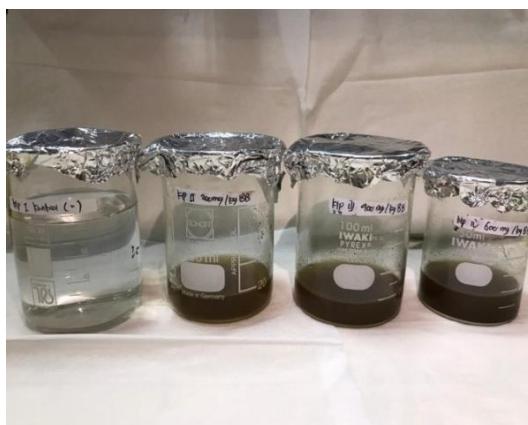
Gambar 5. Kandang modifikasi



Gambar 6. Tikus dalam kandang modifikasi



Gambar 7. Ekstraksi kental



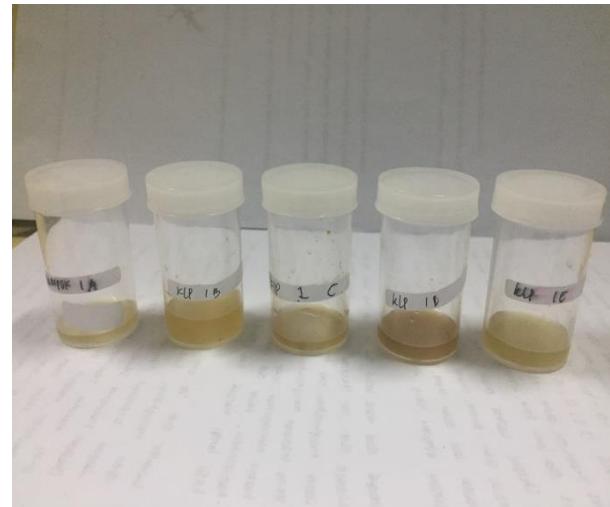
Gambar 8. Penyiapan ekstrak sebelum perlakuan



Gambar 9. Proses pemberian pada hewan uji



Gambar 10. Proses penampungan urine



Gambar 11. Hasil tampungan urine



Gambar 12. Hasil tampungan urine dipindahkan ke tabung sentrifus



Gambar 13. Strip reagent dicelupkan ke dalam tambung sentrifus



Gambar 14. Proses pemeriksaan urine menggunakan *urine analyzer*



Gambar 15. Strip reagen yang telah dianalisis



Gambar 16. Struk hasil *urine analyzer*

LAMPIRAN 5. KODE ETIK



REKOMENDASI PERSETUJUAN ETIK

Nomor : 293/UN4.6.4.5.31/PP36/2021

Tanggal: 26 April 2021

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik:

No Protokol	UH21040241	No Sponsor	
Peneliti Utama	Aprillia Holly	Sponsor	
Judul Penelitian	Uji Toksisitas Sub-Akut Ekstrak Beruwas Laut (<i>Scaevola taccada</i>) Berdasarkan Parameter Urinalisis Terhadap Tikus Putih (<i>Rattus Norvegicus</i>)		
No Versi Protokol	1	Tanggal Versi	16 April 2021
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Fakultas Farmasi Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 26 April 2021 sampai 26 April 2022	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama Prof.Dr.dr. Suryani As'ad, M.Sc,Sp.GK (K)	Tanda tangan 	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	Nama dr. Agussalim Bukhari, M.Med.,Ph.D,Sp.GR (K)	Tanda tangan 	

Kewajiban Peneliti Utama:

- Menyerahkan Amendemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan laporan SAE ke Komisi Etik dalam 24 jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 jam setelah Peneliti Utama menerima laporan
- Menyerahkan laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari protokol yang diajukan (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

