

mengakibatkan akumulasi dalam tubuh dengan efek yang bertahap pada jaringan dan organ.

DAFTAR PUSTAKA

- Adaramoye, Oluwatosin A, et.al. 2013. Effects of Methanol Extract of Breadfruit (*Artocarpus altilis*) on Atherogenic Indices and Redox Status of Cellular System of Hypercholesterolemic Male Rats. Hindawi Publishing Corporation, *Advances in Pharmacological Sciences*.
- Alimin et al. 2020. *Effects of Breadfruit Leaf Extract Reducing The Risk of Cornary Heart Disease*.
- Al-Afifi, N. A., Alabsi, A. M., Bakri, M. M., & Ramanathan, A. (2018). Acute and sub-acute oral toxicity of *Dracaena cinnabari* resin methanol extract in rats. *BMC complementary and alternative medicine*, 18(1), 50-50. doi:10.1186/s12906-018-2110-3
- Agustin dkk. 2015. Uji Aktivitas Antihiperglikemia Ekstrak Etanol Daun Sukun (*Artocarpus altilis*) pada Tikus Swiss Webster Jantan dengan Metode Uji Toleransi Glukosa.
- Arifianti, L., Rice, D.O., & Idha, K., 2014. Pengaruh Jenis Pelarut Pengekstraksi terhadap Konsentrasi Sinensetin dalam Ekstrak Daun *Orthosiphon stamineus* Benth. *E-Journal Planta Husada*, 2 (1), hal 1-4.
- Astuti dkk. 2021. Uji Toksisitas Akut Infusa Daun Sukun (*Artocarpus communis* Fost) terhadap Tikus (*Mus Musculus*) dengan Metode OECD425
- Azwanida, N.N., 2015. A Review on the Extraction Methods Use in Medicinal Plants, Principle, Strength and Limitation. *Medicinal & Aromaric Plants*, 4 (3), p. 1-6.
- Badipatla, Visweswararao. 2007. Disintegration Of Tablets and Capsules Measured by Isothermal Thermal Mechanical Analysis nd Macrophotography
- Bariweni, Moses W, Oboma I Yibala and Raymond I Ozula. 2018. Toxicological studies on the aqueous leaf extract of *Pavetta crassipes* (K. Schum) in rodents. <https://www.redalyc.org/journal/4960/496055725001/html/>

- Benzie, Iris F.F and Sissi Wachtel Galor. 2011. Herbal Medicine Biomoleculer and Clinical Aspects.
- BPOM. 2014. Pedoman Uji Toksisitas Nonklinik Secara *IN VIVO*.
- BPOM. 2020. Potensi Obat Herbal Indonesia. <https://www.pom.go.id/new/view/more/pers/531/Potensi-Obat-Herbal-Indonesia.html>
- Brown, SL. 1996. Lowered Serum Cholesterol and Low Mood. *B Med J* 313:637-8.
- Cameron J. S. and R. Greger. 1998. Renal function and testing of function, *Oxford Textbook of Clinical Nephrology*, A. M. Davison, J. S. Cameron, J. P. Grunfeld, D. N. S. Kerr, E. Rits, and G. C. Winearl, Eds., pp. 36–39, Oxford University Press.
- Ekor, Martins. 2013. The growing use of herbal medicines: issues relating to adverse reactions and challenges in monitoring safety. *Frointers in Pharmacology*, 4 (177).
- Faizin, Della FN, dkk. 2021. Rekayasa Simulator Penghancur Tablet dengan Kontrol Suhu dan Motor. *Jurnal Teknik Elektromedik Indonesia* 2 (2).
- Feldman, Francis, et al. 2020. Efficacy of Polyphenols in the Management of Dyslipidemia: A Focus on Clinical Studies. *MDPI Journal*
- Fitriani, FA, et al. 2019. *The Effect of Ethanolic Extract of Breadfruit Leaves (Artocarpus altilis) to Body Weight and Blood Sugar Level in Type II Diabetes Mellitus with Nicotinamide- Alloxan-Induction*.
- Gustina, N. M. R. A. (2012). Aktivitas Ekstrak, Fraksi Pelarut, dan Senyawa Flavonoid Daun Sukun (*Artocarpus Altilis*) terhadap Enzim A - Glukosidase Sebagai Antidiabetes. *Bogor Agricultural University*, 7–12.
- Hadisoewignyo, L. dan Fudholi, A., 2013, Sediaan Solida, Pustaka Pelajar, Yogyakarta.
- Halliwell, B. (2006). Reactive Species and Antioxidants. *Redox Biology* Is.pdf. *Plant Physiology*, 141(June), 312–322. <https://doi.org/10.1104/pp.106.077073.312>
- Halliwell, B, J. Gutteridge. (2015) Free radicals in biology and medicine, (Fifth ed.)Oxford University Press, Oxford USA.

- Joshinta, D. 2008. Kestabilan Obat. Departemen Farmasi Universitas Indonesia.
- Jothy, S. L., Zakaria, Z., Chen, Y., Lau, Y. L., Latha, L. Y., & Sasidharan, S. (2011). Acute oral toxicity of methanolic seed extract of *Cassia fistula* in mice. *Molecules* (Basel, Switzerland), 16(6), 5268-5282. doi:10.3390/molecules16065268
- Juliastuti et al. 2017. *Ethanol-based Breadfruit Leaf (Artocarpus altilis) Extract as Hepatoprotective in Carbon Tetrachloride Induced Liver Injury.*
- Jurut dan Bilal. 2019. Uji Toksisitas Rebusan Daun Sukun (*Artocarpus altilis*) Menggunakan Metode BSLT (Brine Shrimp Lethality Test).
- Kim, et al. 2019. Dietary pattern, dietary total antioxidant capacity, and dyslipidemia in Korean adults. *Nutrition Journal* 18:37.
- K.j, wahyu atmaja. (2010). Efek Hepatoprotektif Infus Daun Sukun (*Artocarpus Altilis* (Park.) Fsb.) Terhadap Kerusakan Hati Tikus Yang Diinduksi Dengan Karbon Tetraklorida. *Universitas Indonesia, VII(2)*, 27–42.
- Kooti, W., et al. 2014. The Effects of hydro-alcoholic extract of celery on lipid profile of rats fed a high fat diet. *Advances in Environmental Biology.*
- Lee, Yit Leng, et al. 2018. Antioxidant and Total Phenolic Content of Breadfruit (*Artocarpus altilis*) Leaves. *Matec Web of Conferences* 150.
- Leskinen. 2003. Tablet Disintegration; Effects of Temperature and pH of aqueous disintegrating fluid and influenced of solubility of diluent on the behaviour of superdisintegrants.
- Li, Dan, et al. 2015. Purified Anthocyanin Supplementation Reduces Dyslipidemia, Enhances Antioxidant Capacity, and Prevents Insulin Resistance in Diabetic Patients. *The Journal of Nutrition, American Society for Nutrition*, 145 (4):742-748.
- Liu, Changfeng, et al. 2016. Effects of Anthocyanin on Serum Lipids in Dyslipidemia Patients: A Systematic Review and Meta-Analysis.
- Maharani, E. T. W., Mukaromah, A. H., & Farabi, M. F. (2014). Uji Fitokimia Ekstrak Daun Sukun Kering (*Artocarpus altilis*). *Seminar Nasional.*

- Markl, D.; Zeitler, J. A. A review of disintegration mechanisms and measurement techniques. *Pharm. Res.*; 2017, 34, 890–917. DOI: 10.1007/s11095-017-2129-z.
- Maronpot RR, Boorman GA, Gaul BW, editors. 1999. *Pathology of Mouse*. Vienna IL: Cache River Press.
- Mukhriani, 2014. Ekstraksi, Pemisahan Senyawa, dan Identifikasi Senyawa Aktif. *Jurnal Kesehatan*, 7 (4), hal. 361-367.
- Mutmainna, Yenti Purnamasari, dan Parawansah. (2019). Uji Toksisitas Akut Ekstrak Etanol Daun Gedi (*Abelmoschus Manihot* L). *Medula* (6).
- Nwokocha, C. R., Owu, D. U., McLaren, M., Murray, J., Delgoda, R., Thaxter, K., ... Young, L. (2012). Possible mechanisms of action of the aqueous extract of *Artocarpus altilis* (breadfruit) leaves in producing hypotension in normotensive SpragueDawley rats. *Pharmaceutical Biology*, 50(9), 1096–1102. <https://doi.org/10.3109/13880209.2012.658113>
- Palimbong dkk. 2020. Potensi Sirup Ekstrak Daun Sukun (*Artocarpus altilis*) sebagai Pangan Fungsional bagi Penderita Penyakit Hepatitis
- Pineiro, Jose AA, et al. 2021. Nrf2 and Heme Oxygenase-1 Involvement in Atherosclerosis Related Oxidative Stress. *Journal MDPI*.
- Pramono, A, et al. 2011. *Effect of leaf stew breadfruit (artocarpus Altilis) on triglyceride, total cholesterol, and LDS (Low density lipoprotein blood serum rats (Rattus norvegicus)*.
- Raman Vasugi, D. Sudhahar dan K. Anandarajagopa. 2012. Preliminary Phytochemical Investigation and Screening of Antimicrobial Activity of Leaf Extracts of *Artocarpus altilis*. *Asian Journal of Biological and Life Sciences*, 1 (2):104-107.
- Riasari H, dkk. (2018). *Aktivitas Antihiperqlikemia Dari Ekstrak Etanol Daun Sukun (Artocarpus Altilis (Park.) Fosberg) Kuning Jatuh Dan Jatuh Kering Pada Mencit Putih Jantan Galur Swiss Webster Dengan Metode Induksi Aloksan*. (1), 1–13.
- Riasari, H, dkk. 2017. Formulation and Test Antioxidant Activity of Gel Fraction Breadfruit Yellow Leaf (*Artocarpus Altilis* (Parkinson) Fosberg).

- Rinaldi, D. H., Kamadjaja, D. B., & Sumarta, N. P. M. (2018). The effects of breadfruit leaf (*Artocarpus Altilis*) extract on fibroblast proliferation in the tooth extraction sockets of Wistar rat. *Dental Journal (Majalah Kedokteran Gigi)*, 51(3), 143. <https://doi.org/10.20473/j.djmkq.v51.i3.p143-146>.
- Rosmawaty dan Hellna. 2013. Skrining Fitokimia dan Uji Bioaktivitas Daun SUkun (*Artocarpus altilis*).
- Rubinstein, M. H.; Bodey, D. M. 1976. Disaggregation of compressed tablets. *J Pharm Sci.* 65, 1749–1753. DOI: 10.1002/ jps.2600651214.
- Sairam, Suda and Asna Urooj. 2014. Safety Evaluation of *Artocarpus altilis* as Pharmaceutical Agent in Wistar Rats. *Journal of Toxicology*, Hindawi.
- Sari dkk. 2019. *Metabolite Profile of Various Development Breadt Fruit Leaves (Artocarpus altilis) and The Identification of Their Major Components*
- Sasidharan, S., Sharmini, R., Vijayarathna, S., Yoga Latha, L., Vijenthi, R., Amala, R., & Amutha, S. (2009). Antioxidant and hepatoprotective activity of methanolic extracts of *Elaeis guineensis* Jacq leaf. *Pharmacologyonline*, 3(September), 84–90.
- Sikarwar, MS, et al. 2015. Pharmacognostical, Phytochemical and Total Phenolic Content of *Artocarpus altilis* (Parkinson) Fosberg Leaves. *Journal of Applied Pharmaceutical Science*, 5 (05):90-100.
- Sutiswa, Shandra Isasi dan Asep Abdul Rahman. 2020. *Celery (Apium graveolens L) Herba Extract Capsule Formulation as Anti-Ulcer*. *Jurnal Info Kesehatan*, 18(2):105-112.
- Tetuko, Aji, Ria Etikasari, dan Tunik Saptawati. 2016. Uji Toksisitas Akut Air Rebusan Umi Gadung (*Dioscorea Hispida* Dennst) dan Gambaran Mikroskopis Organ Hepar pada Mencit Galur Swiss. *Indonesia Jurnal Farmasi*, 1 (1): 22-27.
- Utami, R. D., Yuliawati, K. M., & Syafnir, L. (2015). Pengaruh Metode Ekstraksi terhadap Aktivitas Antioksidan Daun Sukun (*Prosiding Penelitian SpeSIAnisba 2015*, 280–286.

- OECD. 2001. *OECD GUIDELINE FOR TESTING OF CHEMICALS- Acute oral Toxicity- Acute Toxic Class Method*
- OECD. 2001. *OECD GUIDELINE FOR TESTING OF CHEMICALS- Acute oral Toxicity- Acute Toxic Fixed Dosed Method*
- OECD. 2001. *OECD GUIDELINE FOR TESTING OF CHEMICALS- Acute oral Toxicity- Acute Toxic Up and Down Procedures.*
- Oliver JA. Opportunities for using fewer animals in acute toxicity studies. In: *Chemicals Testing and Animal Welfare*. Solna, Sweden: The National Chemicals Inspectorate, 1986;1 19-142.
- Qomariyah, Nurul. 2003. Herbal Medicine: Pentingnya Mengenal dan Memahaminya. *Mutiara Medika* 3 (2).
- Vianney et al. 2020. *Antioxidant and Toxicity Activity of Aqueous Extracts from Various parts of Breadfruit and Breadnut.*
- WHO. 2006. *Guidelines for The Management of Dyslipidemia in Patients with Diabetes Mellitus.*
- Wijesekera, R.O.B., 1991. *The Medicinal Plant Industry*. Washington DC. CRC Press.
- Zaid, Abdel Naser, Rowa' J. Al-Ramahi, Abeer Abu Ghoush, Aiman Qaddumi, and Yara Abu Zaaror. 2012. Weight and content uniformity of lorazepam half-tablets: A study of correlation of a low drug content product. *Saudi Pharmaceutical Journal* (21):71-75.
- Zaheer,-Ud-Din, et al. (2012). An Evaluation of Consumers Perceptions Regarding "Modern Medicines" in Penang, Malaysia. *Journal of Young Pharmacists*, 4 (2): 108-113.

LAMPIRAN

Lampiran 1

Volume Maksimum Induksi pada Hewan Coba

Jenis Hewan dan BB	Cara Pemberian dan Volume Maksimum (mL)				
	i.v	i.m	i.p	s.c	p.o
Mencit (20-30 g)	0,2	0,05	1,0	0,5-1,0	1,0
Tikus (100 g)	1,0	0,1	2,0-5,0	2,0-5,0	5,0
Hamster (50 g)	-	0,1	1,0-5,0	2,5	2,5
Marmut (250 g)	-	0,25	2,0-5,0	5,0	10,0
Merpati (300 g)	2,0	0,5	2,0	2,0	10,0
Kelinci (2,5 kg)	5,0-10,0	0,5	10,0-20,0	5,0-10,0	20,0
Kucing (3 kg)	5,0-10,0	1,0	10,0-20,0	5,0-10,0	50,0
Anjing (5 kg)	10,0-20,0	5,0	20,0-50,0	10,0	100,0

Sumber: Subarnas *et al.* (2008), Malole & Pramono (1989)

Lampiran 2

Perhitungan Dosis Uji Toksisitas Akut

$$\begin{aligned}\text{Ekstrak daun sukun 3000 mg/kg BB} &= (3000 \text{ mg}/1000 \text{ g}) \times 150 \\ &\text{mg/kgBB} \\ &= 450 \text{ mg}/150 \text{ g}/ 4 \text{ mL/ tikus}\end{aligned}$$

$$\begin{aligned}\text{Perhitungan larutan stok dosis 3000 mg/kg BB} &= \frac{450}{4} \times 50 \text{ mL} \\ &= 5625 \text{ mg}/ 50 \text{ mL} \\ &= 5,6 \text{ g} / 50 \text{ mL}\end{aligned}$$

$$\begin{aligned}\text{Ekstrak daun sukun 5000 mg/kg BB} &= (5000 \text{ mg}/1000 \text{ g}) \times 150 \\ &\text{mg/kgBB} \\ &= 750 \text{ mg}/150 \text{ g}/ 4 \text{ mL/ tikus}\end{aligned}$$

$$\begin{aligned}\text{Perhitungan larutan stok dosis 3000 mg/kg BB} &= \frac{750}{4} \times 50 \text{ mL} \\ &= 9375 \text{ mg}/ 50 \text{ mL} \\ &= 9,3 \text{ g} / 50 \text{ mL}\end{aligned}$$

$$\begin{aligned}\text{Ekstrak daun sukun 10000 mg/kg BB} &= (10000 \text{ mg}/1000 \text{ g}) \times 150 \\ &\text{mg/kgBB} \\ &= 1500 \text{ mg}/150 \text{ g}/ 4 \text{ mL/} \\ &\text{Tikus}\end{aligned}$$

$$\begin{aligned}\text{Perhitungan larutan stok dosis 3000 mg/kg BB} &= \frac{1500}{4} \times 50 \text{ mL} \\ &= 18750 \text{ mg}/ 50 \text{ mL} \\ &= 18,75 \text{ g} / 50 \text{ mL}\end{aligned}$$

Lampiran 3



**KEMENTERIAN PENDIDIKAN, KEBUDAYAAN
RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
FAKULTAS KESEHATAN MASYARAKAT**

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REKOMENDASI PERSETUJUAN ETIK

Nomor : **1088/UN4.14.1/TP.01.02/2022**

Tanggal : 26 Januari 2022

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

No.Protokol	131221042039	No. Sponsor Protokol	
Peneliti Utama	Rifa'atul Mahmudah	Sponsor	Pribadi
Judul Peneliti	Efek Toksik dan Waktu Hancur Kapsul Ekstrak Daun Sukun (Artocarpus altilis) sebagai Herbal Medicine Penanganan Dislipidemia		
No.Versi Protokol	1	Tanggal Versi	13 Desember 2021
No.Versi PSP	1	Tanggal Versi	13 Desember 2021
Tempat Penelitian	Laboratorium Biofarmasi Fakultas Farmasi Universitas Hasanuddin, Laboratorium Teknologi Farmasi Fakultas Farmasi Universitas Hasanuddin.		
Judul Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 26 Januari 2022 Sampai 26 Januari 2023	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr.Veni Hadju,M.Sc,Ph.D	Tanda tangan 	 Tanda tangan 26 Januari 2022
Sekretaris komisi Etik Penelitian	Nama : Dr. Wahiduddin, SKM.,M.Kes	Tanda tangan 	 Tanda tangan 26 Januari 2022

Kewajiban Peneliti Utama :

1. Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
2. Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
3. Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
4. Menyerahkan laporan akhir setelah Penelitian berakhir
5. Melaporkan penyimpangan dari protocol yang disetujui (protocol deviation/violation)
6. Mematuhi semua peraturan yang ditentukan

Lampiran 4



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
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E-mail : fkunhas@gmail.com, website : www.fkm.unhas.ac.id

No : 10496/UN4.14/PT.01.04/2021 23 November 2021
Lamp : Proposal
Hal : Permohonan Izin Penelitian

Yth.
Dekan Fakultas Farmasi Universitas Hasanuddin
Di -
Tempat

Dengan hormat, kami sampaikan bahwa mahasiswa Program Pascasarjana Fakultas Kesehatan Masyarakat Universitas Hasanuddin yang tersebut di bawah ini :

Nama : Rifa'atul Mahmudah
Nomor Pokok : K012191006
Program Studi : Kesehatan Masyarakat

Bermaksud melakukan penelitian di Laboratorium Biofarmasi Fakultas Farmasi Unhas dan Laboratorium Teknologi Farmasi Fakultas Farmasi Unhas dalam rangka persiapan penulisan tesis dengan judul "Efek Toksik dan Waktu Hancur Kapsul Ekstrak Daun Sukun (*Artocarpus altilis*) sebagai Herbal Medicine Penanganan Dislipidemia".

Pembimbing : 1. Dr. Nurhaedar Jafar, Apt.,M.Kes (Ketua)
2. Dr. dr. Burhanuddin Bahar, M.Sc (Anggota)

Waktu Penelitian : November 2021 – Januari 2022

Sehubungan dengan hal tersebut kami mohon kebijaksanaan Bapak/Ibu kiranya berkenan memberi izin kepada yang bersangkutan.

Atas perkenan dan kerjasamanya disampaikan terima kasih.

Dekan

Dr. Aminuddin Syam, SKM, M.Kes., M.Med.Ed
NIP. 19670617 199903 1 001

Tembusan :
1. Para Wakil Dekan FKM Unhas
2. Peringgal





KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
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No : 563/UN4.14/PT.01.04/2022 12 Januari 2022
Lamp : Proposal
Hal : Permohonan Izin Penelitian

Yth.
Direktur Utama RSPTN Universitas Hasanuddin
Di -
Tempat

Dengan hormat, kami sampaikan bahwa mahasiswa Program Pascasarjana Fakultas Kesehatan Masyarakat Universitas Hasanuddin yang tersebut di bawah ini :

Nama : Rifa'atul Mahmudah
Nomor Pokok : K012191006
Program Studi : Kesehatan Masyarakat

Bermaksud melakukan penelitian di Laboratorium Patologi dan Anatomi RSPTN Unhas dalam rangka persiapan penulisan tesis dengan judul "Efek Toksik dan Waktu Hancur Kapsul Ekstrak Daun Sukun (*Artocarpus altilis*) sebagai Herbal Medicine Penanganan Dislipidemia".

Pembimbing : 1. Dr. Nurhaedar Jafar, Apt., M.Kes (Ketua)
2. Dr. dr. Burhanuddin Bahar, M.Sc (Anggota)

Waktu Penelitian : Januari - Maret 2022

Sehubungan dengan hal tersebut kami mohon kebijaksanaan Bapak/Ibu kiranya berkenan memberi izin kepada yang bersangkutan.

Atas perkenan dan kerjasamanya disampaikan terima kasih.

Dekan

Dr. Aminuddin Syam, SKM., M.Kes., M.Med.Ed
NIP. 19670617 199903 1 001

Tembusan :
1. Para Wakil Dekan FKM Unhas
2. Peringgal



Lampiran 5

Output Analisis SPSS

Uji Normalitas

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
BBawal	20	95.2%	1	4.8%	21	100.0%
BBakhir	20	95.2%	1	4.8%	21	100.0%

Descriptives

		Statistic	Std. Error	
BBawal	Mean	160.40	1.266	
	95% Confidence Interval for Mean	Lower Bound	157.75	
		Upper Bound	163.05	
	5% Trimmed Mean	160.39		
	Median	160.00		
	Variance	32.042		
	Std. Deviation	5.661		
	Minimum	152		
	Maximum	169		
	Range	17		
	Interquartile Range	11		
	Skewness	.043	.512	
	Kurtosis	-1.395	.992	
	BBakhir	Mean	179.55	1.721
95% Confidence Interval for Mean		Lower Bound	175.95	
		Upper Bound	183.15	
5% Trimmed Mean		179.78		
Median		182.00		
Variance		59.208		
Std. Deviation		7.695		
Minimum		164		
Maximum		191		
Range		27		
Interquartile Range		13		
Skewness		-.461	.512	
Kurtosis		-.677	.992	

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
BBawal	.138	20	.200*	.926	20	.131
BBakhir	.175	20	.110	.949	20	.348

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

a. Lilliefors Significance Correction

Uji Paired t-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	BBawalKontrol	157.40	5	4.669	2.088
	BBakhirKontrol	170.40	5	5.771	2.581
Pair 2	BBawalPI	162.60	5	6.107	2.731
	BBakhirPI	180.40	5	5.459	2.441
Pair 3	BBawalPII	162.60	5	6.107	2.731
	BBakhirPII	180.40	5	5.459	2.441
Pair 4	BBawalPIII	159.00	5	5.477	2.449
	BBakhirPIII	187.00	5	3.536	1.581

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	BBawalKontrol & BBakhirKontrol	5	.289	.637
	BBawalPI & BBakhirPI	5	.988	.002
Pair 3	BBawalPII & BBakhirPII	5	.988	.002
Pair 4	BBawalPIII & BBakhirPIII	5	.658	.227

Paired Samples Test

		Mean	Std. Deviation	Paired Differences		t	df	Sig. (2-tailed)	
				Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	BBawalKontrol - BBakhirKontrol	-13.000	6.285	2.811	-20.804 -5.196	-4.625	4	.010	
Pair 2	BBawalPI - BBakhirPI	-17.800	1.095	.490	-19.160 -16.440	-36.334	4	.000	
Pair 3	BBawalPII - BBakhirPII	-17.800	1.095	.490	-19.160 -16.440	-36.334	4	.000	
Pair 4	BBawalPIII - BBakhirPIII	-28.000	4.123	1.844	-33.120 -22.880	-15.185	4	.000	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
perubahanBBK	5	23.8%	16	76.2%	21	100.0%
perubahanBBPI	5	23.8%	16	76.2%	21	100.0%
perubahanBBPII	5	23.8%	16	76.2%	21	100.0%
perubahanBBPIII	5	23.8%	16	76.2%	21	100.0%

Descriptives

		Statistic	Std. Error	
perubahanBBK	Mean	13.00	2.811	
	95% Confidence Interval for Mean	Lower Bound	5.20	
		Upper Bound	20.80	
	5% Trimmed Mean	13.17		
	Median	16.00		
	Variance	39.500		
	Std. Deviation	6.285		
	Minimum	4		
	Maximum	19		
	Range	15		
	Interquartile Range	12		
	Skewness	-.816	.913	
	Kurtosis	-1.230	2.000	
	perubahanBBPI	Mean	17.80	.490
95% Confidence Interval for Mean		Lower Bound	16.44	
		Upper Bound	19.16	
5% Trimmed Mean		17.83		
Median		18.00		
Variance		1.200		
Std. Deviation		1.095		
Minimum		16		
Maximum		19		
Range		3		
Interquartile Range		2		
Skewness		-1.293	.913	
Kurtosis		2.917	2.000	
perubahanBBPII		Mean	17.40	.748
	95% Confidence Interval for Mean	Lower Bound	15.32	
		Upper Bound	19.48	
	5% Trimmed Mean	17.33		
	Median	17.00		
	Variance	2.800		
	Std. Deviation	1.673		
	Minimum	16		
	Maximum	20		

	Range	4	
	Interquartile Range	3	
	Skewness	1.089	.913
	Kurtosis	.536	2.000
perubahanBBPIII	Mean	26.40	3.156
	95% Confidence Interval for	Lower Bound	17.64
	Mean	Upper Bound	35.16
	5% Trimmed Mean	26.67	
	Median	28.00	
	Variance	49.800	
	Std. Deviation	7.057	
	Minimum	15	
	Maximum	33	
	Range	18	
	Interquartile Range	12	
	Skewness	-1.299	.913
	Kurtosis	1.700	2.000

Uji Normalitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
perubahanBBK	.283	5	.200*	.896	5	.390
perubahanBBPI	.372	5	.022	.828	5	.135
perubahanBBPII	.201	5	.200*	.881	5	.314
perubahanBBPIII	.221	5	.200*	.903	5	.427

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

a. Lilliefors Significance Correction

Uji One way Anova

Test of Homogeneity of Variances

BBakhir

Levene Statistic	df1	df2	Sig.
.524	3	16	.672

ANOVA

BBakhir

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	703.350	3	234.450	8.898	.001
Within Groups	421.600	16	26.350		
Total	1124.950	19			

Multiple Comparisons

Dependent Variable: BBakhir

LSD

(I) Kelompok	(J) Kelompok	Mean Difference			95% Confidence Interval	
		(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
kontrol	KI (3000)	-10.000*	3.247	.007	-16.88	-3.12
	KII (5000)	-10.000*	3.247	.007	-16.88	-3.12
	KIII (10000)	-16.600*	3.247	.000	-23.48	-9.72
KI (3000)	kontrol	10.000*	3.247	.007	3.12	16.88
	KII (5000)	.000	3.247	1.000	-6.88	6.88
	KIII (10000)	-6.600	3.247	.059	-13.48	.28
KII (5000)	kontrol	10.000*	3.247	.007	3.12	16.88
	KI (3000)	.000	3.247	1.000	-6.88	6.88
	KIII (10000)	-6.600	3.247	.059	-13.48	.28
KIII (10000)	kontrol	16.600*	3.247	.000	9.72	23.48
	KI (3000)	6.600	3.247	.059	-.28	13.48
	KII (5000)	6.600	3.247	.059	-.28	13.48

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

Case Processing Summary

	Valid		Cases Missing		Total	
	N	Percent	N	Percent	N	Percent
waktuhancur	6	100.0%	0	0.0%	6	100.0%

Descriptives

		Statistic	Std. Error
waktuhancur	Mean	6.1217	.01014
	95% Confidence Interval for Mean	Lower Bound 6.0956	
		Upper Bound 6.1477	
	5% Trimmed Mean	6.1219	
	Median	6.1200	
	Variance	.001	
	Std. Deviation	.02483	
	Minimum	6.09	
	Maximum	6.15	
	Range	.06	
	Interquartile Range	.05	
	Skewness	.070	.845
	Kurtosis	-1.621	1.741

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
waktuhancur	.206	6	.200 [*]	.898	6	.361

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

a. Lilliefors Significance Correction

One-Sample Statistics

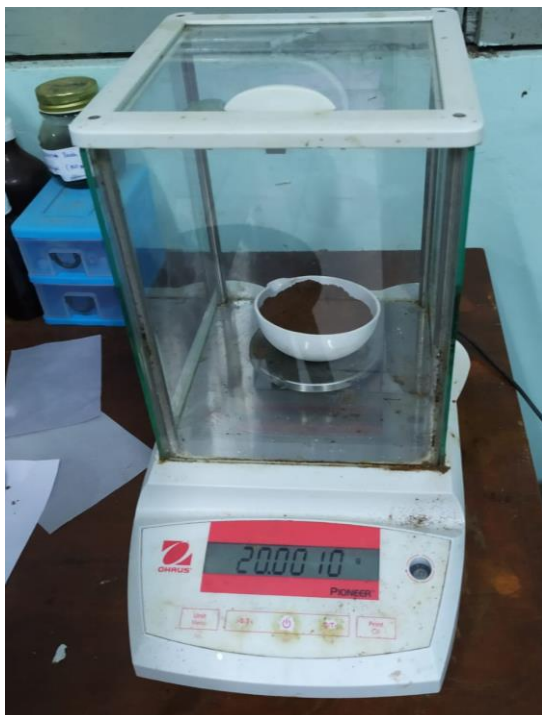
	N	Mean	Std. Deviation	Std. Error Mean
waktuhancur	6	6.1217	.02483	.01014

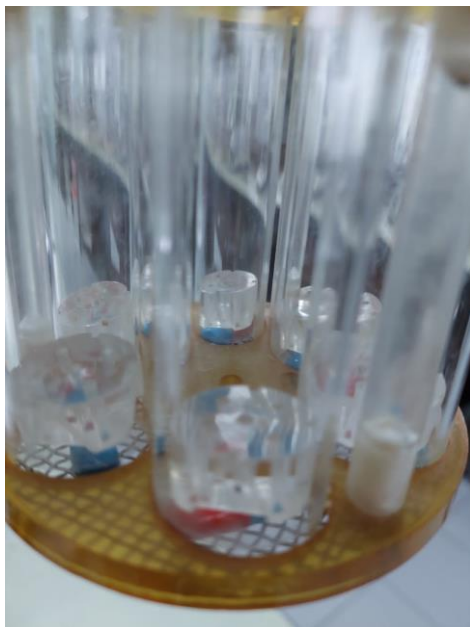
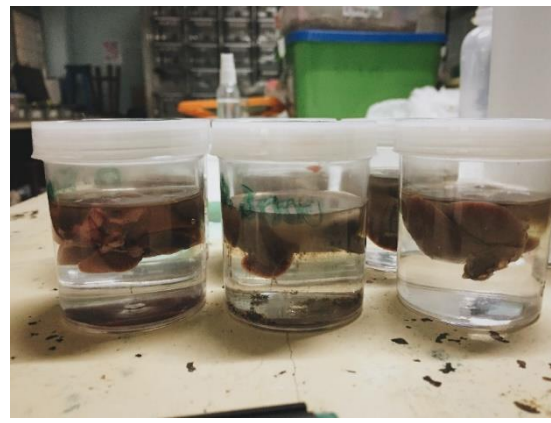
One-Sample Test

Test Value = 15

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
waktuhancur	-875.753	5	.000	-8.87833	-8.9044	-8.8523

Lampiran 6





Lampiran 7

RIWAYAT HIDUP

A. Data Pribadi

1. Nama : Rifa'atul Mahmudah
2. Tempat/Tanggal Lahir : Soppeng, 26 November 1995
3. Alamat Domisili : Jalan Sahabat II Lorong 1
4. Alamat Asal : Jalan Dr. Sutomo Komp. Perum Depag,
Kel Sumpang Binangae, Kec. Barru,
Kab. Barru, Sulsel
5. Jenis Kelamin : Perempuan
6. Suku/Bangsa : Bugis/Indonesia
7. Agama : Islam
8. E-mail : rhyfa.atul@gmail.com
9. Status Sipil : Belum Menikah
10. Nama Orang Tua
 - a. Ayah : Drs. H. Muh. Kasim
 - b. Ibu : Dra. Hj. Maserong
11. Nama Saudara : Nurfadhilah Kasim S.KM., M.Kes
Alfian Hidayat, S.Si.

B. Riwayat Pendidikan Formal

1. TK Raodhatul Atfal Al-Ikhlas Barru 2000-2001
2. SD Inpres Barru I 2001-2007
3. MTsN Mangempang 2007-2010
4. SMA Negeri 1 Barru 2010-2013
5. Fakultas Kesehatan Masyarakat Program Studi
Ilmu Gizi Universitas Hasanuddin 2014-2018
6. Program Studi S2 Kesehatan Masyarakat 2019-2022
Departemen Gizi, Sekolah Pasca Sarjana
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