

DAFTAR PUSTAKA

- Amalia, N. 2020. Potensi Antibakteri Ekstrak Daging Buah Pare (*Momordica charantia* L.) Terhadap Bakteri *Staphylococcus aureus* ATCC 2593. Skripsi. Universitas Sumatera Utara
- Ajizah, A. 2004. *Sensitivitas Salmonella Typhimurium* terhadap Ekstrak pare. Vol. 1. (1). Pp: 8-31
- Ajizah, A. 2004. *Sensitivitas Salmonella typhimurium* terhadap ekstrak daun *Psidium guajava* . J Bioscientiae. 1(1):31-38.
- Benson, H.J. 2002. Microbiological Applications Laboratory Manual In General Microbiology Eight Edition. Pasadena City College. Pasadena
- Cowan, M.M. Plant Products as Antimicrobial Agents. (1999). *Clinical Microbiology Reviews*, 12: 564 – 582 <https://doi.org/10.1128/CMR.124.564/25> Agustus 2022
- Chungmu P, Hyunseo Y, 2018. Antimicrobial activity of essential oil against oral strain. *Int J Clin Prev Dent*; 14(4): 2016-15. Milah P, Bintari SH, Dewi M. Pengaruh konsentrasi antibakteri propolis terhadap pertumbuhan bakteri streptococcus pyogenes secara invitro. *Life Science*, 2016;5(2): 95-7.
- de-Fatima, A., L.V. Modolo, L.S. Conegero, R.A. Pilli, C.V. Ferreira, L.K. Kohn, and J.E. de-Carvalho. 2006. Lactones and their derivatives: biological activities, mechanisms of action and potential leads for drug design. *J. Med. Chem.* (13):3371-3384
- Djide, M. Natsir dan Sartini. 2008. *Analisis Mikrobiologi Farmasi*. UNHAS : Makassar.
- Dixit VP, Kimna P, Bhargava SK. 1978. Effects of *Momordica charantia* L. Fruit extract on the Testicular Function of Dog. *J. Med. Plant Res.* 34:280.
- Girini MM, Ahamed RN, Aladakatti RH, 2005, Effect of graded doses of *Momordica charantia* seedextract on rat sperm: scanning electron microscope study, *J Basic Clin Physiol Pharmacol.*, 16(1):53-66.
- Harborne, J.B. *Metode Fitokimia*, Edisi ke-2. Bandung: ITB. 2006
- Hua, X., Q. Yang, W. Zhang, Z. Dong, S. Yu., S. Schwarz, and S. Liu. 2018. Antibacterial Activity and Mechanism of Action of Aspidinol Against Multi-Drug-Resistant *Methicillin-Resistant Staphylococcus aureus*. *Frontiers in Pharmacology* 9: 1 – 12

- Howden, B.P. *et al.* 2010. Reduced Vancomycin Susceptibility in *Staphylococcus aureus*, including Vancomycin-intermediate and Heterogeneous vancomycin-intermediate strains : Resistance Mechanisms, Laboratory Detection, and Clinical Implications., 23(1), pp.99-139
- Ilma, A. S. (2019). Uji efektivitas antibakteri dan antijamur ekstrak etanol buah pare (*Momordica charantia* L.) terhadap bakteri *Pseudomonas aeruginosa* dan jamur *Candida albicans*. Universitas Muhammadiyah Surakarta.
- Jawetz, E., Melnick, J. L., Adelberg, E. A., 1986, *Mikrobiologi Kedokteran*, diterjemahkan oleh Bagian Mikrobiologi Fakultas Kedokteran Universitas Airlangga, 205-209, Penerbit Salemba Medika, Jakarta
- Karou, Damintoti. Savadogo. Aly. Antibacterial activity of alkaloids from *Sidaacuta*. (2005). *African Journal of Biotechnology*.4(12): 1452- 1457 <https://doi.org/10.4314/ajb.v4i12.71463>
- Leboffe, M. J dan B. E. Pierce. (2012). *Brief Microbiology. Laboratory Theory & Application* 2nd Edition. Englewood: Morton Publishing.
- Lennette, T. H., Barilows, A., Hausler, W. J., dan Shadoni, H. J. 1991. *Manual Clinical Microbiology* (5th ed). Washington, DC: American Society for Microbiology.
- Mahmudah, R., Soleha, T. U., & Ekowati, C. (2013). Identifikasi *Methicillin-Resistant Staphylococcus Aureus* (MRSA) Pada Tenaga Medis Dan Paramedis Di Ruang Intensivecare Unit (ICU) Dan Ruang Perawatan Bedah Rumah Sakit Umum Daerah Abdul Moeloek. *Medical Journal of Lampung University*, 2(4), 70–78.
- Nagappan, T., P. Ramasamy, M.E.A. Wahid, T.C. Segaran, and C.S. Vairappan. 2011. Biological activity of carbazole alkaloids and essential oil of *Murraya koenigii* against antibiotic resistant microbes and Cancer cell lines. *J Molecules*. (16):9651-9664.
- Nuria, Maulita Cut, Faizaitun, Arvin, Sumantri, Uji Aktivitas Antibakteri Ekstrak Etanol Daun Jarak Pagar (*Jatropha Curcas* L) Terhadap Bakteri *Staphylococcus Aureus* Atcc 25923, *Escherichia Coli* Atcc 25922, Dan *Salmonella Typhi* Atcc 1408, (2009), *Mediagro*, 5(2):26–37 <http://dx.doi.org/> 25 Agustus 2022.
- Nurdina, Y.A., Praharani D, Ernawati.T. 2012. Daya Hambat Ekstrak Daun Pare (*Momordica charantia*) Terhadap *Lactobacillus acidophilus*
- Okabe H, Miyahara Y, Yamauchi T. 1982. Studies on the Constituents of *Momordica charantia* L. IV. Characterization of the New Cucurbitacin Glycosides, Momordicosides K and L. *Chem. Pharm. Bull.* 30: 4334.
- Pramono S, Ngatijan, Sudarsono S. Budiono, Pujoarianto A. 1988. Obat Tradisional Indonesia I. Pusat Penelitian Obat Tradisional UGM. Yogyakarta, h. 18.

- Putra, M. I. H., Suwanto, S., Loho, T., & Abdullah, M. (2017). Faktor Risiko *Methicillin Resistant Staphylococcus aureus* pada Pasien Infeksi Kulit dan Jaringan Lunak di Ruang Rawat Inap. *Jurnal Penyakit Dalam Indonesia*, 1(1), 3.
- Putri, U, S. 2016. *Efek Ekstrak Makroalga terhadap Bakteri Staphylococcus aureus dan Methicillin-Resistant Staphylococcus aureus*. Skripsi. Makassar.
- Pratiwi, R.D, Gunawan Elsy. 2018. Uji Aktivitas Antibakteri Ekstrak Etanol Daun Afrika (*Vernonia amygdalina Delile*) Asal Papua Terhadap Bakteri *Staphylococcus aureus* Dan *Escherichia coli*
- Rahmawati, D., Asmawati. 2018. Uji Aktivitas Ekstrak Buah Pare (*Momordica charantia* L.) Terhadap Pertumbuhan *Propionibacterium acnes*. *Media Farmasi*. Volume 14, No. 2
- Rahmawati, N., Nursyamsi. 2015. Efek Antibakteri Ekstrak Etanol Buah Pare (*Momordica charantia, L*) terhadap Pertumbuhan *Staphylococcus aureus* pada Media Pembenihan Difusi. Vol. 2. (1) : pp. 1-9.
- Ramdaya, M. (2018). Daya hambat ekstrak etanol buah pare (*Momordica charantia, L*) terhadap pertumbuhan bakteri *Methicillin Resistant Staphylococcus aureus* (MRSA). 1–8.
- Sambara, J., Yuliani, N, N., Emerensiana, M, Y. 2016. Pemanfaatan Obat Tradisional Oleh Masyarakat Kelurahan Merdeka Kecamatan Kupang Timur. *Jurnal Info Kesehatan*. Volume 14, No. 1.
- Sikora A, Zahra F. Nosocomial Infections. [Updated 2020 Jul 6]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559312/> 30 Desember 2021
- Silaban, L. W. 2009. Skrining fitokimia dan uji aktivitas antibakteri dari kulit buah sentul (*Sandoricum koetjae* (burm. f.) Merr) terhadap beberapa bakteri secara in vitro. *Skripsi*. Universitas Sumatera Utara. Medan
- Silvikasari. 2011. Aktivitas antibakteri ekstrak kasar flavonoid daun gambir (*Uncaria gambir* Roxb). *Skripsi*. IPB. Bogor.
- Shodikin, M.A. 2010. Antimicrobial Activity of Mahkota Dewa (*Phaleria macrocarpa* (Scheff) Boerl.) Leaf Extract Against *Pseudomonas aeruginosa* By Agar Dilution and Scanning electron Microscopy. *Folia Medica indonesia* 46(3): 172 – 178
- Soelama HJJ, Kepel BJ, Siagian KV. 2015. Uji Minimum Inhibitory Concentration (MIC) Ekstrak Rumput Laut (*Eucheuma Cottonii*) Sebagai Antibakteri Terhadap *Streptococcus Mutans*

Tortora, G.J., B.R. Funke, dan C.L. Case. 2010. *Microbiology an Introduction*.

San Fransisco, USA : Addison Wesley Longman Inc.

Yuda, I. K. A., Anthara, M.S., & Dharmayuda, A.A.G.O., 2013. 'Identifikasi Golongan Senyawa Kimia Ekstrak Etanol Buah Pare dan Pengaruhnya Terhadap Penurunan Kadar Glukosa Darah Tikus Putih Jantan yang Diinduksi Aloksan. *Buletin Veteriner Udayana*, 5(2), pp. 87–95.

Yuslianti.Euis.Reni.Et all. Sayuran dan Buah Berwarna Hijau dilingkungan Rumah Untuk Menangkal Radikal Bebas Masa Pandemi Covid-19.2022.hal.59-59

Zheng YT, Ben KL, Jin SW, 1999, Alpha-momorcharin inhibits HIV-1 replication in acutely but not chronically infected T-lymphocytes., *Zhongguo Yao Li Xue Bao*, 20(3):239-43.



LAMPIRAN I. HASIL OD BAKTERI

Tabel 4. Hasil OD Bakteri KHM

Konsentrasi	Absorbansi Setelah Inkubasi	Absorbansi Sebelum Inkubasi	OD
2%	0,6592	0,8207	0,1615
4%	1,0675	1,2307	0,1632
6%	1,3256	1,4572	0,1316
8%	1,3324	1,5229	0,1905

Optical Density (OD) bakteri dilakukan dengan mengukur nilai rata-rata absorbansi masing-masing konsentrasi setelah inkubasi dikurangi absorbansi rata-rata sebelum inkubasi dengan menggunakan spektrofotometer UV-Vis (λ 480nm) diperoleh nilai yang berbeda dari setiap sampel konsentrasi yang diamati. Nilai absorbansi dari semua sampel konsentrasi dengan nilai OD rata-rata sebesar 0 koma. Hasil yang diperoleh OD bakteri untuk KHM 2% diperoleh OD sebesar 0,1615. Sesuai dengan ketentuan dimana nilai OD bakteri berkisar rata-rata berada di kisaran ≤ 0 ,

Tabel 5. Hasil OD Bakteri KBM

Konsentrasi	Absorbansi Setelah Inkubasi I	Absorbansi Setelah Inkubasi II	OD
2%	0,6594	0,6592	0,0002
4%	0,9035	1,0675	0,164
6%	1,1349	1,3256	0,1907
8%	1,2466	1,3324	0,0858

Optical Density (OD) bakteri KBM dilakukan dengan menggunakan spektrofotometer UV-Vis (λ 480 nm) menunjukkan nilai Optical Density (OD) yang berbeda dari setiap sampel konsentrasi yang diamati. Nilai absorbansi dari semua sampel

konsentrasi dengan OD rata-rata sebesar 0 koma. Hasil yang diperoleh OD bakteri untuk KBM 4% diperoleh OD sebesar 0,164. Sesuai dengan ketentuan dimana nilai OD bakteri berkisar rata rata berada di kisaran ≤ 0 .



LAMPIRAN II. Hasil Pengolahan Bahan Uji

Penguapan menggunakan rotary evaporator, umumnya dilakukan pada suhu rendah sekitar 40-50°C dan dibantu oleh alat penghisap udara agar titik didih pelarut lebih rendah. Hasil dari evaporasi didapatkan ekstrak dengan bobot 12,74 g.

Untuk bobot sampel = 1000 g (1 kg)

Bobot ekstrak kental = 12,74 g

$$\% \text{ rendamen} = \frac{\text{berat ekstrak kental}}{\text{berat serbuk buah pare}} \times 100\%$$

$$\% \text{ rendamen} = \frac{12,74 \text{ g}}{1000 \text{ g}} \times 100\%$$

$$= 12,74\%$$

$$\text{Bobot ekstrak} = 127,4 \text{ g}$$



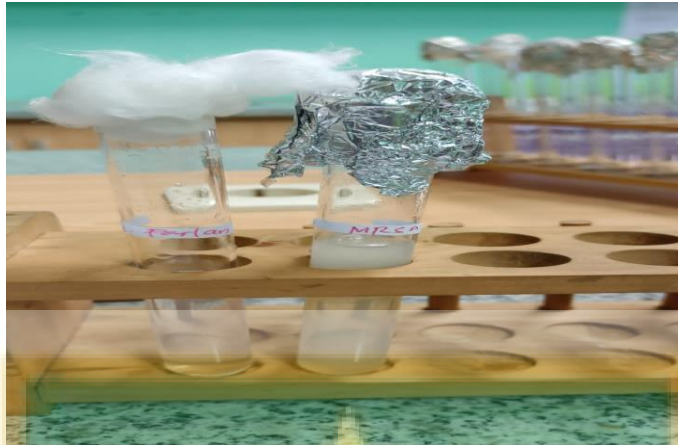
Lampiran III. Gambar lampiran



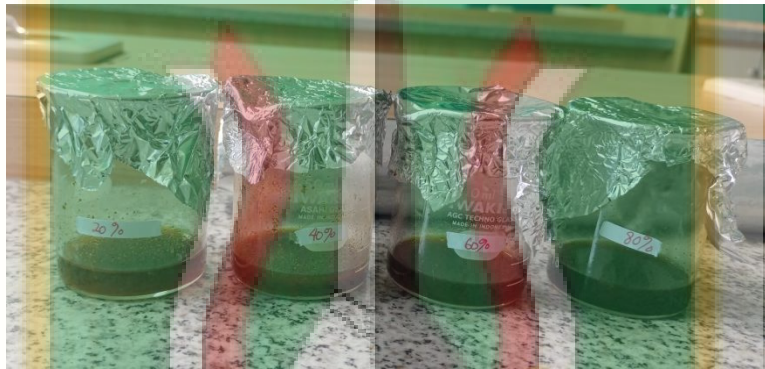
Gambar lampiran 1. Buah pare (*Momordica charantia* L.)



Gambar lampiran 2. Ekstrak metanol buah pare



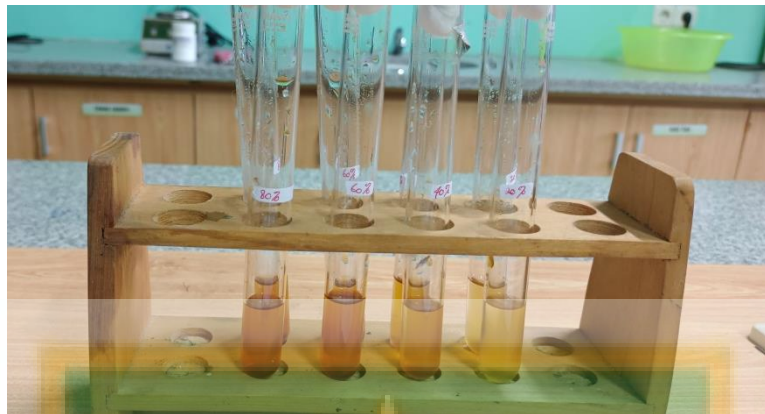
Gambar lampiran 3. Mc. Farland 0,5 dan Suspensi bakteri MRSA



Gambar lampiran 4. Seri konsentrasi ekstrak metanol buah pare



Gambar lampiran 5. Larutan uji sebelum inkubasi



Gambar lampiran 6. Larutan uji setelah inkubasi



Gambar lampiran 7. Alat spektrofotometer UV-Vis

Lampiran IV. Data Statistik ANOVA

Lampiran 1

Tests of Normality

	Sebelum Inkubasi	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
AU(480,00nm)	Konsentrasi 2%	,219	3	.	,987	3	,780
	Konsentrasi 4%	,385	3	.	,750	3	,000
	Konsentrasi 6%	,289	3	.	,927	3	,478
	Konsentrasi 8%	,329	3	.	,868	3	,289
	Kontrol (+)	,340	3	.	,848	3	,235
	Kontrol (-)	,364	3	.	,799	3	,112

a. Lilliefors Significance Correction

Descriptives

AU(480,00nm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Konsentrasi 2%	3	,820733	,0002517	,0001453	,820108	,821358	,8205	,8210
Konsentrasi 4%	3	1,230733	,0001155	,0000667	1,230446	1,231020	1,2306	1,2308
Konsentrasi 6%	3	1,457267	,0018175	,0010493	1,452752	1,461782	1,4558	1,4593
Konsentrasi 8%	3	1,522967	,0132576	,0076543	1,490033	1,555900	1,5134	1,5381
Kontrol (+)	3	,619933	,0008145	,0004702	,617910	,621957	,6190	,6205
Kontrol (-)	3	,253667	,0068245	,0039401	,236714	,270620	,2458	,2580
Total	18	,984217	,4730530	,1114997	,748973	1,219460	,2458	1,5381

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
AU(480,00nm)	Based on Mean	9,921	5	12	,001
	Based on Median	1,154	5	12	,385
	Based on Median and with adjusted df	1,154	5	3,298	,475
	Based on trimmed mean	8,437	5	12	,001

AU(480,00nm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3,804	5	,761	20163,225	,000
Within Groups	,000	12	,000		
Total	3,804	17			

Multiple Comparisons

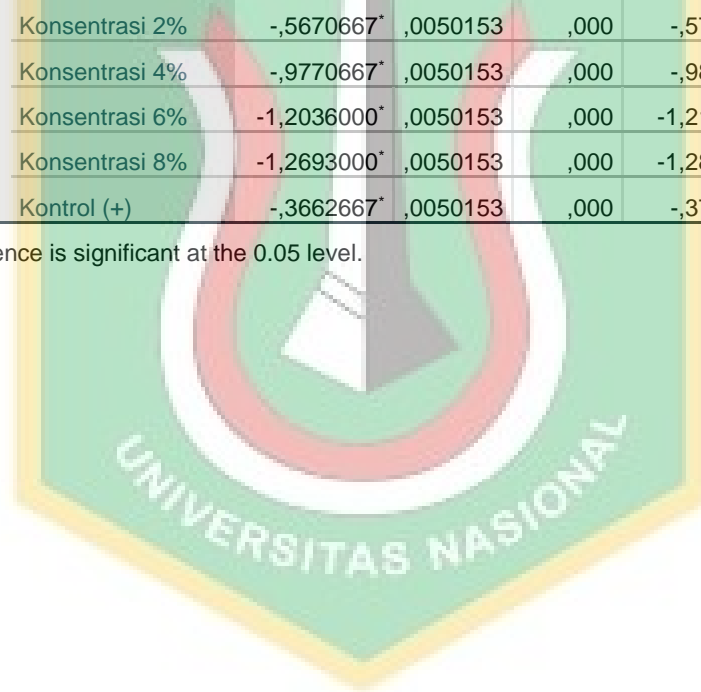
Dependent Variable: AU(480,00nm)

LSD

(I)	Sebelum (J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Inkubasi	Inkubasi				Lower Bound	Upper Bound
Konsentrasi 2%	Konsentrasi 4%	-,410000*	,0050153	,000	-,420927	-,399073
	Konsentrasi 6%	-,6365333*	,0050153	,000	-,647461	-,625606
	Konsentrasi 8%	-,7022333*	,0050153	,000	-,713161	-,691306
	Kontrol (+)	,2008000*	,0050153	,000	,189873	,211727
	Kontrol (-)	,5670667*	,0050153	,000	,556139	,577994
Konsentrasi 4%	Konsentrasi 2%	,4100000*	,0050153	,000	,399073	,420927
	Konsentrasi 6%	-,2265333*	,0050153	,000	-,237461	-,215606
	Konsentrasi 8%	-,2922333*	,0050153	,000	-,303161	-,281306
	Kontrol (+)	,6108000*	,0050153	,000	,599873	,621727
	Kontrol (-)	,9770667*	,0050153	,000	,966139	,987994
Konsentrasi 6%	Konsentrasi 2%	,6365333*	,0050153	,000	,625606	,647461
	Konsentrasi 4%	,2265333*	,0050153	,000	,215606	,237461

	Konsentrasi 8%	-,0657000*	,0050153	,000	-,076627	-,054773
	Kontrol (+)	,8373333*	,0050153	,000	,826406	,848261
	Kontrol (-)	1,2036000*	,0050153	,000	1,192673	1,214527
Konsentrasi 8%	Konsentrasi 2%	,7022333*	,0050153	,000	,691306	,713161
	Konsentrasi 4%	,2922333*	,0050153	,000	,281306	,303161
	Konsentrasi 6%	,0657000*	,0050153	,000	,054773	,076627
	Kontrol (+)	,9030333*	,0050153	,000	,892106	,913961
	Kontrol (-)	1,2693000*	,0050153	,000	1,258373	1,280227
Kontrol (+)	Konsentrasi 2%	-,2008000*	,0050153	,000	-,211727	-,189873
	Konsentrasi 4%	-,6108000*	,0050153	,000	-,621727	-,599873
	Konsentrasi 6%	-,8373333*	,0050153	,000	-,848261	-,826406
	Konsentrasi 8%	-,9030333*	,0050153	,000	-,913961	-,892106
	Kontrol (-)	,3662667*	,0050153	,000	,355339	,377194
Kontrol (-)	Konsentrasi 2%	-,5670667*	,0050153	,000	-,577994	-,556139
	Konsentrasi 4%	-,9770667*	,0050153	,000	-,987994	-,966139
	Konsentrasi 6%	-1,2036000*	,0050153	,000	-1,214527	-1,192673
	Konsentrasi 8%	-1,2693000*	,0050153	,000	-1,280227	-1,258373
	Kontrol (+)	-,3662667*	,0050153	,000	-,377194	-,355339

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



Lampiran 2

Test of Normality

	Sesudah Inkubasi	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
AU(480,00nm)	Konsentrasi 2%	,269	3	.	,949	3	,567
	Konsentrasi 4%	,196	3	.	,996	3	,878
	Konsentrasi 6%	,385	3	.	,750	3	,000
	Konsentrasi 8%	,256	3	.	,962	3	,623
	Kontrol (+)	,356	3	.	,818	3	,157
	Kontrol (-)	,314	3	.	,893	3	,363

a. Lilliefors Significance Correction

Descriptives

AU(480,00nm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Konsentrasi 2%	3	,659267	,0005132	,0002963	,657992	,660541	,6587	,6597
Konsentrasi 4%	3	1,067500	,0013528	,0007810	1,064140	1,070860	1,0661	1,0688
Konsentrasi 6%	3	1,325600	,0019053	,0011000	1,320867	1,330333	1,3245	1,3278
Konsentrasi 8%	3	1,332400	,0026514	,0015308	1,325814	1,338986	1,3301	1,3353
Kontrol (+)	3	,416800	,0054745	,0031607	,403201	,430399	,4105	,4204
Kontrol (-)	3	,458800	,0031749	,0018330	,450913	,466687	,4564	,4624
Total	18	,876728	,3938586	,0928334	,680867	1,072589	,4105	1,3353

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
AU(480,00nm)	Based on Mean	4,398	5	12	,017
	Based on Median	,508	5	12	,765
	Based on Median and with adjusted df	,508	5	4,398	,762
	Based on trimmed mean	3,777	5	12	,028

AU(480,00nm)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2,637	5	,527	59928,308	,000
Within Groups	,000	12	,000		
Total	2,637	17			

Dependent Variable: AU(480,00nm)

LSD

(I) Inkubasi	Sesudah (J) Inkubasi	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Konsentrasi 2%	Konsentrasi 4%	-,4082333*	,0024222	,000	-,413511	-,402956
	Konsentrasi 6%	-,6663333*	,0024222	,000	-,671611	-,661056
	Konsentrasi 8%	-,6731333*	,0024222	,000	-,678411	-,667856
	Kontrol (+)	,2424667*	,0024222	,000	,237189	,247744
	Kontrol (-)	,2004667*	,0024222	,000	,195189	,205744
Konsentrasi 4%	Konsentrasi 2%	,4082333*	,0024222	,000	,402956	,413511
	Konsentrasi 6%	-,2581000*	,0024222	,000	-,263378	-,252822
	Konsentrasi 8%	-,2649000*	,0024222	,000	-,270178	-,259622
	Kontrol (+)	,6507000*	,0024222	,000	,645422	,655978
	Kontrol (-)	,6087000*	,0024222	,000	,603422	,613978
Konsentrasi 6%	Konsentrasi 2%	,6663333*	,0024222	,000	,661056	,671611

	Konsentrasi 4%	,2581000*	,0024222	,000	,252822	,263378
	Konsentrasi 8%	-,0068000*	,0024222	,016	-,012078	-,001522
	Kontrol (+)	,9088000*	,0024222	,000	,903522	,914078
	Kontrol (-)	,8668000*	,0024222	,000	,861522	,872078
Konsentrasi 8%	Konsentrasi 2%	,6731333*	,0024222	,000	,667856	,678411
	Konsentrasi 4%	,2649000*	,0024222	,000	,259622	,270178
	Konsentrasi 6%	,0068000*	,0024222	,016	,001522	,012078
	Kontrol (+)	,9156000*	,0024222	,000	,910322	,920878
	Kontrol (-)	,8736000*	,0024222	,000	,868322	,878878
Kontrol (+)	Konsentrasi 2%	-,2424667*	,0024222	,000	-,247744	-,237189
	Konsentrasi 4%	-,6507000*	,0024222	,000	-,655978	-,645422
	Konsentrasi 6%	-,9088000*	,0024222	,000	-,914078	-,903522
	Konsentrasi 8%	-,9156000*	,0024222	,000	-,920878	-,910322
	Kontrol (-)	-,0420000*	,0024222	,000	-,047278	-,036722
Kontrol (-)	Konsentrasi 2%	-,2004667*	,0024222	,000	-,205744	-,195189
	Konsentrasi 4%	-,6087000*	,0024222	,000	-,613978	-,603422
	Konsentrasi 6%	-,8668000*	,0024222	,000	-,872078	-,861522
	Konsentrasi 8%	-,8736000*	,0024222	,000	-,878878	-,868322
	Kontrol (+)	,0420000*	,0024222	,000	,036722	,047278

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



Lampiran 3

Tests of Normality

	Kadar	Bunuh	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
			Minimum	Statistic	df	Sig.	Statistic	df
AU(480,00nm)	Konsentrasi 2%		,227	3	.	,983	3	,747
	Konsentrasi 4%		,253	3	.	,964	3	,637
	Konsentrasi 6%		,325	3	.	,876	3	,312
	Konsentrasi 8%		,211	3	.	,991	3	,817
	Kontrol (+)		,226	3	.	,983	3	,751
	Kontrol (-)		,248	3	.	,969	3	,660

a. Lilliefors Significance Correction

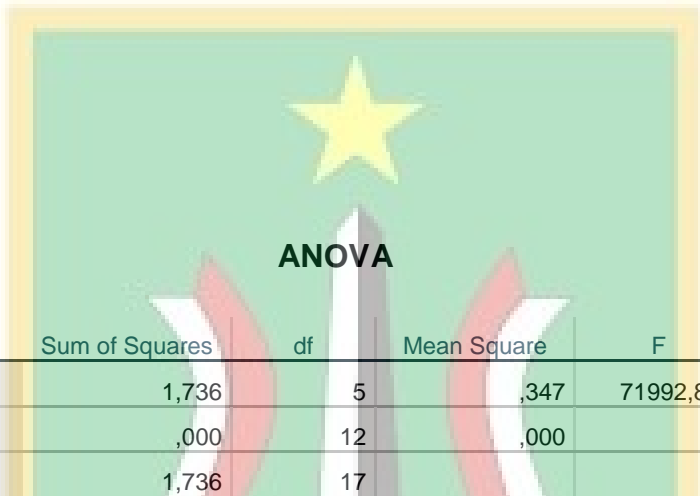
AU(480,00nm)

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Konsentrasi 2%	3	,659400	,0006557	,0003786	,657771	,661029	,6588	,6601
Konsentrasi 4%	3	,903567	,0001528	,0000882	,903187	,903946	,9034	,9037
Konsentrasi 6%	3	1,134900	,0036865	,0021284	1,125742	1,144058	1,1322	1,1391
Konsentrasi 8%	3	1,246633	,0006028	,0003480	1,245136	1,248131	1,2460	1,2472
Kontrol (+)	3	,307833	,0022189	,0012811	,302321	,313345	,3058	,3102
Kontrol (-)	3	,758933	,0030989	,0017892	,751235	,766631	,7562	,7623
Total	18	,835211	,3195480	,0753182	,676304	,994119	,3058	1,2472

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
AU(480,00nm)	Based on Mean	4,161	5	12	,020
	Based on Median	1,037	5	12	,440
	Based on Median and with adjusted df	1,037	5	4,571	,491
	Based on trimmed mean	3,830	5	12	,026

AU(480,00nm)



	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,736	5	,347	71992,865	,000
Within Groups	,000	12	,000		
Total	1,736	17			

Multiple Comparisons

Dependent Variable: AU(480,00nm)

LSD

(I) Kadar	Bunuh (J) Kadar	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
Minimum	Minimum				Lower Bound	Upper Bound
Konsentrasi 2%	Konsentrasi 4%	-,2441667*	,0017930	,000	-,248073	-,240260
	Konsentrasi 6%	-,4755000*	,0017930	,000	-,479407	-,471593
	Konsentrasi 8%	-,5872333*	,0017930	,000	-,591140	-,583327
	Kontrol (+)	,3515667*	,0017930	,000	,347660	,355473
	Kontrol (-)	-,0995333*	,0017930	,000	-,103440	-,095627
Konsentrasi 4%	Konsentrasi 2%	,2441667*	,0017930	,000	,240260	,248073
	Konsentrasi 6%	-,2313333*	,0017930	,000	-,235240	-,227427
	Konsentrasi 8%	-,3430667*	,0017930	,000	-,346973	-,339160
	Kontrol (+)	,5957333*	,0017930	,000	,591827	,599640
	Kontrol (-)	,1446333*	,0017930	,000	,140727	,148540
Konsentrasi 6%	Konsentrasi 2%	,4755000*	,0017930	,000	,471593	,479407

	Konsentrasi 4%	,2313333*	,0017930	,000	,227427	,235240
	Konsentrasi 8%	-,1117333*	,0017930	,000	-,115640	-,107827
	Kontrol (+)	,8270667*	,0017930	,000	,823160	,830973
	Kontrol (-)	,3759667*	,0017930	,000	,372060	,379873
Konsentrasi 8%	Konsentrasi 2%	,5872333*	,0017930	,000	,583327	,591140
	Konsentrasi 4%	,3430667*	,0017930	,000	,339160	,346973
	Konsentrasi 6%	,1117333*	,0017930	,000	,107827	,115640
	Kontrol (+)	,9388000*	,0017930	,000	,934893	,942707
	Kontrol (-)	,4877000*	,0017930	,000	,483793	,491607
Kontrol (+)	Konsentrasi 2%	-,3515667*	,0017930	,000	-,355473	-,347660
	Konsentrasi 4%	-,5957333*	,0017930	,000	-,599640	-,591827
	Konsentrasi 6%	-,8270667*	,0017930	,000	-,830973	-,823160
	Konsentrasi 8%	-,9388000*	,0017930	,000	-,942707	-,934893
	Kontrol (-)	-,4511000*	,0017930	,000	-,455007	-,447193
Kontrol (-)	Konsentrasi 2%	,0995333*	,0017930	,000	,095627	,103440
	Konsentrasi 4%	-,1446333*	,0017930	,000	-,148540	-,140727
	Konsentrasi 6%	-,3759667*	,0017930	,000	-,379873	-,372060
	Konsentrasi 8%	-,4877000*	,0017930	,000	-,491607	-,483793
	Kontrol (+)	,4511000*	,0017930	,000	,447193	,455007

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



User Information

Name:

Experiment Information

Title: KHM KBM
 Comment: Onci
 Instrument Serial No.: 365K9070908
 Software Version: UV Express -Version 4.1.2
 Experimental Date: Jul 8 2022 16:44:09 (GMT +7:00)
 System Name: Undefined
 Firmware Version: 160529

Method

Experiment Type : Wavelength Program

Experiment	Setup
Data Type:	Absorbance
0%T / Blocked Beam Baseline :	No
SBW (nm):	1.0
Beam Type :	Double Normal
Lamp:	UV+VIS
Measurement No.:	3
Accessory :	Single-Cell

Result Data

Name	AU(480.00nm)
Sebelum Inkubasi 2%-1	0,8205
Sebelum Inkubasi 2%-2	0,8207
Sebelum Inkubasi 2%-3	0,821
Sebelum Inkubasi 4%-1	1,2308
Sebelum Inkubasi 4%-2	1,2308
Sebelum Inkubasi 4%-3	1,2306
Sebelum Inkubasi 6%-1	1,4558
Sebelum Inkubasi 6%-2	1,4567
Sebelum Inkubasi 6%-3	1,4593
Sebelum Inkubasi 8%-1	1,5134
Sebelum Inkubasi 8%-2	1,5174
Sebelum Inkubasi 8%-3	1,5381



User Information

Name:

Experiment Information

Title: KHM KBM	Experimental Date: Jul 8 2022 16:54:16 (GMT +7:00)
Comment: Onei	System Name: Undefined
Instrument Serial No.: 365K9070908	Firmware Version: 160529
Software Version: UV Express - Version 4.1.2	

Method

Experiment Type : Wavelength Program

Experiment	Setup
Data Type:	Absorbance
0%T / Blocked Beam Baseline :	No
SBW (nm):	1.0
Beam Type :	Double Normal
Lamp:	UV+VIS
Measurement No.:	3
Accessory :	Single-Cell

Result Data

Name	AU(480.00nm)
Kontrol positif-1	0,6203
Kontrol positif-2	0,6205
Kontrol positif-3	0,6190
Kontrol negatif-1	0,258
Kontrol negatif-2	0,2572
Kontrol negatif-3	0,2458



User Information

Name:

Experiment Information

Title: Setelah inkubasi
 Comment: Onci
 Instrument Serial No.: 365K9070908
 Software Version: UV Express -Version 4.1.2

Experimental Date: Jul 9 2022 17:37:04 (GMT +7:00)
 System Name: Undefined
 Firmware Version: 160529

Method

Experiment Type :Wavelength Program

Experiment	Setup
Data Type:	Absorbance
0%T / Blocked Beam Baseline :	No
SBW (nm):	1.0
Beam Type :	Double Normal
Lamp:	UV+VIS
Measurement No.:	3
Accessory :	Single-Cell

Result Data

Name	AU(480.00nm)
Setelah inkubasi 2%-1	0,6587
Setelah inkubasi 2%-2	0,6594
Setelah inkubasi 2%-3	0,6597
Setelah inkubasi 4%-1	1,0688
Setelah inkubasi 4%-2	1,0676
Setelah inkubasi 4%-3	1,0661
Setelah inkubasi 6%-1	1,3278
Setelah inkubasi 6%-2	1,3245
Setelah inkubasi 6%-3	1,3245
Setelah inkubasi 8%-1	1,3353
Setelah inkubasi 8%-2	1,3318
Setelah inkubasi 8%-3	1,3301



User Information

Name:

Experiment Information

Title: Setelah inkubasi
 Comment: Ouci
 Instrument Serial No.: 365K9070908
 Software Version: UV Express - Version 4.1.2

Experimental Date: Jul 9 2022 17:47:07 (GMT +7:00)
 System Name: Undefined
 Firmware Version: 160529

Method

Experiment Type : Wavelength Program

Experiment	Setup
Data Type:	Absorbance
0%T / Blocked Beam Baseline :	No
SBW (nm):	1.0
Beam Type :	Double Normal
Lamp:	UV+VIS
Measurement No.:	3
Accessory :	Single-Cell

Result Data

Name	AU(480.00nm)
Kontrol positif-1	0,4105
Kontrol positif-2	0,4195
Kontrol positif-3	0,4204
Kontrol negatif-1	0,4564
Kontrol negatif-2	0,4576
Kontrol negatif-3	0,4624



User Information

Name:

Experiment Information

Title: Untitled-3
 Comment: KBM
 Instrument Serial No.: 365K9070908
 Software Version: UV Express - Version 4.1.2

Experimental Date: Jul 12 2022 19:03:55 (GMT +7:00)
 System Name: Undefined
 Firmware Version: 160529

Method

Experiment Type : Wavelength Program

Experiment	Setup
Data Type:	Absorbance
0%T / Blocked Beam Baseline :	No
SBW (nm):	1.0
Beam Type :	Double Normal
Lamp:	UV+VIS
Measurement No.:	3
Accessory :	Single-Cell

Result Data

Name	AU(480.00nm)
KBM2% setelah inkubasi-1	0,6588
KBM2% setelah inkubasi-2	0,6593
KBM2% setelah inkubasi-3	0,6601
KBM4% setelah inkubasi-1	0,9037
KBM4% setelah inkubasi-2	0,9034
KBM4% setelah inkubasi-3	0,9036
KBM6% setelah inkubasi-1	1,1322
KBM6% setelah inkubasi-2	1,1334
KBM6% setelah inkubasi-3	1,1391
KBM8% setelah inkubasi-1	1,2460
KBM8% setelah inkubasi-2	1,2472
KBM8% setelah inkubasi-3	1,2467



User Information

Name:

Experiment Information

Title: Untitled-3
 Comment: KBM
 Instrument Serial No.: 365K9070908
 Software Version: UV Express - Version 4.1.2

Experimental Date: Jul 12 2022 19:13:52 (GMT +7:00)
 System Name: Undefined
 Firmware Version: 160529

Method

Experiment Type : Wavelength Program

Experiment	Setup
Data Type:	Absorbance
0%T / Blocked Beam Baseline :	No
SBW (nm):	1.0
Beam Type :	Double Normal
Lamp:	UV+VIS
Measurement No.:	3
Accessory :	Single-Cell

Result Data

Name	AU(480.00nm)
Kontrol positif-1	0,3056
Kontrol positif-2	0,3075
Kontrol positif-3	0,3102
Kontrol negatif-1	0,7562
Kontrol negatif-2	0,7623
Kontrol negatif-3	0,7583

