

DAFTAR PUSTAKA

- Afdal Et Al. 2019. Studies on Microplastics Morphology Characteristics In The Coastal Water Of Makassar City, South Sulawesi, Indonesia. *International Journal Of Environment, Agriculture And Biotechnology (Ijeab)*. Vol-4, Issue-4, Jul-Aug- 2019.
- Ali, N., A. 2017. Analisis Kandungan Logam Berat Timbal (Pb) Pada Kerang Di Perairan Biringkassi Kabupaten Pangkep, Sulawesi Selatan. *Fakultas Sains Dan Teknologi Uin Alauddin Makassar*. [Http://Repository.Uin-Alauddin.Ac.Id/4177/1/Nur%20afdalia%20ali_Opt.Pdf](http://Repository.Uin-Alauddin.Ac.Id/4177/1/Nur%20afdalia%20ali_Opt.Pdf) (Diakses 1 Juni 2020)
- Andrady, A.L. 2015. *Persistence of Plastic Litter in The Oceans*.
- Arif, Rahman. 2007. Pengaruh Perlakuan Depurasi dan Analisis Kandungan Logam Berat (Hg, Pb, Cd dan Cu) pada Kerang Hijau (*Perna Viridis*) Hasil Budidaya di Perairan Teluk Jakarta. Departemen Biologi. FMIPA. Universitas Indonesia. Depok
- Badan Pusat Statistik. 2015. *Kabupaten Takalar Dalam Angka. Badan Pusat Statistik Kabupaten Takalar*.
- Birnstiel, Et Al. 2019. Depuration Reduces Microplastic Content in Wild and Farmed Mussels. *Marine Pollution Bulletin* 140 (2019) 241–247
- Boulter, M, Wilson, P. And Denton, J.W. (1994) Trials to Assess the Viability of Purifying Cockles. Three Phases of Trials Conducted Between 1990–1992. *Report No. Sr443. Sea Fish Industry Authority, St Andrews Dock, Hull, Hu3 4qe*, United Kingdom. Canzonier, W.J. (1991) Historical Perspective on Commercial Depuration of Shellfish.
- Brite, M., J, Dewi., Dan Kurniastuty. 2006. Rekayasa Pengujian Depurasi Kekerangan Dalam Upaya Meningkatkan Keamanan Bagi Konsumen. *Jurnal Departemen Kelautan Dan Perikanan. Jakarta*.
- Browne, M.A., Crump, P., Niven, S.J., Teuten, E., Tonkin, A., Galloway, T. & Thompson, R. 2011. Accumulation of Microplastic On Shorelines Worldwide: Sources and Sinks. *Environ. Sci. Technol.*, 45(21): 9175-9179.
- Carbery, Et Al. 2018. Trophic Transfer of Microplastics And Mixed Contaminants in The Marine Food Web and Implications for Human Health. *This Is the Accepted Manuscript of A Paper Published In Environment International*. The Final Version May Be Accessed At [Https://Doi.Org/10.1016/J.Envint.2018.03.007](https://doi.org/10.1016/j.envint.2018.03.007).
- Cauwenberghe Et Al., 2014. Microplastics In Bivalves Cultured for Human Consumption. *Environmental Pollution* 193 (2014) 65e70
- Catarino, A.I., Macchia, V., Sanderson, W.G., Thompson, R.C., Henry, T.B., 2018. Low levels of microplastics (MP) in wild mussels indicate that MP ingestion by humans is minimal compared to exposure via household fibres fallout during a meal. *Environ. Pollut.* 237, 675–684.
- Cedervall, T., Hansson, L.-A., Lard, M., Frohm, B., Linse, S., 2012. Food Chain Transport Of Nanoparticles Affects Behaviour And Fat Metabolism In Fish. *Plos One* 7 (2), E32254. [Http://Dx.Doi.Org/10.1371/Journal.Pone.0032254](http://dx.doi.org/10.1371/journal.pone.0032254).
- Chatterjee Et Al., 2019. *Microplastics In Our Oceans and Marine Health*. Institut Veolia. Issn: 1867-8521
- Critchell, Et Al. 2018. Effects of Microplastic Exposure on The Body Condition And Behaviour Of Planktivorous Reef Fish (*Acanthochromis Polyacanthus*). *Plos One* 13(3): E0193308. [Https://Doi.Org/10.1371/Journal. Pone.0193308](https://doi.org/10.1371/journal.pone.0193308)

- Cusson, M., Tremblay, R., Daigle, G., & Roussy, M. (2005). Modeling the Depuration Potential of Blue Mussels (*Mytilus* Spp.) *In Response to Thermal Shock. Aquaculture*, 250(1-2), 183–193. Doi.10.1016/J.Aquaculture.2005.03.045
- Diaz-Alejo, L. A., Menchaca-Campos, C., Chavarin, J. U., Sosa-Fonseca, R., and Garcia-Sanches, M., 2013, Effect of the Addition of Ortho- and Para NH₂ Substituted Tetraphenylporphyrins on the Structure of Nylon 66, *International Journal of Polymer Science*, 1: 1-14.
- European Commission Directorate-General for Health and Food Safety. 2018. *Guidance Document on The Implementation of Certain Provisions of Regulation (Ec) No 852/2004.* https://ec.europa.eu/food/sites/food/files/safety/docs/biosafety_fh_legis_guidance_reg-2004-852_en.pdf (Diakses 30 Mei 2020)
- Foodstandaragency. 2009. *Dance for Inspection of Shellfish Purification Systems for Local Food Authorities.* [https://www.foodstandards.gov.scot/downloads/guidance_document_\(3\).pdf](https://www.foodstandards.gov.scot/downloads/guidance_document_(3).pdf) (Diakses Pada 27 Mei 2020)
- Gabr, H.R. And A. Gab-Alla. 2008. *Effect of Transplantation on Heavy Metal Concentrations in Commercial Clams of Lake Timsah, Suez Canal, Egypt. Marine Sciences Department. Faculty of Science. Suez Canal University. Oceanologia*, 50(1): 83–93
- Gesamp (Joint Group of Experts on The Scientific Aspects of Marine Environmental Protection). 2015. *Sources, Fate and Effects of Microplastics In the Marine Environment: A Global Assessment.*
- Hantoro et al. 2019. *Microplastics in coastal areas and seafood: implications for food safety.* ISSN: 1944-0049 (Print) 1944-0057 (Online) Journal homepage: <https://www.tandfonline.com/loi/taf20>
- Hasibuan, 2018. *Kepadatan Populasi dan Pola Pertumbuhan Kepah (Polymesoda erosa) di Pantai Sialang Buah, Kecamatan Teluk Mengkudu, Kabupaten Serdang Bedagai, Sumatera Utara. Universitas Sumatera Utara Repositori Institusi USU.* <http://repositori.usu.ac.id/bitstream/handle/123456789/2480/130805030.pdf?sequence=1&isAllowed=y> (diakses 4 Juni 2020)
- Hasniar. Litaay, Magdalena. Priosambono, Dody. 2013. *Biodiversitas Gastropoda Di Padang Lamun Perairan Mara'bombang Kabupaten Pinrang Sulawesi Selatan. Orani (Jurnal Ilmu Kelautan dan Perikanan) Vol. 23 (3) Desember 2013: 127–136*
- Herzke D, Anker-Nilssen T, Nost Th, Gotsch A, Christensen-Dalsgaard S, Langset M, Et Al. 2016. *Negligible Impact of Ingested Microplastics On Tissue Concentrations of Persistent Organic Pollutants in Northern Fulmars Off Coastal Norway. Environ Sci Technol* 50:1924-1933.
- Hendrick A.W Capernbeg. 2012. *Beberapa Aspek Biologi Kerang Hijau. Vol Xxxiii.*
- Hiebenthal Et Al. 2012. *Effects of Seawater Pco₂ And Temperature on Shell Growth, Shell Stability, Condition and Cellular Stress of Western Baltic Sea Mytilus Edulis (L.) And Arctica Islandica (L.). Mar Biol (2013) 160:2073–2087*
- Hidalgo-Ruz Et Al. 2012. *Microplastics in the Marine Environment: A Review of The Methods Used for Identification and Quantification. Environ. Sci. Technol. 2012, 46, 3060–3075*
- Hiscock, I. D. 1972. *Phylum Mollusca (London: English Language Book Society), H.614.*

- Ika, Tahril, Irwan Said. 2012. Analisis Logam Timbal (Pb) Dan Besi (Fe) Dalam Air Laut Di Wilayah Pesisir Pelabuhan Ferry Taipa Kecamatan Palu Utara.
- Insafitri. 2014. Keanekaragaman, Keseragaman, Dan Dominansi Bivalvia Di Area Buangan Lumpur Lapindo Muara Sungai Porong. *Jurnal Kelautan*. Vol 3(1).
- Ismi, A. N. 2012. Distribusi Dan Keanekaragaman Bivalvia Di Perairan Puntondo Kabupaten Takalar. [Http://Repository.Uin-Alauddin.Ac.Id/2479/1/Andi%20nur%20ismi.Pdf](http://Repository.Uin-Alauddin.Ac.Id/2479/1/Andi%20nur%20ismi.Pdf) [Skripsi] (Diakses Pada 3 Januari 2020)
- International Maritime Organization. 2015. Sources, Fate and Effects of Microplastics In the Marine Environment: *A Global Assessment* (Online). (https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/gesamp_microplastics%20full%20study.pdf, Diakses 13 Januari 2020)
- Jambeck Et Al. 2015. Plastic Waste Inputs from Land into The Ocean. *Marine Pollution* Vol 347 Issue 622
- Jung, M. R., Horgen, F. D., Orski, S. V., Rodriguez, V., Beers, K., Jones, T., Brignac, K., Hyrenbach, K., Jensen, B., Lynch, J., 2018, Validation of FTIR to Identify Polymers of Plastic Marine Debris, Including Those Ingested by Marine Organisms, *Marine Pollution Bulletin*, **127**: 704-716.
- Lattemann Et Al. 2008. Environmental Impact and Impact Assessment of Seawater Desalination. *Desalination* 220 (2008) 1–15
- Law, K.L., 2017. Plastics in the marine environment. *Ann. Rev. Mar. Sci.* 9, 205-229.
- Leal Diego, A. G., Dores Ramos, A. P., Marques Souza, D. S., Durigan, M., Greinert-Goulart, J. A., Moresco, V., Regina Maura Bueno Franco. (2013). Sanitary Quality of Edible Bivalve Mollusks in Southeastern Brazil Using an Uv Based Depuration System. *Ocean & Coastal Management*, 72, 93–100. Doi.10.1016/J.Ocecoaman.2011.07.010
- Lenz, Et Al. 2016. Microplastic Exposure Studies Should Be Environmentally Realistic. *Pnas Early Edition*. <https://www.pnas.org/content/113/29/E4121>
- Lee, H., Shim, Wj., Kwon, J. H. 2014. Sorption Capacity of Plastic Debrids For Hydrophobic Organic Chemicals. *Science Total Environment*. 470-471, 1545-1552
- Liebezeit, G.; Liebezeit, E. Non-Pollen Particulates in Honey and Sugar. *Food Addit. Contam., Part A* 2013, 30 (12), 2136–2140.
- Li Et Al., 2016. Microplastics In Mussels Along the Coastal Waters of China. *Environ Pollut.* 2016 Jul;214:177-184. Doi: 10.1016/J.Envpol.2016.04.012
- Liebmann Et Al. 2018. Assessment of Microplastic Concentration in Human Stool Final Results of a Prospective Study. *Medical University of Vienna*
- Lusher, Et Al. 2016. Microplastic And Macroplastic Ingestion by A Deep Diving, Oceanic Cetacean: The True's Beaked Whale *Mesoplodon Mirus*, *Environmental Pollution*, [Doi.Org/10.1016/J. Envpol.2015.01.023](https://doi.org/10.1016/j.envpol.2015.01.023), 2015
- Lusher et al. 2017. Sampling, isolating and identifying microplastics ingested by fish and invertebrates. *Anal. Methods*, 2017, 9, 1346.
- Mai, L., Bao, L.-J., Shi, L., Wong, C. S., & Zeng, E. Y. 2018. A Review of Methods for Measuring Microplastics In Aquatic Environments. *Environmental Science and Pollution Research*, 25(12), 11319–11332. Doi:10.1007/S11356-018-1692-0
- Maximenko N A, Hafner J and Niiler P P 2012 Pathways of Marine Debris Derived from Trajectories of Lagrangian Drifters *Mar. Pollut. Bull.* 65 51–62
- Mathalon, A.; Hill, P. Microplastic Fibers in The Intertidal Ecosystem Surrounding Halifax Harbor, Nova Scotia. *Mar. Pollut. Bull.* 2014, 81 (1), 69–79.

- Mcleod1 Et Al. 2017. Final Report: Evaluating the Effectiveness of Depuration in Removing Norovirus from Oysters. *Seafood Safety Assessment Ltd. And The 2 French Research Institute for Exploitation of The Sea*. https://www.food.gov.uk/sites/default/files/media/document/fs101068finrep_0.pdf (Diakses Pada 30 Mei 2020)
- Melinda Et Al. 2015. Kebiasaan Makan Kerang Kepah (*Polymesoda Erosa*) Di Kawasan Mangrove Pantai Pasir Padi. *Oseatek Juni 2015 Vol. 9 _ Issn: 1858 – 4519*
- Muchammad Arifin (2019) Komposisi Kimia Kerang Batik (*Paphia Undulata*) Pada Lokasi Yang Berbeda Di Kecamatan Sedati Sidoarjo, Jawa Timur. Skripsi thesis, UNIVERSITAS AIRLANGGA
- Nikmah, Ma'rifatul. 2017. Potensi Penggunaan Cangkang Kerang Sebagai Filter Dalam Proses Depurasi Terhadap Kandungan Logam Berat Kadmium (Cd) Pada Kerang Bulu (*Anadara Antiquata*). *Fakultas Perikanan Dan Kelautan Universitas Air Langga* [Skripsi]. (Diakses Pada 28 Mei 2020)
- Novianti dkk. 2017. Studi Tentang Pertumbuhan Mikroalga *Chlorella Vulgaris* Yang dikultivasi berdasarkan sumber cahaya yang berbeda. *Mangifera Edu. Volume 1 Nomor 2*
- Plastics Europe, 2018. *Plastics — the facts 2017. An analysis of European plastics production, demand and waste data*. <https://www.plasticseurope.org>.
- Qualls, R., G., Susan F. Ossoff, John C. H. Chang, Mark H. Dorfman, Constance M. Dumais, David C. Lobe and J. Donald Johnson *Journal (Water Pollution Control Federation)* Vol. 57, No. 10 (Oct., 1985), Pp. 1006-1011
- Rahman. 2007. *Public Health Assessment: Model Kajian Prediktif Dampak Lingkungan Dan Aplikasinya Untuk Manajemen Risiko Kesehatan*. (Online) (<https://Arrahman29.files.wordpress.com/2008/02/Ph-A-130208.pdf>, Diakses 10 Januari 2020)
- Richard, Gary P. 1988. Microbial Purification of Shellfish: A Review of Depuration and Relaying. *Journal of Food Protection*, Vol. 51, No. 3, Pages 2/8-25/ (March 1988)
- Riyadi dkk. 2016. Efektifitas Depurasi Untuk Menurunkan Kandungan Logam Berat Pb Dan Cd Dalam Daging Kerang Darah (*Anadara granosa*). Prosiding Seminar Nasional Tahunan Ke-V Hasil-Hasil Penelitian Perikanan dan Kelautan, Universitas Diponegoro
- Rudianto. 2018. *Buku Ajar Pengelolaan Wilayah Pesisir Dan Laut Terpadu (Pwplt). Uwais Inspirasi Indonesia*.
- Rochman, C.M., Hoh, E., T., The, S.J. 2013. Ingested Plastic Transfers Hazardous Chemicals to Fish and Induces Hepatic Stress. *Science Rep.* 3, 3265
- Rochman Et Al. 2015. Anthropogenic Debris in Seafood: Plastic Debris and Fibers from Textiles in Fish and Bivalves Sold for Human Consumption. *Scientific Reports* | 5:14340 | Doi.10.1038/Srep14340
- Sampurno, 2006. Aplikasi Polimer dalam Industri Kemasan. Edisi Khusus Oktober 2006, hal: 15 - 22 ISSN: 1411-1098
- Santoso. 2016. Pengaruh Perbedaan Salinitas pada Proses Depurasi terhadap Konsentrasi Logam Berat Merkuri (Hg) dalam Kerang Darah (*Anadara granosa*). AdIn - Perpustakaan Universitas Airlangga [SKRIPSI]
- Schneider, K. R., Cevallos, J., & Rodrick, G. E. (2009). *Molluscan Shellfish Depuration. Shellfish Safety and Quality*, 509–541. Doi:10.1533/9781845695576.5.509

- Schwabl Et Al. 2019. Detection of Various Microplastics In Human Stool. *Ann Intern Med*. Doi:10.7326/M19-0618
- Setyono, D. E. D. 2006. *Karakteristik Biologi Dan Produk Kekeurangan Laut*. *Jurnal Oseana* 31, (1): 1-7. [Http://Biologi/Reproduksi Bivalvia.Com](http://Biologi/Reproduksi Bivalvia.Com)
- Smith Et Al. 2018. *Microplastics In Seafood and The Implications for Human Health*. *Current Environmental Health Reports* (2018) 5:375–386
- Song Et Al., 2009. Biodegradable and Compostable Alternatives to Conventional Plastics. *Phil. Trans. R. Soc. B* (2009) 364, 2127–2139
- Stephanie L., Et Al, 2018. Plastic and Human Health: A Micro Issue. *Environ. Sci. Technol.* 2017, 51, 6634–6647
- Sucita D. 2014. Sistem Pakar untuk Menentukan Jenis Plastik Berdasarkan Sifat Plastik Terhadap Makanan yang akan Dikemas Menggunakan Metode Certainly Factor. Studi Kasus CV. Minapack Pekan Baru. Fakultas Sains dan Teknologi Universitas Islam Negeri Sultan Syarif Kasim Riau: Riau.
- Sulmartiw et al. 2019. Aplikasi Sanitasi Kerang dengan Metode Depurasi di Kawasan Kampung Nelayan Kerang Pantai Kenjeran, Surabaya. *Journal of Marine and Coastal Science*, Vol. 8 No.1, Februari 2019
- Tanaka, K., Takada, H., 2016. Microplastic Fragments and Microbeads In Digestive Tracts Of Planktivorous Fish From Urban Coastal Waters. *Sci. Rep.* 6, 34,351.
- Tu, N. P. C., Ha, N. N., Agusa, T., Ikemoto, T., Tuyen, B. C., Tanabe, S., & Takeuchi, I. (2011). Trace elements in *Anadara* spp. (Mollusca: Bivalva) collected along the coast of Vietnam, with emphasis on regional differences and human health risk assessment. *Fisheries Science*, 77(6), 1033–1043. <https://doi.org/10.1007/s12562-011-0410-3>.
- Tremblay I, Guderley HE, Himmelman JH. 2012. Swimming Away or Clamming Up: The Use of Phasic and Tonic Adductor Muscles During Escape Responses Varies with Shell Morphology in Scallops. *J. Exp. Biol.* 4: 131-143.
- Tremblay I, Samson DM, Guderley HE. 2015. When Behavior and Mchanics Meet: Scallop Swimming Capacities and Their Hinge Ligament. *J Shellfish Res.* 2: 203-212.
- Urbanek Et Al., 2018. Degradation of Plastics and Plastic-Degrading Bacteria in Cold Marine Habitats. *Applied Microbiology and Biotechnology* (2018) 102:7669–7678
- Vandermeersch, G., Van Cauwenberghe, L., Janssen, C. R., Marques, A., Granby, K., Fait, G., Devriese, L. (2015). A critical view on microplastic quantification in aquatic organisms. *Environmental Research*, 143(2014), 46–55. <https://doi.org/10.1016/j.envres.2015.07.016>.
- Von Moos, N., Burkhardt-Holm, P., & Koehler, A. (2012). Uptake and Effects of Microplastics on Cells and Tissue of the Blue Mussel *Mytilus edulis* L. after an Experimental Exposure. *Environmental Science & Technology*, 46, 327–335. <https://doi.org/10.1021/es302332w>.
- Weisz, P. B. 1973. *The Science of Zoology* (United States of America: Second Edition. Mc Graw-Hill, Inc), H. 125.
- West, P. A. (1986). Hazard Analysis Critical Control Point (Haccp) Concept: Application to Bivalve Shellfish Purification Systems. *Journal of The Royal Society of Health*, 106(4), 133–140. Doi:10.1177/146642408610600405
- World Health Organization (Who). 2010. *Safe Management of Shellfish and Harvest Waters*. Edited by G. Rees, K. Pond, D. Kay, J. Bartram And J. Santo Domingo. Isbn: 9781843392255. *Published by Iwa Publishing, London, Uk*.
- Widianarko, (2018). *Mikroplastik Dalam Seafood Dari Pantai Utara Jawa..*

- Woods, M. N., Stack, M. E., Fields, D. M., Shaw, S. D., & Matrai, P. A. (2018). Microplastic Fiber Uptake, Ingestion, And Egestion Rates in The Blue Mussel (*Mytilus Edulis*). *Marine Pollution Bulletin*, 137, 638–645. Doi.10.1016/J.Marpolbul.2018.10.061
- Wright, S.L., Rowe, D., Thompson, R.C., Galloway, T.S., 2013. Microplastic Ingestion Decreases Energy Reserves in Marine Worms. *Curr. Biol.*
- Wwf Indonesia. 2015. Perikanan Dan Kerang (Online). ([Http://awsassets.Wwf.Or.Id/Downloads/Capture___Bmp_Kerang___Des_2015.Pdf](http://awsassets.wwf.or.id/downloads/capture___bmp_kerang___des_2015.pdf), Diakses 12 Januari 2020)
- Yang, Et Al. 2015. Microplastics In Commercial Bivalves from China. *Environ. Pollut.* 2015, 207, 190–195.
- Yennie, Y dan J.T. Murtini. 2005. Kandungan Logam Berat Air Laut, Sedimen dan Daging Kerang Darah (*Anadara Granosa*) Di Perairan Mentok dan Tanjung Jabung Timur. *Jurnal Ilmu-ilmu Perairan dan Perikanan Indonesia*, 12(1): 27-32
- Zulkarnaen, Adi. 2017. Identifikasi Sampah Laut (Marine Debris) Di Pantai Bodia Kecamatan Galesong. <https://core.ac.uk/download/pdf/83870565.pdf> (diakses 4 Juni 2020)

LAMPIRAN

Lampiran 1. Karakteristik mikroplastik pada sampel kerang

a. Depurasi 24 jam

No.	Kode Sampel (Ulangan 1)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	A1 (5,3 gr)	Fiber	Merah	2,368	15
		Fiber	Merah	3,972	
		Fiber	Merah	1,755	
		Fiber	Merah	1,164	
		Fiber	Merah	0,755	
		Fiber	Merah	4,233	
		Fiber	Merah	1,174	
		Fiber	Merah	0,731	
		Fiber	Merah	0,578	
		Fiber	Merah	1,928	
		Fiber	Merah	1,108	
		Fiber	Merah	0,317	
		Fiber	Merah	2,03	
		Fiber	Merah	0,361	
		Fiber	Merah	0,632	
2	A1 (11,4 gr)	Fiber	Biru	0,386	2
		Film	Transparan	3,788	
3	A1 (4,6 gr)	Film	Transparan	4,05	34
		Fiber	Merah	1,084	
		Fiber	Merah	0,951	
		Fiber	Merah	1,91	

		Fiber	Merah	1,147	
		Fiber	Merah	0,991	
		Fiber	Merah	1,691	
		Fiber	Merah	1,316	
		Fiber	Merah	2,997	
		Fiber	Merah	0,386	
		Fiber	Merah	1,842	
		Fiber	Merah	1,836	
		Fiber	Merah	2,949	
		Fiber	Merah	1,856	
		Fiber	Merah	2,916	
		Fiber	Merah	1,139	
		Fiber	Merah	1,762	
		Fiber	Merah	1,126	
		Fiber	Merah	2,207	
		Fiber	Merah	0,858	
		Fiber	Merah	2,462	
		Fiber	Merah	1,4	
		Fiber	Merah	2,603	
		Fiber	Merah	1,061	
		Fiber	Merah	1,39	
		Fiber	Merah	0,291	
		Fiber	Merah	0,905	
		Fiber	Merah	0,916	
		Fiber	Merah	2,091	
		Fiber	Merah	1,778	

		Fiber	Merah	2,495	
		Fiber	Merah	1,895	
		Fiber	Merah	1,66	
		Fiber	Merah	1,244	
4	A1 (5,1 gr)	Fiber	Merah	2,312	12
		Fiber	Merah	0,931	
		Fiber	Merah	2,163	
		Fiber	Merah	0,921	
		Fiber	Merah	1,82	
		Fiber	Merah	1,598	
		Fiber	Merah	0,747	
		Fiber	Merah	0,767	
		Fiber	Merah	2,247	
		Fiber	Merah	0,917	
		Film	Transparan	2,572	
		Fiber	Biru	0,362	
5	A1 (7,2 gr)	Fiber	Merah	2,237	20
		Fiber	Merah	0,843	
		Fiber	Merah	2,404	
		Fiber	Merah	1,332	
		Fiber	Merah	0,872	
		Fiber	Merah	0,527	
		Fiber	Merah	3,575	
		Fiber	Merah	1,258	
		Fiber	Merah	1,587	
		Fiber	Merah	1,428	

		Fiber	Merah	1,489	
		Fiber	Merah	1,13	
		Fiber	Merah	1,137	
		Fiber	Merah	3,566	
		Fiber	Hitam	1,625	
		Fiber	Hitam	0,561	
		Fiber	Hitam	2,644	
		Fiber	Hitam	0,771	
		Film	Transparan	3,074	
		Fragmen	Kuning	0,894	
6	A1 (9.0 gr)	Fiber	Merah	0,594	3
		Fiber	Merah	1,094	
		Fragmen	Kuning	0,386	
7	A1 (9,8 gr)	Fiber	Merah	1,15	3
		Fiber	Merah	0,816	
		Fiber	Merah	1,002	
8	A1 (11,1 gr)	Fiber	Merah	2,024	3
		Fragmen	Merah	0,207	
		Film	Transparan	3,448	
9	A1 (11,4 gr)	Film	Transparan	3,563	1
10	A1 (14,1 gr)	Film	Transparan	4,169	1
TOTAL					94

No.	Kode Sampel (Ulangan 2)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	A2 (9,1 gr)	Film	Transparan	3,879	2
		Film	Transparan	2,418	
2	A2 (4,8 gr)	Fiber	Merah	1,568	1
3	A2 (5,6 gr)	Fiber	Biru	1,033	2
		Fiber	Biru	1,145	
4	A2 (6,1 gr)	Fiber	Biru	0,956	1
5	A2 (7,1 gr)	Fiber	Biru	0,794	1
6	A2 (8,2 gr)	Fiber	Merah	1,537	5
		Fiber	Merah	0,262	
		Fiber	Merah	1,553	
		Fiber	Merah	2,012	
		Fiber	Merah	2,341	
7	A2 (10,1 gr)	Fiber	Merah	1,512	2
		Fiber	Hitam	0,431	
8	A2 (9,3 gr)	Negatif			0
9	A2 (8,8 gr)	Negatif			0
10	A2 (5,2 gr)	Negatif			0
TOTAL					14

No.	Kode Sampel (Ulangan 3)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	A3 (5,8)	Fiber	Merah	1,704	2

	gr)				
		Fiber	Merah	2,607	
2	A3 (7,1 gr)	Fiber	Merah	1,742	6
		Fiber	Merah	1,092	
		Fiber	Merah	1,743	
		Fiber	Merah	0,824	
		Fiber	Merah	4,495	
		Fiber	Merah	2,282	
3	A3 (7,0 gr)	Fiber	Merah	1,554	4
		Fiber	Merah	3,058	
		Fiber	Merah	0,866	
		Fiber	Biru	3,548	
4	A3 (8,0 gr)	Film	Transparan	4,007	2
		Fiber	Hitam	1,192	
5	A3 (7,4 gr)	Fiber	Merah	3,968	5
		Fiber	Merah	0,564	
		Fiber	Merah	1,087	
		Fiber	Merah	0,988	
		Film	Transparan	2,27	
6	A3 (8,9 gr)	Fiber	Merah	0,905	2
		Film	Transparan	4,725	
7	A3 (10,4 gr)	Fiberr	Biru	5,434	XMP

8	A3 (6,3 gr)	Negatif			
9	A3 (6,2 gr)	Negatif			
10	A3 (7,8 gr)	Negatif			
TOTAL					21

b. Depurasi 48 jam

No.	Kode Sampel (Ulangan 1)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	B1 (9,5 gr)	Fiber	Merah	1,006	7
		Fiber	Merah	1,512	
		Fiber	Merah	0,981	
		Fiber	Merah	0,828	
		Fiber	Merah	0,718	
		Fiber	Merah	1,839	
		Film	Transparan	4,714	
2	B1 (6,2 gr)	Fiber	Merah	0,72	6
		Fiber	Merah	0,607	
		Fiber	Merah	3,102	
		Fiber	Merah	1,486	
		Monofilamen	Biru	0,469	
		Film	Transparan	2,718	
3	B1 (7,4 gr)	Fiber	Merah	1,404	3
		Fiber	Biru	0,52	

		Film	Transparan	2,544	
4	B1 (5,5 gr)	Fiber	Merah	1,038	5
		Fiber	Merah	1,269	
		Fiber	Merah	3,242	
		Fiber	Merah	1,987	
		Fiber	Merah	1,761	
5	B1 (11,6 gr)	Fiber	Merah	1,479	4
		Fiber	Merah	4,532	
		Fiber	Biru	1,208	
		Film	Transparan	3,086	
6	B1 (7,9 gr)	Fiber	Biru	2,04	3
		Film	Transparan	3,268	
		Film	Transparan	3,09	
7	B1 (4,4 gr)	Fiber	Merah	1,993	18
		Fiber	Merah	1,641	
		Fiber	Merah	1,839	
		Fiber	Merah	2,685	
		Fiber	Merah	0,987	
		Fiber	Merah	0,949	
		Fiber	Merah	1,351	
		Fiber	Merah	1,314	
		Fiber	Merah	4,131	
		Fiber	Merah	0,742	
		Fiber	Merah	1,711	
		Fiber	Merah	1,085	

		Fiber	Merah	1,134	
		Fiber	Merah	3,592	
		Fiber	Merah	0,726	
		Fiber	Merah	2,215	
		Fiber	Merah	2,248	
		Fiber	Merah	0,871	
8	B1 (8,1 gr)	Fiber	Merah	1,86	7
		Fiber	Merah	2,832	
		Fiber	Merah	1,217	
		Fiber	Merah	1,262	
		Fiber	Merah	3,074	
		Fiber	Merah	1,196	
		Film	Transparan	2,566	
9	B1 (6,1 gr)	Fiber	Merah	1,641	18
		Fiber	Merah	0,432	
		Fiber	Merah	1,442	
		Fiber	Merah	2,485	
		Fiber	Merah	1,51	
		Fiber	Merah	1,494	
		Fiber	Merah	1,146	
		Fiber	Merah	0,304	
		Fiber	Merah	1,665	
		Fiber	Merah	0,834	
		Fiber	Merah	1,734	
		Fiber	Merah	0,83	
		Fiber	Merah	1,431	

		Fiber	Merah	0,424	
		Fiber	Merah	0,978	
		Fiber	Merah	2,341	
		Fiber	Merah	0,951	
		Fiber	Biru	0,199	
10	B1 (8,1 gr)	Fiber	Merah	1,568	4
		Fiber	Merah	1,134	
		Fiber	Merah	1,692	
		Fiber	Merah	1,977	
TOTAL					75

No.	Kode Sampel (Ulangan 2)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	B2 (7,7 gr)	Fiber	Merah	2,874	7
		Fiber	Merah	0,532	
		Fiber	Merah	1,074	
		Fiber	Merah	1,467	
		Fiber	Merah	1,198	
		Fiber	Biru	1,712	
		Fiber	Biru	0,245	
2	B2 (8,7 gr)	Fiber	Merah	1,035	21
		Fiber	Merah	1,212	
		Fiber	Merah	1,045	
		Fiber	Merah	1,24	
		Fiber	Merah	1,233	

		Fiber	Merah	1,271	
		Fiber	Merah	2,335	
		Fiber	Merah	1,967	
		Fiber	Merah	1,791	
		Fiber	Merah	0,888	
		Fiber	Merah	1,109	
		Fiber	Merah	2,121	
		Fiber	Merah	1,966	
		Fiber	Merah	1,658	
		Fiber	Merah	1,012	
		Fiber	Merah	0,707	
		Fiber	Merah	2,566	
		Fiber	Merah	2,284	
		Fiber	Merah	0,694	
		Fiber	Merah	1,097	
		Fiber	Merah	2,059	
3	B2 (5,2 gr)	Fiber	Merah	3,054	6
		Fiber	Merah	1,369	
		Fiber	Merah	3,588	
		Fiber	Merah	1,847	
		Fiber	Merah	3,024	
		Fiber	Merah	1,93	
4	B2 (5,0 gr)	Fiber	Merah	0,431	6
		Fiber	Merah	1,159	
		Fiber	Merah	1,593	
		Fiber	Merah	2,07	

		Fiber	Merah	1,926	
		Fiber	Merah	0,371	
5	B2 (3,2 gr)	Fiber	Merah	0,9	31
		Fiber	Merah	1,859	
		Fiber	Merah	1,659	
		Fiber	Merah	2,007	
		Fiber	Merah	1,286	
		Fiber	Merah	1,008	
		Fiber	Merah	1,097	
		Fiber	Merah	1,181	
		Fiber	Merah	0,973	
		Fiber	Merah	2,315	
		Fiber	Merah	2,414	
		Fiber	Merah	3,118	
		Fiber	Merah	1,55	
		Fiber	Merah	0,815	
		Fiber	Merah	0,863	
		Fiber	Merah	1,321	
		Fiber	Merah	1,163	
		Fiber	Merah	1,791	
		Fiber	Merah	2,924	
		Fiber	Merah	0,924	
		Fiber	Merah	2,291	
		Fiber	Merah	1,832	
		Fiber	Merah	1,336	
		Fiber	Merah	0,69	

		Fiber	Merah	1,77	
		Fiber	Merah	2,301	
		Fiber	Merah	2,567	
		Fiber	Merah	2,588	
		Fiber	Merah	1,395	
		Fiber	Merah	2,078	
		Fiber	Merah	2,499	
6	B2 (5,2 gr)	Fiber	Biru	0,359	6
		Fiber	Biru	0,887	
		Fiber	Biru	0,216	
		Fiber	Biru	1,004	
		Film	Transparan	2,628	
		Film	Transparan	3,082	
7	B2 (4,8 gr)	Fiber	Biru	0,731	6
		Fiber	Merah	0,905	
		Fiber	Merah	0,503	
		Fiber	Merah	2,106	
		Fiber	Merah	1,948	
		Fiber	Merah	2,037	
8	B2 (7,1gr)	Fiber	Merah	3,299	2
		Fiber	Merah	0,645	
9	B2 (6,0 gr)	Fiber	Biru	1,926	3
		Monofilamen	Biru	1,004	
		Fiber	Merah	0,903	
10	B2 (8,8 gr)	Fiber	Biru	1,633	2
		Film	Transparan	3,9	

No.	Kode Sampel (Ulangan 3)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	B3 (5,8 gr)	Fiber	Merah	1,207	6
		Fiber	Merah	1,736	
		Fiber	Merah	0,597	
		Fiber	Merah	0,551	
		Fiber	Biru	0,963	
		Film	Transparan	1,982	
2	B3 (8,1 gr)	Film	Transparan	2,861	1
3	B3 (6,3 gr)	Fiber	Biru	1,849	1
4	B3 (4,2 gr)	Fiber	Merah	1,281	2
		Fiber	Biru	1,813	
5	B3 (7,7 gr)	Fiber	Biru	0,479	4
		Fiber	Biru	0,199	
		Fiber	Biru	0,184	
		Fiber	Hitam	1,208	
6	B3 (7,8 gr)	Film	Transparan	3,846	2
		Monofilamen	Biru	0,278	
7	B3 (5,2 gr)	Fiber	Biru	2,311	1
8	B3 (7,2 gr)	Negatif			
9	B3 (5,3 gr)	Negatif			
10	B3 (5,6 gr)	Negatif			
TOTAL					17

c. Depurasi 72 jam

No.	Kode Sampel (Ulangan 1)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	C1 (6,6 gr)	Fiber	Biru	0,805	2
		Film	Transparan	2,783	
2	C1 (7,5 gr)	Film	Transparan	2,86	1
3	C1 (6,0 gr)	Fiber	Merah	0,644	1
4	C1 (5,6 gr)	Fiber	Merah	0,718	1
5	C1 (6,4 gr)	Negatif			
6	C1 (7,9 gr)	Negatif			
7	C1 (6,3 gr)	Negatif			
8	C1 (9,3 gr)	Negatif			
9	C1 (8,1 gr)	Negatif			
10	C1 (7,9 gr)	Negatif			
TOTAL					5

No.	Kode Sampel (Ulangan 2)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	C2 (9,2 gr)	Film	Transparan	2,264	1
2	C2 (5,2 gr)	Fiber	Merah	0,388	1
3	C2 (14,5 gr)	Fiber	Hitam	0,632	1
4	C2 (6,6 gr)	Film	Transparan	2,403	1
5	C2 (8,2 gr)	Negatif			
6	C2 (6,4 gr)	Negatif			
7	C2 (6,0 gr)	Negatif			
8	C2 (6,1 gr)	Negatif			
9	C2 (4,2 gr)	Negatif			
10	C2 (5,4 gr)	Negatif			
TOTAL					4

No.	Kode Sampel (Ulangan 3)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	C3 (8,4 gr)	Fiber	Biru	1,044	4

		Fiber	Biru	0,682	
		Fiber	Biru	0,512	
		Fiber	Biru	0,679	
2	C3 (12,6 gr)	Film	Transparan	3,251	1
3	C3 (12,9 gr)	Film	Transparan	4,572	2
		Film	Transparan	3,833	
4	C3 (4,9 gr)	Film	Transparan	1,761	2
		Film	Transparan	4,218	
5	C3 (10,9 gr)	Film	Transparan	2,472	1
6	C3 (9,7 gr)	Fiber	Biru	0,212	1
7	C3 (13,3 gr)	Negatif			
8	C3 (11,2 gr)	Negatif			
9	C3 (14,4 gr)	Negatif			
10	C3 (8,5 gr)	Negatif			
TOTAL					11

d. Depurasi 96 jam

No.	Kode Sampel (Ulangan 1)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	D1 (8,4 gr)	Fiber	Hitam	1,175	3

		Fiber	biru	0,344	
		Fiber	Hitam	0,489	
2	D1 (7,1 gr)	Film	Transparan	2,671	1
3	D1 (7,2 gr)	Fiber	Merah	0,343	2
		Film	Transparan	2,701	
4	D1 (4,6 gr)	Film	Transparan	3,648	1
5	D1 (6,4 gr)	Film	Transparan	2,889	2
		Film	Transparan	2,333	
6	D1 (5,6 gr)	Fiber	biru	2,628	1
7	D1 (7,6 gr)	Film	Transparan	1,905	1
8	D1 (6,0 gr)	Negatif			
9	D1 (6,43 gr)	Negatif			
10	D1 (6,8 gr)	Negatif			
TOTAL					11

No.	Kode Sampel (Ulangan 2)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	D2 (5,9 gr)	Fiber	Biru	0,984	1
2	D2 (6,1 gr)	Negatif			
3	D2 (7,4 gr)	Negatif			
4	D2 (8,6 gr)	Negatif			
5	D2 (7,0 gr)	Negatif			
6	D2 (6,7 gr)	Negatif			
7	D2 (6,6 gr)	Negatif			
8	D2 (5,2 gr)	Negatif			
9	D2 (5,7 gr)	Negatif			
10	D2 (6,5 gr)	Negatif			
TOTAL					1

No.	Kode Sampel (Ulangan 3)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	

1	D3 (13,6 gr)	Film	Transparan	4,065	1
2	D3 (16,6 gr)	Film	Transparan	3,052	1
3	D3 (9,9 gr)	Film	Transparan	2,305	1
4	D3 (8,6 gr)	Film	Transparan	3,302	1
5	D3 (8,4 gr)	Film	Transparan	3,216	1
6	D3 (9,8 gr)	Negatif			
7	D3 (10,3 gr)	Negatif			
8	D3 (8,7 gr)	Negatif			
9	D3 (9,3 gr)	Negatif			
10	D3 (12,8 gr)	Negatif			
TOTAL					5

e. Kontrol (0 jam)

No.	Kode Sampel (Ulangan 1)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	K1 (6) 4,8 gr	Fiber	Biru	0,588	3
		Monofilamen	Biru	0,26	
		Fragmen	Merah	0,244	
2	K1 (7) 11.3 gr	Fragmen	Kuning	0,269	4

		Fragmen	Kuning	0,513	
		Fragmen	Kuning	0,234	
		Film	Transparan	3,313	
3	K1 (11) 9.5 gr	Film	Transparan	4,253	18
		Film	Transparan	0,5	
		Film	Transparan	1,093	
		Film	Transparan	4,324	
		Film	Transparan	1,274	
		Film	Transparan	1,017	
		Fragmen	Merah	0,824	
		Fragmen	Merah	0,731	
		Fragmen	Kuning	0,574	
		Fragmen	Kuning	0,378	
		Fragmen	Kuning	0,523	
		Fragmen	Kuning	0,495	
		Fragmen	Kuning	0,921	
		Fragmen	Kuning	0,439	
		Fragmen	Kuning	0,154	
		Fiber1	Merah	0,769	
		Fiber	Biru	0,423	
		Fiber	Biru	0,467	
4	K1 (12) 10.9 gr	Fragmen	Merah	0,514	8
		Fragmen	Merah	0,683	
		Fragmen	Kuning	2,83	
		Fragmen	Kuning	0,531	

		Fragmen	Kuning	0,564	
		Fragmen	Kuning	1,257	
		Fragmen	Kuning	0,51	
		Fragmen	Kuning	0,624	
5	K1 (14) 10.4 gr	Fragmen	Merah	0,791	9
		Fragmen	Merah	0,589	
		Fragmen	Kuning	1,12	
		Fragmen	Kuning	1,042	
		Fragmen	Kuning	0,524	
		Fragmen	Kuning	0,579	
		Fragmen	Kuning	0,653	
		Fragmen	Kuning	0,581	
		Fragmen	Hitam	1,901	
6	K1 (14) 11.8 gr	Fiber	Biru	0,808	2
		Film	Transparan	4,483	
7	K1 (15) 9.4 gr	Fragmen	Kuning	0,132	18
		Fragmen	Kuning	0,819	
		Fragmen	Kuning	0,914	
		Fragmen	Kuning	0,779	
		Fiber	Merah	0,826	
		Fiber	Merah	0,572	
		Fiber	Biru	1,498	
		Fiber	Biru	0,425	
		Fiber	Biru	0,246	
		Fiber	Biru	0,237	

		Fiber	Biru	0,587	
		Fiber	Biru	1,796	
		Fiber	Biru	1,552	
		Film	Transparan	1,729	
		Film	Transparan	4,06	
		Film	Transparan	3,762	
		Film	Transparan	3,722	
		Film	Transparan	3,436	
8	K1 (18) 9.9 gr	Film	Transparan	4,35	5
		Film	Transparan	3,255	
		Film	Transparan	0,87	
		Film	Transparan	0,723	
		Film	Transparan	0,55	
9	K1 (20) 9.4 gr	Film	Transparan	4,218	13
		Film	Transparan	0,679	
		Film	Transparan	0,72	
		Film	Transparan	1,415	
		Fragmen	Kuning	0,513	
		Fragmen	Kuning	0,182	
		Fragmen	Kuning	0,801	
		Fragmen	Kuning	0,457	
		Fragmen	Kuning	0,332	
		Fiber	Merah	0,975	
		Fiber	Merah	0,654	
		Fiber	Merah	1,537	
		Fiber	Biru	0,573	

10	K1 (22) 11.1 gr	Fiber	Merah	1,183	12
		Fiber	Merah	1,232	
		Fiber	Merah	1,045	
		Fiber	Merah	0,777	
		Fiber	Biru	1,406	
		Fiber	Biru	2,129	
		Fiber	Biru	3,659	
		Fiber	Biru	0,391	
		Fiber	Biru	0,758	
		Monofilamen	Biru	0,512	
		Fragmen	Kuning	0,469	
		Fragmen	Kuning	0,563	
TOTAL					92

No.	Kode Sampel (Ulangan 2)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	K2 (24) 10.2 gr	Fiber	Hitam	0,88	15
		Fiber	Hitam	0,351	
		Fiber	Hitam	0,961	
		Fragmen	Kuning	1,552	
		Fragmen	Kuning	0,418	
		Fragmen	Kuning	0,559	
		Fragmen	Kuning	0,375	
		Fragmen	Kuning	0,532	

		Fragmen	Kuning	0,528	
		Fragmen	Kuning	0,874	
		Fragmen	Kuning	0,486	
		Fragmen	Kuning	0,4	
		Fragmen	Hitam	0,961	
		Fragmen	Merah	0,427	
		Fiber	Biru	0,654	
2	K2 (30) 10.3 gr	Monofilamen	Biru	2,757	2
		Fragmen	Kuning	0,339	
3	K2 (31) 11.7	Film	Transparan	4,505	11
		Film	Transparan	2,364	
		Film	Transparan	2,631	
		Film	Transparan	1,358	
		Fragmen	Hitam	0,476	
		Fiber	Biru	0,612	
		Fiber	Merah	1,142	
		Fiber	Biru	0,581	
		Fragmen	Kuning	0,481	
		Fragmen	Kuning	1,338	
		Fragmen	Merah	0,633	
4	K2 (32) 13.8 gr	Fragmen	Kuning	0,308	3
		Fragmen	Kuning	0,307	
		Film	Transparan	3,634	
5	K2 (38) 11.6 gr	Film	Transparan	0,883	8

		Film	Transparan	1,251	
		Film	Transparan	3,926	
		Film	Transparan	3,285	
		Fragmen	Kuning	0,641	
		Fragmen	Kuning	0,362	
		Fragmen	Kuning	0,14	
		Fragmen	Hitam	1,172	
6	K2 (46) 10,1 gr	Film	Transparan	0,495	8
		Film	Transparan	2,371	
		Film	Transparan	1,073	
		Film	Transparan	1,36	
		Fragmen	Kuning	0,991	
		Fragmen	Kuning	0,783	
		Fiber	Biru	0,405	
		Fiber	Biru	1,792	
7	K2 (46) 11,6 gr	Film	Transparan	1,046	1
8	K2 (48) 11.4 gr	Fragmen	Kuning	0,655	3
		Fragmen	Kuning	0,526	
		Fragmen	Kuning	0,589	
9	K2 (49) 8.7 gr	Fragmen	Kuning	0,323	2
		Fragmen	Kuning	0,249	
10	K2 (51) 7.7 gr	Fragmen	Kuning	0,407	14
		Fragmen	Kuning	0,207	

		Fragmen	Kuning	0,334	
		Fragmen	Kuning	0,393	
		Fragmen	Kuning	0,36	
		Fragmen	Kuning	0,298	
		Fragmen	Kuning	0,393	
		Fragmen	Kuning	0,6	
		Fragmen	Kuning	0,483	
		Fragmen	Kuning	0,389	
		Fragmen	Kuning	0,214	
		Fragmen	Kuning	0,699	
		Fragmen	Hitam	0,488	
		Fiber	Biru	0,485	
TOTAL					67

No.	Kode Sampel (Ulangan 3)	Karakteristik Mikroplastik (MP)			Jumlah MP per Individu
		Bentuk	Warna	Ukuran (mm)	
1	K3 (52) 6.8 gr	Film	Transparan	3,237	2
		Fragmen	Kuning	0,312	
2	K3 (53) 5.2 gr	Fragmen	Kuning	0,261	7
		Fragmen	Kuning	0,367	
		Fragmen	Kuning	0,446	
		Fragmen	Merah	0,432	
		Fiber	Biru	0,565	
		Fiber	Hitam	1,583	
		Fiber	Biru	1,378	

3	K3 (54) 9.4 gr	Fiber	Biru	1,154	4
		Fragmen	Hitam	0,347	
		Fragmen	Kuning	0,748	
		Film	Transparan	3,78	
4	K3 (60) 5.7 gr	Fiber	Biru	0,61	6
		Fiber	Biru	0,883	
		Fragmen	Kuning	0,689	
		Fragmen	Kuning	0,663	
		Fragmen	Kuning	0,643	
		Fragmen	Merah	0,256	
5	K3 (61) 14.4 gr	Film	Transparan	4,523	6
		Film	Transparan	1,276	
		Film	Transparan	1,098	
		Fragmen	Kuning	0,82	
		Fragmen	Kuning	0,423	
		Fragmen	Kuning	0,148	
6	K3 (62) 9.3 gr	Fragmen	Kuning	0,546	13
		Fragmen	Kuning	1,145	
		Fragmen	Kuning	0,522	
		Fragmen	Kuning	0,728	
		Fragmen	Kuning	0,45	
		Fragmen	Merah	0,622	
		Fragmen	Merah	0,722	
		Fragmen	Merah	0,636	
		Fragmen	Hitam	0,913	

		Fiber	Biru	3,542	
		Fiber	Biru	0,905	
		Fiber	Biru	0,632	
		Fiber	Biru	0,388	
7	K3 (65) 10.3 gr	Fragmen	Kuning	0,129	19
		Fragmen	Kuning	0,799	
		Fragmen	Kuning	0,975	
		Fragmen	Kuning	0,565	
		Film	Transparan	4,817	
		Film	Transparan	1,832	
		Film	Transparan	4,599	
		Film	Transparan	4,067	
		Film	Transparan	3,494	
		Film	Transparan	1,803	
		Fiber	Biru	1,503	
		Fiber	Biru	0,254	
		Fiber	Biru	0,26	
		Fiber	Biru	0,25	
		Fiber	Biru	1,745	
		Fiber	Hitam	0,448	
		Fiber	Biru	0,461	
		Fiber	Merah	0,841	
		Fiber	Biru	0,579	
8	K3 (86) 8,3 gr	Fragmen	Hitam	1,313	19
		Fragmen	Kuning	0,326	

		Fragmen	Kuning	0,423	
		Fragmen	Kuning	0,45	
		Fragmen	Kuning	0,687	
		Fragmen	Kuning	0,494	
		Fragmen	Kuning	0,921	
		Fragmen	Kuning	0,847	
		Fragmen	Kuning	1,47	
		Fragmen	Kuning	1,295	
		Fragmen	Kuning	0,194	
		Fragmen	Kuning	1,444	
		Fragmen	Kuning	1,358	
		Fragmen	Kuning	0,7	
		Fragmen	Kuning	0,362	
		Fiber	Biru	0,722	
		Fiber	Biru	1,273	
		Film	Transparan	4,35	
		Film	Transparan	2,896	
9	K3 9,8 gr	Fragmen	Kuning	0,608	3
		Fiber	Biru	0,707	
		Film	Transparan	4,102	
10	K3 10,6 gr	Fragmen	Kuning	0,574	5
		Fragmen	Kuning	0,383	
		Fragmen	Kuning	1,275	
		Fragmen	Kuning	0,664	
		Fiber	Biru	0,883	
TOTAL					84

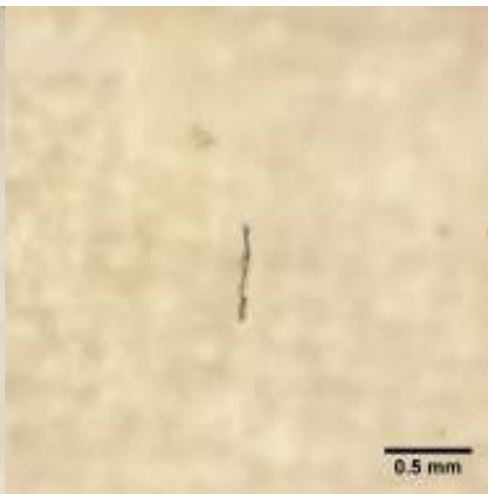
Lampiran 2. Proporsi bentuk mikroplastik berdasarkan warna

Bentuk	Transparan	Merah	Hitam	Kuning	Biru
Fiber	0	252	13	0	63
Fragmen	0	15	6	110	0
Film	96	0	0	0	0
Monofilamen	0	0	0	0	6

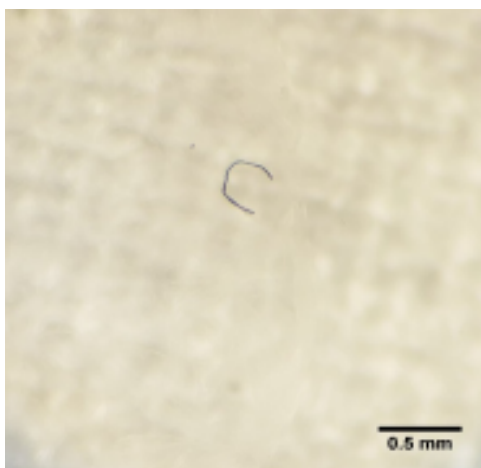
Lampiran 3. Gambar mikroplastik



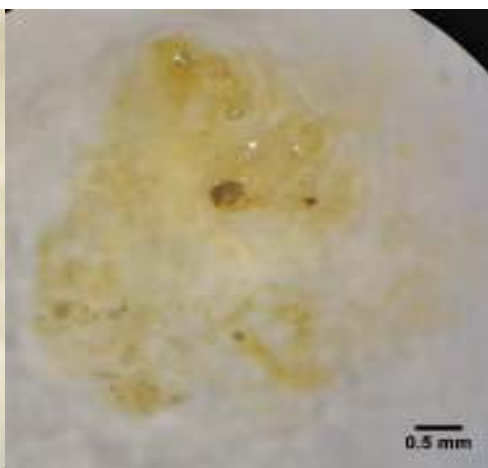
Fiber merah



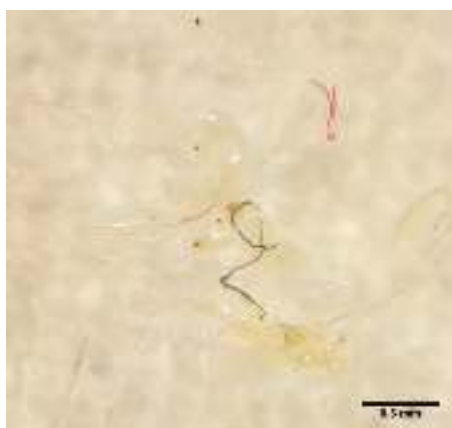
Monofilamen biru



Fiber biru



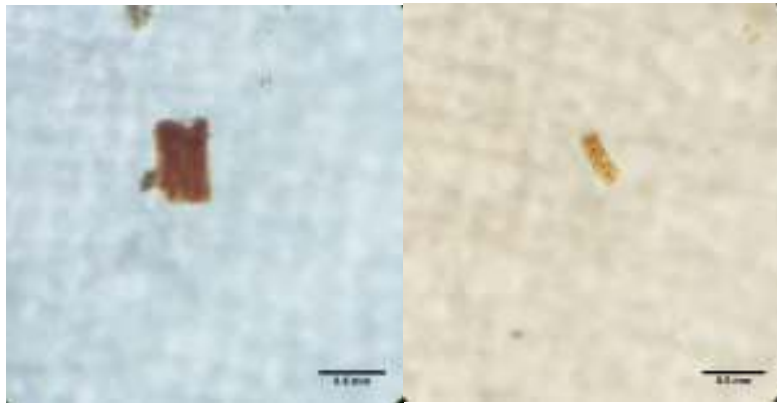
Film



Fiber hitam



Fragmen hitam



Fragmen merah

Fragmen kuning

Lampiran 4. Dokumentasi Kegiatan



Pengukuran Morfometrik KerangTude



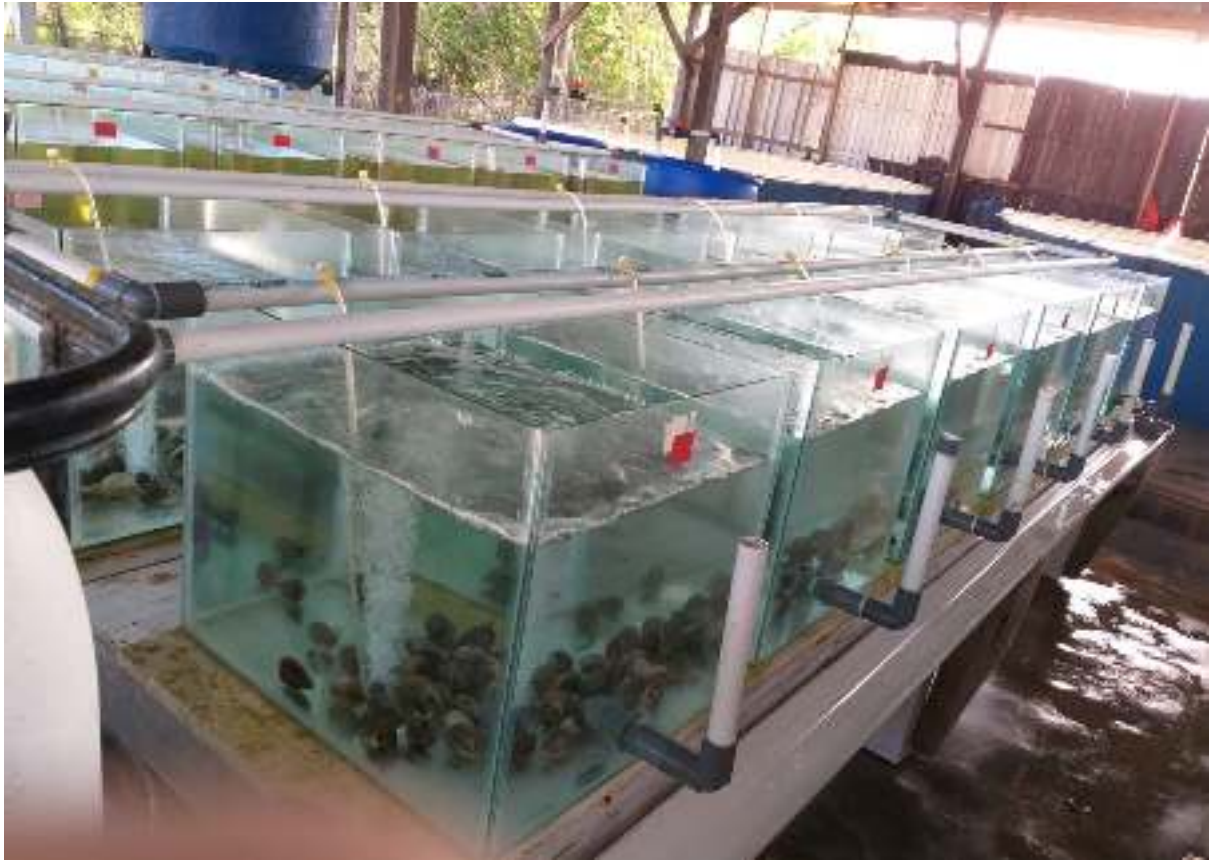
Kerang Tude



Bak Air Depurasi



Analisis Mikroplastik



Proses Depurasi Kerang Tude

Lampiran 5. Hasil Uji Statistik

a. Hubungan morfometrik pada kandungan mikroplastik (Regresi Linear)

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	138.052	4	34.513	1.057	.398 ^a
	Residual	816.648	25	32.666		
	Total	954.700	29			

a. Predictors: (Constant), Tebal, Berat, Lebar, Panjang

b. Dependent Variable: Konsentrasi_MPs

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.720	22.223		-.122	.904
	Berat	-.675	.599	-.228	-1.128	.270
	Panjang	-1.460	5.327	-.077	-.274	.786
	Lebar	2.921	3.405	.210	.858	.399
	Tebal	3.759	8.806	.121	.427	.673

a. Dependent Variable: Konsentrasi_MPs

b. Perbedaan efektivitas depurasi mikroplastik pada kerang tude (ANOVA)

1) Uji Normaloitas

Case Processing Summary

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Unstandardized Residual	Kontrol (0 hari)	3	100.0%	0	.0%	3	100.0%
	Depurasi 1 hari	3	100.0%	0	.0%	3	100.0%
	Depurasi 2 hari	3	100.0%	0	.0%	3	100.0%
	Depurasi 3 hari	3	100.0%	0	.0%	3	100.0%
	Depurasi 4 hari	3	100.0%	0	.0%	3	100.0%

Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	Kontrol (0 hari)	.260	3	.	.959	3	.609
	Depurasi 1 hari	.357	3	.	.815	3	.151
	Depurasi 2 hari	.312	3	.	.896	3	.374
	Depurasi 3 hari	.276	3	.	.942	3	.537
	Depurasi 4 hari	.219	3	.	.987	3	.780

a. Lilliefors Significance Correction

2) Tes Variansi (homogen)

Konsentrasi
Mikroplastik

Levene Statistic	df1	df2	Sig.
2.411	4	10	.118

3) ANOVA (Pengaruh perbedaan tiap perlakuan)

Konsentrasi Mikroplastik

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.925	4	.981	7.184	.005
Within Groups	1.366	10	.137		
Total	5.291	14			

4) Pos Hoc Test (Uji Lanjut)

Multiple Comparisons

Dependent Variable:Konsentrasi Mikroplastik

	(I) Perlakuan	(J) Perlakuan	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
LSD	D1	D2	-.2061	.30178	.510	-.8785	.4663
		D3	.6733*	.30178	.050	.0009	1.3457
		D4	.9004*	.30178	.014	.2280	1.5728
		Kontrol	-.4242	.30178	.190	-1.0966	.2482
	D2	D1	.2061	.30178	.510	-.4663	.8785
		D3	.8794*	.30178	.015	.2070	1.5518
		D4	1.1065*	.30178	.004	.4341	1.7789
		Kontrol	-.2181	.30178	.486	-.8905	.4543
	D3	D1	-.6733*	.30178	.050	-1.3457	-.0009
		D2	-.8794*	.30178	.015	-1.5518	-.2070
		D4	.2271	.30178	.469	-.4453	.8995
		Kontrol	-1.0975*	.30178	.005	-1.7699	-.4251

D4	D1	-.9004*	.30178	.014	-1.5728	-.2280
	D2	-1.1065*	.30178	.004	-1.7789	-.4341
	D3	-.2271	.30178	.469	-.8995	.4453
	Kontrol	-1.3246*	.30178	.001	-1.9970	-.6522
Kontrol	D1	.4242	.30178	.190	-.2482	1.0966
	D2	.2181	.30178	.486	-.4543	.8905
	D3	1.0975*	.30178	.005	.4251	1.7699
	D4	1.3246*	.30178	.001	.6522	1.9970

Based on observed means.

The error term is Mean Square(Error) = ,137.

*. The mean difference is significant at the ,05 level.

Konsentrasi Mikroplastik

Perlakuan	N	Subset	
		1	2
Duncan ^a D4	3	.5801	
D3	3	.8072	
D1	3		1.4805
D2	3		1.6866
Kontrol	3		1.9047
Sig.		.469	.209

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = ,137.

Lampiran 6. Surat Izin Penelitian



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN
FAKULTAS KESEHATAN MASYARAKAT

Jl. Perintis Kemerdekaan Km. 10 Makassar 90245, Telp. (0411) 585618, Fax (0411) 586013
E-mail: dikan@unhas.ac.id, website: www.fkm.unhas.ac.id

2 Juli 2020

No : 4576/UN.4.14/PT.01.04/2020
Lamp : -
Hal : Permohonan Izin Penelitian

Yth.
Gubernur Provinsi Sulawesi Selatan
Cq. Kepala UPT P2T, BKPM D
Provinsi Sulawesi Selatan
Di—

Tempat

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

Nama : Dian Fatriani Indah Saputri
Nomor Pokok : K012181112
Program Studi : Kesehatan Masyarakat
Konsentrasi : Kesehatan Lingkungan

Bermaksud melakukan penelitian dalam rangka persiapan penulisan tesis dengan judul "Analisis Pencemaran Mikroplastik pada Kerang dengan Metode Depurasi di Perairan Pantai Kecamatan Galesong Kabupaten Takalar, Sulawesi Selatan Tahun 2020".

Pembimbing : 1. Prof. Dr. Anwar Daud, SKM., M.Kes. (Ketua)
2. Prof. Dr. Ir. Rachman Syah, MS (Anggota)

Waktu Penelitian : Juli – September 2020

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

Atas perkenan dan kerjasamanya disampaikan terima kasih.



Dr.-Ami m Syam, SKM., M.Kes., M.Med.Ed
NIP. 19870817 199903 1 001

Terbilang:

1. Para Wakil Dekan FKM Unhas
2. Bertinggal

Lampiran 7. Bukti Etik Penelitian



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
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FAKULTAS KESEHATAN MASYARAKAT
KOMITE ETIK PENELITIAN KESEHATAN

Sekretariat :

Jl. Perintis Kemerdekaan Km. 10 Makassar 90245, Telp. (0411) 585658, 516-005,
Fax (0411) 586019E-mail : kepfkmuh@gmail.com, website : www.fkm.uhas.ac.id

REKOMENDASI PERSETUJUAN ETIK

Nomor : 5512/UN4.14.1/TP 01.02/2020

Tanggal : 25 Juli 2020

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

No.Protokol	3720062146	No. Sponsor Protokol	
Peneliti Utama	Dian Fatriani Indah	Sponsor	Pribadi
Judul Peneliti	Analisis Pencemaran Mikroplastik Pada Kerang Dengan Metode Depurasi di Perairan Pantai Kecamatan Galesong Kabupaten Takalar, Sulawesi Selatan Tahun 2020		
No.Versi Protokol	1	Tanggal Versi	03 Juli 2020
No.Versi PSP	1	Tanggal Versi	03 Juli 2020
Tempat Penelitian	Kecamatan Galesong Kabupaten Takalar		
Judul Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 25 Juli 2020 Sampai 25 Juli 2021	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr.Veni Hadju,M.Sc,Ph.D	Tanda tangan 	Tanggal 25 Juli 2020
Sekretaris komisi Etik Penelitian	Nama : Nur Arifah,SKM,MA	Tanda tangan 	Tanggal 25 Juli 2020

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 8. *Curriculum Vitae* (CV)

CURRICULUM VITAE



A. DATA PRIBADI

1. Nama : Dian Fatriani Indah Saputri
2. Tempat, tanggal lahir : Kendari, 1 Mei 1996
3. Jenis Kelamin : Perempuan
4. Suku : Tolaki-Bugis
5. NIM : K012181112
6. Jurusan : Kesehatan Lingkungan
7. Alamat Rumah : Kec. Laeya, Konawe Selatan, Sulawesi Tenggara
8. Email : dianfatriani96@gmail.com

B. PENDIDIKAN

1. TK : TK Islam Kendari (2001 – 2002)
2. Sekolah Dasar : SDN 09 Kendari Barat (2002- 2008)
3. SMP : SMPN 1 Kendari (2008 – 2011)
4. SMA : SMAN 1 Kendari (2011 – 2013)
5. Sarjana (S1) : Fakultas Kesehatan Masyarakat –
Universitas Halu Oleo (2013 – 2017)