

DAFTAR PUSTAKA

- Abdel-Warith, A.-W.A., Younis, E.-S.M.I., Al-Asgah, N.A., Rady, A.M., Allam, H.Y., 2020. Bioaccumulation of Lead Nitrate in Tissues and Its Effects on Hematological and Biochemical Parameters of *Clarias gariepinus*. Saudi Journal of Biological Sciences 27, 840–845. <https://doi.org/10.1016/j.sjbs.2020.01.015>
- Abriana, A., 2017. Teknologi Pengolahan dan Pengawetan Ikan. SAH MEDIA.
- Adegbola, I.P., Aborisade, B.A., Adetutu, A., 2021. Health Risk Assessment and Heavy Metal Accumulation in Fish Species (*Clarias Gariepinus* and *Sarotherodon Melanotheron*) from Industrially Polluted Ogun and Eleyele Rivers, Nigeria. Toxicology Reports 8, 1445–1460. <https://doi.org/10.1016/j.toxrep.2021.07.007>
- Alam, M.R., Sharmin, S., Islam, S.M., Alam, M.A., Ehiguese, F.O., Pattadar, S.N., Shahjahan, M., 2020. Salinity Intrusion Affects Early Development of Freshwater Aquaculture Species Pabda, Ompok Pabda. Aquaculture Reports 18, 100476. <https://doi.org/10.1016/j.aqrep.2020.100476>
- Al-Balawi, H.F.A., Al-Akel, A.S., Al-Misned, F., Suliman, E.A.M., Al-Ghanim, K.A., Mahboob, S., Ahmad, Z., 2013. Effects of Sub-Lethal Exposure of Lead Acetate on Histopathology of Gills, Liver, Kidney and Muscle and Its Accumulation in These Organs of *Clarias Gariepinus*. Braz. arch. biol. technol. 56, 293–302. <https://doi.org/10.1590/S1516-89132013000200015>
- Aliza, D., Sutriana, A., Nazaruddin, N., Armansyah, T., Etriwati, E., Hanafiah, M., Hafizuddin, H., Hasan, D.I., Awaluddin, A., Ulfa, B., 2021. Histopathological Changes in the Gills of *Oreochromis mossambicus* Exposed to Mercury Chloride (HgCl₂). Presented at the 2nd International Conference on Veterinary, Animal, and Environmental Sciences (ICVAES 2020), Atlantis Press, pp. 74–80. <https://doi.org/10.2991/absr.k.210420.017>
- Alkhamis, Y.A., 2022. Periodic Effects of Salinity on Compensatory Expression of Phenotypic Traits in Nile Tilapia (*Oreochromis niloticus*). PJZ. <https://doi.org/10.17582/journal.pjz/20220116050126>
- Araïn, M.B., Kazi, T.G., Jamali, M.K., Jalbani, N., Afridi, H.I., Shah, A., 2008. Total Dissolved and Bioavailable Elements in Water and Sediment Samples and Their Accumulation in *Oreochromis Mossambicus* of Polluted Manchar Lake. Chemosphere 70, 1845–1856. <https://doi.org/10.1016/j.chemosphere.2007.08.005>
- Arfan, Y., Tobuku, R., Santoso, P., 2022. Pertumbuhan Ikan Bandeng (*Chanos chanos*) yang Diberi Pakan Campuran Tepung Cacing Sutra (*Tubifex* sp) dan Pelet Komersil. Jurnal Vokasi Ilmu-Ilmu Perikanan (JVIP) 3, 25–32. <https://doi.org/10.35726/jvip.v3i1.801>
- Arfiati, D., Zebadiah, Z., Safara, R., Orchida, K., R, Z.N.I., Pratiwi, K., 2023. Plankton Composition in Milkfish's (*Chanos chanos*) Stomach Cultivated in Traditional Pond. IOP Conf. Ser.: Earth Environ. Sci. 1191, 012008. <https://doi.org/10.1088/1755-1315/1191/1/012008>
- Aris, M., Syazili, A., Buton, A., 2021. Growth and Survival of Nener Bandeng (*Chanos chanos*) with Different Stocking Densities. Jurnal Ilmu Kelautan Kepulauan 4. <https://doi.org/10.33387/jikk.v4i1.3356>
- Aunurohim, A., Yulaipi, S., 2013. Bioakumulasi Logam Berat Timbal (Pb) dan Hubungannya dengan Laju Pertumbuhan Ikan Mujair (*Oreochromis*

- Mossambicus). Jurnal Sains dan Seni ITS 2, 16044. <https://doi.org/10.12962/j23373520.v2i2.3965>
- Awaluddin, A., Kabangnga, A., Noor, R.J., 2020. Kajian Cemaran Timbal (Pb) pada Tambak Tradisional Ikan Bandeng (*Chanos chanos*). Jurnal Berkala Kesehatan 6, 62–68. <https://doi.org/10.20527/jbk.v6i2.9408>
- A'yun, Q., Takarina, N.D., 2019. Food preference analysis of milkfish in Blanakan Ponds, Subang, West Java. AIP Conference Proceedings 2168, 020083. <https://doi.org/10.1063/1.5132510>
- Ayuzar, E., Khalil, M., Wijaya, H., 2021. Management Application of Feeding with Different Fasting Methods in Milkfish Seeding (*Chanos chanos*). Acta Aquatica: Aquatic Sciences Journal 8, 186–191. <https://doi.org/10.29103/aa.v8i3.5862>
- Babe, B.Y., Erfin, L., Yohanista, M., 2021. Identifikasi Jenis -Jenis Ikan Pelagis Kecil yang ada di Pasar Alok dan Pasar Wuring, Kabupaten Sikka. Aquanipa. Jurnal Ilmu Kelautan dan Perikanan 3.
- Banaee, M., Nematdoust Hagh, B., Zoheiri, F., 2013. LC50 and bioaccumulation of lead nitrate (Pb (NO₃)₂) in Goldfish (*Carassius auratus*). International Journal of Aquatic Biology 1(5): 233-239. <https://doi.org/10.22034/ijab.v1i5.153>
- Benjamin, L.V., Kutty, R., 2019. Sub-lethal Effects of Potassium Dichromate on Hematological and Histological Parameters in Climbing Perch, *Anabas testudineus* (*Anabantidae*). International Journal of Aquatic Biology 7.
- Bera, A., Kailasam, M., Mandal, B., Sukumaran, K., Makesh, M., Hussain, T., Sivaramakrishnan, T., Subburaj, R., Thiagarajan, G., K. Vijayan, K., 2019. Effect of Tank Colour on Foraging Capacity, Growth and Survival of Milkfish (*Chanos chanos*) Larvae. Aquaculture. 512; p.734347. URL <https://www.sciencedirect.com/science/article/abs/pii/S0044848619307446>
- Boyd, C.E., 2015. Water Quality: An Introduction. Springer International Publishing, Cham. <https://doi.org/10.1007/978-3-319-17446-4>
- Chavan, V.R., Muley, D.V., 2014. Effect of Heavy Metals on Liver and Gill of Fish *Cirrhinus mrigala*. International Journal of Current Microbiology and Applied Sciences 3, 277–288.
- Choudhary, L., Vyas, T., Raj, N., Chauhan, S., Bhoi, M., Krishnan, G., Bharadwaj, S., Gopal, K., Yadavand, S., Bharadwaj, 2019. Histopathological Changes Due to Lead Toxicity in Gills of *P. ticto* (*hem*). Int Res J Sci Engin. 7(4): 92-95
- Dai, J., Zhang, L., Du, X., Zhang, P., Li, W., Guo, X., Li, Y., 2018. Effect of Lead on Antioxidant Ability and Immune Responses of Crucian Carp. Biol Trace Elem Res 186, 546–553. <https://doi.org/10.1007/s12011-018-1316-z>
- Eroglu, A., Dogan, Z., Kanak, E.G., Atli, G., Canli, M., 2015. Effects of Heavy Metals (Cd, Cu, Cr, Pb, Zn) on Fish Glutathione Metabolism. Environ Sci Pollut Res 22, 3229–3237. <https://doi.org/10.1007/s11356-014-2972-y>
- Esin, E.V., 2015. Developmental Abnormalities in Salmonids (*Salmonidae*) Under The Conditions of Large-Scale Volcanic Pollution of Their Spawning Ground (Using Dolly Varden *Salvelinus Malma* as An Example). Russ J Dev Biol 46, 88–98.
- Fahmi, U., Andriani, I., Salmah, S., Hatta, T.H., Omar, S.B.A., Sari, D.K., 2019. Histopathology of Liver and Intestine of Pangkulan Bare Fish (*Oryzias Matanensis*) Polluted by Nickel and Iron in Lake Matano, South Sulawesi. IOP Conf. Ser.: Earth Environ. Sci. 370, 012078. <https://doi.org/10.1088/1755-1315/370/1/012078>

- Farag, A.M., May, T., Marty, G.D., Easton, M., Harper, D.D., Little, E.E., Cleveland, L., 2006. The Effect of Chronic Chromium Exposure on The Health of Chinook Salmon (*Oncorhynchus Tshawytscha*). *Aquatic Toxicology* 76, 246–257. <https://doi.org/10.1016/j.aquatox.2005.09.011>
- Firmani, U., 2021. Histologi Hati Ikan Bandeng dari Tambak Tradisional di Kecamatan Ujung Pangkah, Gresik. *Jurnal Perikanan Pantura (JPP)* 4, 50–58. <https://doi.org/10.30587/jpp.v4i1.2461>
- Ganesh, G., Devi, B.C., Reddy, D., Rao, A.S., Mohan, R.R., Pamanna, D., Kumar, P.R., Mahesh, L.N., 2020. Evaluation of Water Quality Parameters in Grow Out Phase of Brackish Water Fish *Chanos chanos* (Milk fish) in Floating Net Cages. *Journal of Entomology and Zoology Studies*.
- Gopinathan, S., Binukumari, S., 2021. Histopathological Alterations in The Gills of Fresh Water Fish, *Labeo Rohita (Hamilton-Buchanan)* Exposed to Heavy Metal Mixture (Cd, Cr & Pb). *Journal of Advanced Scientific Research* 12, 253–256. <https://doi.org/10.55218/JASR.202112134>
- Hassanain, M.A., Abbas, W.T., Ibrahim, T.B., 2012. Skeletal Ossification Impairment in Nile Tilapia (*Oreochromis niloticus*) After Exposure to Lead Acetate. *Pak J Biol Sci* 15, 729–735. <https://doi.org/10.3923/pjbs.2012.729.735>
- Hossain, S., Miah, M.I., Islam, M.S., Shahjahan, M., 2016. Changes in Hepatosomatic Index and Histoarchitecture of Liver in Common Carp Exposed to Organophosphate Insecticide Sumithion. *Asian Journal of Medical and Biological Research* 2, 164–170. <https://doi.org/10.3329/ajmbr.v2i2.29006>
- Hussain, S., Javed, M., Asghar, S., Hussain, M., Abdullah, S., Raza, S., Javid, A., 2010. Studies on Growth Performance of Metals Mixture Stressed *Cirrhina Mrigala* in Earthen Ponds. *Pakistan Journal of Agricultural Sciences* 47, 263–270.
- Hwang, I.-K., Kim, K.-W., Kim, J.-H., Kang, J.-C., 2016. Toxic Effects and Depuration after The Dietary Lead (II) Exposure on The Bioaccumulation and Hematological Parameters in Starry Flounder (*Platichthys stellatus*). *Environmental Toxicology and Pharmacology* 45, 328–333. <https://doi.org/10.1016/j.etap.2016.06.017>
- Ilmani, A.H., Handayani, L., 2020. Ritme Kebiasaan Makan Ikan Bandeng (*Chanos chanos* Forskal) Selama 24 Jam pada Tambak Ekstensif. *Jurnal Ilmu Hewani Tropika (Journal of Tropical Animal Science)* 9, 75–79.
- Ishaque, A., Ishaque, S., Arif, A., Abbas, H.G., 2020. Toxic Effects of Lead on Fish and Human. *Biological and Clinical Sciences Research Journal* 2020. <https://doi.org/10.54112/bcsrj.v2020i1.47>
- Jabaruddin, J., Iromo, H., Farizah, N., 2023. Pemanfaatan Kombinasi Tepung Kepala Udang dan Pakan Komersial pada Penggelondongan Nener Bandeng (*Chanos chanos*) di Tambak Tradisional. *Agrokompleks* 23, 129–137. <https://doi.org/10.51978/japp.v23i2.551>
- Jais, N., Ikhtiar, M., Gafur, A., Abbas, H.H., Hidayat, 2020. Bioakumulasi Logam Berat Kadmium (Cd) dan Kromium (Cr) yang Terdapat dalam Air dan Ikan di Sungai Tallo Makassar. *Window of Public Health Journal* 261–273. <https://doi.org/10.33096/woph.v1i3.65>
- Joseph, S., 2018. Applications of Fishery Biology Data for Mariculture In: ICAR Sponsored Winter School on Recent Advances in Fishery Biology Techniques for Biodiversity Evaluation and Conservation, 1-21 December 2018, Kochi. [WWW Document]. URL <http://eprints.cmfri.org.in/13336/>

- Karimah, U., Samidjan, I., Pinandoyo, 2018. Performa Pertumbuhan Dan Kelulushidupan Ikan Nila Gift (*Oreochromis niloticus*) yang Diberi Jumlah Pakan Yang Berbeda. *Journal of Aquaculture Management and Technology* 7, 128–135.
- Kawade, S., 2020. Histopathological Alterations in The Liver of Freshwater Fish, *Channa Gachua (Ham.)* on Acute Exposure to Nickel. *J. Emerg. Technol. Innov. Res.*, 7, pp.1025-1030. URL <https://www.jetir.org/view?paper=JETIR2010137>
- Kaya, H., Akbulut, M., 2015. Effects of Waterborne Lead Exposure in Mozambique Tilapia: Oxidative Stress, Osmoregulatory Responses, and Tissue Accumulation. *Journal of Aquatic Animal Health* 27, 77–87. <https://doi.org/10.1080/08997659.2014.1001533>
- Khairuddin, K., Yamin, M., Kusmiyati, K., 2021. Analisis Kandungan Logam Berat Tembaga (Cu) pada Bandeng (*Chanos chanos forsk*) yang Berasal dari Kampung Melayu Kota Bima. *Jurnal Pijar Mipa* 16, 97–102. <https://doi.org/10.29303/jpm.v16i1.2257>
- Kondera, E., Dmowska, A., Rosa, M., Witeska, M., 2012. The Effect of Bleeding on Peripheral Blood and Head Kidney Hematopoietic Tissue in Common Carp (*Cyprinus carpio*). *Turkish Journal of Veterinary & Animal Sciences* 36, 169–175. <https://doi.org/10.3906/vet-1102-790>
- Kosemani, S., 2019. International Journal of Bioassays: IJBNHY : 2278-778X Effects of Lead Chloride on Growth Performance of *Clarias gariepinus* (Burchell, 1822) 5638–5644.
- Kumar, G.B., Nandan, B.S., 2020. Lead Toxicity: Bioaccumulation and Histopathological Study of the Gill of the Teleost Fish, *Anabas Testudineus* (Bloch, 1792) Exposed to Sublethal Concentration of Lead Nitrate. *Annals of the Romanian Society for Cell Biology* 1533–1549.
- Kundariati, M., Maghfiroh, L., Indriwati, S.E., Rohman, F., Priyambodo, B., Setyawan, D., Azean, N., 2020. Analysis of Invertebrate and Vertebrate Animals in Malang Regency as an Animal Diversity Learning Resource for Biology Student at the Universitas Negeri Malang. *AIP Conference Proceedings* 2215, 030007. <https://doi.org/10.1063/5.0003781>
- Lee, J.W., Choi, H., Hwang, U.K., Kang, J.C., Kang, Y.J., Kim, K.I., Kim, J.H., 2019. Toxic Effects of Lead Exposure on Bioaccumulation, Oxidative Stress, Neurotoxicity, and Immune Responses in Fish: A Review. *Environmental Toxicology and Pharmacology* 68, 101–108. <https://doi.org/10.1016/j.etap.2019.03.010>
- Madusari, B.D., Pranggono, H., Linayati, 2016. Analisis Kandungan Timbal (Pb), Cadmium (Cd) pada Air dan Ikan Bandeng (*Chanos chanos*) di Tambak Kota dan Kabupaten Pekalongan. *Fakultas Perikanan dan Ilmu Kelautan UNDIP*, pp. 658–668.
- Magfirah, M., Adhar, S., Ezraneti, R., 2015. Efek Surfaktan terhadap Pertumbuhan, Kelangsungan Hidup dan Struktur Jaringan Insang Benih Ikan Nila (*Oreochromis niloticus*). *Acta Aquatica: Aquatic Sciences Journal* 2, 90–96. <https://doi.org/10.29103/aa.v2i2.340>
- Mahalina, W., Tjandrakirana, Purnomo, T., 2016. Analisis Kandungan Logam Berat Timbal (Pb) dalam Ikan Nila (*Oreochromis niloticus*) yang Hidup di Sungai Kali Tengah, Sidoarjo. *Lentera Bio* 5.
- Manik, R.S., Febriani, H., Syukriah, S., 2023. Analisis Bioakumulasi Cemaran Logam Berat dan Dampaknya pada Histopatologi Ikan Baung (*Hemibagrus nemurus*) di

- Sungai Asahan Kota Tanjungbalai. *Biologi Edukasi: Jurnal Ilmiah Pendidikan Biologi* 15, 114–124. <https://doi.org/10.24815/jbe.v15i2.35866>
- Morcillo, P., Esteban, M.A., Cuesta, A., Morcillo, P., Esteban, M.A., Cuesta, A., 2017. Mercury and its toxic effects on fish. *AIMSES* 4, 386–402. <https://doi.org/10.3934/environsci.2017.3.386>
- Mulqan, M., Rahimi, S.A.E., Dewiyanti, I., 2017. Pertumbuhan dan Kelangsungan Hidup Benih Ikan Nila Gesit (*Oreochromis niloticus*) Pada Sistem Akuaponik Dengan Jenis Tanaman Yang Berbeda. *Jurnal Ilmiah Mahasiswa Kelautan Perikanan Unsyiah* 2.
- Mutiasari, W., Santoso, L., Utomo, D.S.C., 2017. Kajian Penambahan Tepung Ampas Kelapa Pada Pakan Ikan Bandeng (*Chanos chanos*). *E-Jurnal Rekayasa dan Teknologi Budidaya Perairan* 6, 683–690.
- Nirmala, K., Hastuti, Y.P., Yuniar, V., 2012. Toxicity of Mercury (Hg) on Survival and Growth Rate, Hemato and Histopathological Parameters of *Oreochromis niloticus*. *Jurnal Akuakultur Indonesia* 11, 38–48. <https://doi.org/10.19027/jai.11.38-48>
- Paundanan, M., Fajrah, S., Rikwan., 2020. Kandungan Logam Berat (Hg, Pb) dan Histopatologi (Insang, Daging, Hati, Limpa) Ikan Selar Tetengkek (*Megalaspis cordyla* L) di Teluk Palu. *Journal of Environmental Science Sustainable* 1, 1–12. <https://doi.org/10.31331/engoist.v1i1.1145>
- Rosmaidar, R., Nazaruddin, N., Winaruddin, W., Balqis, U., Tr, T.A., 2017. Pengaruh Paparan Timbal (Pb) terhadap Histopatologis Hati Ikan Nila (*Oreochromis niloticus*) (The Effect of Lead (Pb) Exposure to The Histopathology of Nile Tilapia (*Oreochromis niloticus*) Liver). *Jurnal Ilmiah Mahasiswa Veteriner* 1, 742–748. <https://doi.org/10.21157/jim>
- Rustiah, W., Rahmi, E., Daawia, Sahabuddin, E.S., Corsita, L., Suhartawan, B., Adawiyah, R., Rahayu, N.L., 2023. *EKOTOKSIKOLOGI*. Get Press Indonesia.
- Santosa, R.A., Shihab, R.A.Q., Bakar, A.S., Simatupang, J.W., 2021. Utilization of Wireless Sensor Network to Monitor Citarum River Quality for Milkfish Cultivation in Karawang Regency. *Jurnal Serambi Engineering*, 6(4). URL <https://ojs.serambimekkah.ac.id/jse/article/view/3500>
- Sathick, O., Farvin Banu, S., Vasanthi, N., Muthukumaravel, K., 2019. Toxicity of Monocrotophos on The Oxygen Consumption and Gill Histology of Estuarine Fish *Mugil Cephalus*. *RJLBPCS* 05.
- Schulte, P.M., 2015. The Effects of Temperature on Aerobic Metabolism: Towards A Mechanistic Understanding of The Responses of Ectotherms to A Changing Environment. *Journal of Experimental Biology*. URL <https://journals.biologists.com/jeb/article/218/12/1856/13737/The-effects-of-temperature-on-aerobic-metabolism>
- Shahjahan, M., Taslima, K., Rahman, M.S., Al-Emran, M., Alam, S.I., Faggio, C., 2022. Effects of Heavy Metals on Fish Physiology – A review. *Chemosphere* 300, 134519. <https://doi.org/10.1016/j.chemosphere.2022.134519>
- Sharmin, S., Haque, A., 2015. Histopathological Changes in Liver and Kidney of Common Carp Exposed to Sub-lethal Doses of Malathion. *Pakistan J. Zool* 47, 1495–1498.
- Sugiantari, I.A.P., Sukmaningsih, A.A.S.A., Wijana, I.M.S., 2022. Kajian Struktur Histologi Hati, Insang dan Lambung Ikan Nila (*Oreochromis niloticus*) di Danau Batur, Bangli. *Buletin Anatomi dan Fisiologi*, 7(1), pp.51-59. URL <https://ejournal2.undip.ac.id/index.php/baf/article/view/13557>

- Wang, S., Carter, C.G., Fitzgibbon, Q.P., Smith, G.G., 2021. Respiratory Quotient and The Stoichiometric Approach to Investigating Metabolic Energy Substrate Use in Aquatic Ectotherms. *Reviews in Aquaculture* 13, 1255–1284. <https://doi.org/10.1111/raq.12522>
- Wendelaar Bonga, S.E., 1997. The Stress Response in Fish. *Physiological Reviews* 77, 591–625. <https://doi.org/10.1152/physrev.1997.77.3.591>
- Widowati, H., Sutanto, A., Sulistiani, W.S., Dewi, A.F., 2022. Menumbuhkan Budaya Mengelola Tambak Udang Ramah Lingkungan melalui Pemberdayaan Kecerdasan Kearifan Lokal Masyarakat Pasir Sakti. *Prosiding Seminar Nasional Penelitian dan Pengabdian Kepada Masyarakat (SNPPM) Universitas Muhammadiyah Metro* 4, 212–223.
- Wong, C.K.C., Yeung, H.Y., Woo, P.S., Wong, M.H., 2001. Specific Expression of Cytochrome P4501A1 Gene in Gill, Intestine and Liver of Tilapia Exposed to Coastal Sediments. *Aquatic Toxicology* 54, 69–80. [https://doi.org/10.1016/S0166-445X\(00\)00173-9](https://doi.org/10.1016/S0166-445X(00)00173-9)
- Zawisza, M., Chadzinska, M., Steinhagen, D., Rakus, K., Adamek, M., 2023. Gill Disorders in Fish: Lessons from Poxvirus Infections. *Reviews in Aquaculture* 1–20. <https://doi.org/10.1111/raq.12835>
- Zulfahmi, I., Rahmi, A., Muliari, M., Akmal, Y., Paujiah, E., Sumon, K.A., Rahman, M.M., 2021. Exposure to Lead Nitrate Alters Growth and Haematological Parameters of Milkfish (*Chanos chanos*). *Bull Environ Contam Toxicol* 107, 860–867. <https://doi.org/10.1007/s00128-021-03344-y>

LAMPIRAN

Lampiran 1. Hasil analisis ragam (Anova) kandungan logam Pb dalam tubuh juvenil ikan bandeng (*C. chanos*) yang terpapar Pb dengan konsentrasi yang berbeda

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	93.672	3	31.224	43.073	.000
Within Groups	5.799	8	.725		
Total	99.471	11			

Lampiran 2. Hasil Uji Lanjut (W-Tuckey) kandungan logam Pb dalam tubuh juvenil ikan bandeng (*C. chanos*) yang terpapar Pb dengan konsentrasi yang berbeda

Perlakuan	N	Subset for alpha = 0.05		
		1	2	3
0 ml/L	3	-.48867		
0.08 ml/L	3	-.41867		
0.8 ml/L	3		2.71467	
8 ml/L	3			6.32133
Sig.		1.000	1.000	1.000

Lampiran 3. Hasil analisis ragam (Anova) pertumbuhan juvenil ikan bandeng (*C. chanos*) yang terpapar Pb dengan konsentrasi yang berbeda

		Sum of Squares	df	Mean Square	F	Sig.
Pertumbuhan Mutlak	Between Groups	13.557	3	4.519	15.109	.001
	Within Groups	2.393	8	.299		
	Total	15.950	11			
Pertumbuhan Spesifik	Between Groups	.015	3	.005	18.535	.001
	Within Groups	.002	8	.000		
	Total	.017	11			

Lampiran 4. Hasil Uji Lanjut (W-Tuckey) pertumbuhan juvenil ikan bandeng (*C. chanos*) yang terpapar Pb dengan konsentrasi yang berbeda

Pertumbuhan Mutlak

PERLAKUAN	N	Subset for alpha = 0.05	
		1	2
8 ml/L	3	.0000	
0,8 ml/L	3	.7633	
0,08 ml/L	3	1.3400	
0 ml/L	3		2.8967
Sig.		.066	1.000

Pertumbuhan Spesifik

PERLAKUAN	N	Subset for alpha = 0.05	
		1	2
8 ml/L	3	.0000	
0,8 ml/L	3	.0233	
0,08 ml/L	3	.0433	
0 ml/L	3		.0967
Sig.		.050	1.000

Lampiran 5. Hasil analisis ragam (Anova) sintasan juvenil ikan bandeng (*C. chanos*) yang terpapar Pb dengan konsentrasi yang berbeda

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.319	3	.440	274.811	.000
Within Groups	.013	8	.002		
Total	1.332	11			

Lampiran 6. Hasil Uji Lanjut (W-Tuckey) sintasan juvenil ikan bandeng (*C. chanos*) yang terpapar Pb dengan konsentrasi yang berbeda

PERLAKUAN	N	Subset for alpha = 0.05			
		1	2	3	4
8 ml/L	3	.0000			
0,8 ml/L	3		.2133		
0,08 ml/L	3			.5333	
0 ml/L	3				.8767
Sig.		1.000	1.000	1.000	1.000