

## DAFTAR PUSTAKA

1. Zein, R.; Hidayat, D. A.; Elfia, M.; Nazarudin, N.; Munaf, E.: Sugar Palm Arenga Pinnata Merr (magnoliophyta) Fruit Shell as Biomaterial to Remove Cr(III), Cr(VI), Cd(II) and Zn(II) from Aqueous Solution. *J Water Supply Res Technol - AQUA*. 2014;63(7):553-559.
2. Sudsandee, S.; Tantrakarnapa, K.; Tharnpoophasiam, P.; Limpanont, Y.; Mingkhwan, R.; Worakhunpiset, S.: Evaluating Health Risks Posed by Heavy Metals to Humans Consuming Blood Cockles (*Anadara granosa*) from the Upper Gulf of Thailand. *Environ Sci Pollut Res*. 2017;24(17):14605-14615.
3. Rajaram, R.; Ganeshkumar, A.; Vinothkannan, A.: Health Risk Assessment and Bioaccumulation of Toxic Metals in Commercially Important Finfish and Shellfish Resources Collected from Tuticorin Coast of Gulf of Mannar, Southeastern India. *Mar Pollut Bull*. 2020;159(May):111469.
4. Winarti, S.; Pertiwi, C.N.; Hanani, A. Z.; Mujamil, S.I.; Putra, K. A.; Herlambang, K. C.: Beneficial of Coriander Leaves (*Coriandrum sativum* L.) to Reduce Heavy Metals Contamination in Rod Shellfish. *J Phys Conf Ser*. 2018;953(1).
5. Ahmad, M. A.; Ahmed, N. B.; Adegoke, K. A.; Bello, O. S.: Sorption Studies of Methyl Red Dye Removal Using Lemon grass (*Cymbopogon citratus*). *Chem Data Collect*. 2019;22:100249.
6. Hevira, L.; Rahmi, A.; Zein, R.; Zilfa, Z.; Rahmayeni, R.: The Fast and of Low-cost Adsorbent to the Removal of Cationic and Anionic Dye Using Chicken Eggshell with its Membrane. *Mediterr J Chem*. 2020;10(3):294-301.
7. Haque, A. N. M. A.; Remadevi, R.; Naebe, M.: Lemongrass (*Cymbopogon*): a Review on its Structure, Properties, Applications and Recent Developments. *Cellulose*. 2018;25(10):5455-5477.
8. Patiño-Ruiz, D.; Sánchez-Botero, L.; Tejeda-Benitez, L.; Hinestroza J.; Herrera A.: Green Synthesis of Iron Oxide Nanoparticles Using *Cymbopogon citratus* Extract and Sodium Carbonate Salt: Nanotoxicological Considerations for Potential Environmental Applications. *Environ Nanotechnology, Monit Manag*. 2020;14(October).
9. Soegianto, A.; Putranto, T. W. C.; Lutfi, W.; Almirani, F. N.; Hidayat, A. R.; Muhammad, A.; Firdaus, R. A.; et al.: Concentrations of Metals in Tissues of Cockle *Anadara granosa* (linnaeus, 1758) from East Java Coast, Indonesia, and Potential Risks to Human Health. *Int J Food Sci*. 2020;2020.
10. Liu, Q.; Liao, Y.; Shou, L.: Concentration and Potential Health Risk of Heavy Metals in Seafoods Collected from Sanmen Bay and its Adjacent Areas, China. *Mar Pollut Bull*. 2018;131(36):356-364.
11. Dabwan, A. H. A.; Taufiq, M.: Bivalves as Bio-indicators for Heavy Metals Detection in Kuala Kemaman, Terengganu, Malaysia. *Indian J Sci Technol*. 2016;9(9).
12. Januar, H.; Dwiytno.; Hidayah, I.; Hermana, I.: Seasonal Heavy Metals Accumulation in the Soft Tissue of *Anadara granosa* Mollusc form Tanjung Balai,

- Indonesia. *AIMS Environ Sci.* 2019;6(5):356-366.
13. Yefrida, Y.; Suyani, H.; Aziz, H.; Efdi, M.: Validasi Metode MPM untuk Penentuan Kandungan Antioksidan dalam Sampel Herbal serta Perbandingannya dengan Metode PM, FRAP dan DPPH. *J Ris Kim.* 2020;11(1):24-34.
  14. Anandkumar, A.; Nagarajan, R.; Prabakaran, K.; Bing, C. H.; Rajaram, R.: Human Health Risk Assessment and Bioaccumulation of Trace Metals in Fish Species Collected from the Miri Coast, Sarawak, Borneo. *Mar Pollut Bull.* 2018;133(June):655-663.
  15. Mathivanan, K.; Rajaram, R.: Anthropogenic Influences on Toxic Metals in Water and Sediment Samples Collected from Industrially Polluted Cuddalore Coast, Southeast Coast of India. *Environ Earth Sci.* 2014;72(4):997-1010.
  16. Ali, H.; Khan, E.: Trophic Transfer, Bioaccumulation, and Biomagnification of Non Essential Hazardous Heavy Metals and Metalloids in Food Chains. *Hum Ecol Risk Assess.* 2019;25(6):1353-1376.
  17. Deng, M.; Yang, X.; Dai, X.; Zhang, Q.; Malik, A.; Sadeghpour, A.: Heavy Metal Pollution Risk Assessments and their Transportation in Sediment and Overlay Water for the Typical Chinese Reservoirs. *Ecol Indic.* 2020;112(September 2019):106166.
  18. Bayhaqi, A.; Dungga, C. M. A.: Distribusi Butiran Sedimen di Pantai Dalegan, Gresik, Jawa Timur. *Depik.* 2015;4(3):153-159.
  19. Sari, T. A.; Atmodjo, W.; Zuraida, R.: Studi Bahan Organik Total (BOT) Sedimen Dasar Laut di Perairan Nabire, Teluk Cendrawasih, Papua. *Joernal Oseanografi.* 2014;3:81-86.
  20. Islam, M. S.; Proshad, R.; Ahmed, S.: Ecological Risk of Heavy Metals in Sediment of an Urban River in Bangladesh. *Hum Ecol Risk Assess.* 2018;24(3):699-720.
  21. Rosado, D.; Usero, J.; Morillo, J.: Assessment of Heavy Metals Bioavailability and Toxicity Toward *Vibrio Fischeri* in Sediment of the Huelva Estuary. *Chemosphere.* 2016;153:10-17.
  22. Antizar-Ladislao, B.; Mondal, P.; Mitra, S.; Sarkar, S. K.: Assessment of Trace Metal Contamination Level and Toxicity in Sediments from Coastal Regions of West Bengal, Eastern Part of India. *Mar Pollut Bull.* 2015;101(2):886-894.
  23. Santi, S. S.; Wahyudi, T.; Siyam, C.; Rachmani, T. P. D.: Effectiveness Tamarind to Reduction of Pb Content in Red Mussels. *J Phys Conf Ser.* 2020;1569(4).
  24. Yusof, M.; Razali, N. T.; Tien, N. K. H.; John, D.S.: Characterisation of *Polymesoda bengalensis* Shell Powder. *J Appl Sci Process Eng.* 2020;7(1):500-509.
  25. Widiana, R.; Nurdin, J.; Amelia, N.: Kepadatan dan Pola Distribusi *Polymesoda bengalensis* Lamarck di Perairan Muaro Nipah Kabupaten Pesisir Selatan Sumatera Barat. *Pros Semin Biol.* Published online 2016:69-76.

26. Abdullah, A.; Nurjanah.; Hidayat, T.; Chairunisah, R.: Karakteristik Kimiawi dari Daging Kerang Tahu, Kerang Salju dan Keong Macan. *J Teknol dan Ind Pangan*. 2017;28(1):78-84.
27. Venugopal, V.; Gopakumar, K.: Shellfish: Nutritive Value, Health Benefits, and Consumer Safety. *Compr Rev Food Sci Food Saf*. 2017;16(6):1219-1242.
28. Riani, E.; Johari, H. S.; Cordova, M. R.: Bioaccumulation of Cadmium and Lead in Prickly Pen Shell in Seribu Archipelago. *J Pengolah Has Perikan Indones*. 2017;20(1):131.
29. Jaya, E. N.; Kartika, R.; Saleh, C.: Korelasi Kadar Ion Logam Pb Terhadap Kadar Protein pada Kerang Tahu ( *Meretrix meretrix* ) yang Diambil di Perairan Pantai Bunyu Kalimantan Utara. Published online 2017.
30. Tandirerung, E.; Kartika, R.; Hindryawati, N.: Analisis Kandungan Total Logam (Pb), (Fe) dan Protein pada Kerang Darah (*Anadara granosa L*) dari Pesisir Laut Kenyamukan Sangtta Kalimantan Timur. *Pros Semin Nas Kim*. Published online 2017:48-57.
31. Syukur, C.; Trisilawati, O.: *Sirkuler Informasi Teknologi Tanaman Rempah Dan Obat*. Balai Penelitian Tanaman Rempah dan Obat Pusat Penelitian dan Pengembangan Perkebunan; 2018.
32. Joy PP. CABI Lemongrass datasheet. 2016;(August).
33. Akbarirad, H.; Gohari, A. A.; Kazemeini, S. M.; Mousavi, K. A.: An Overview on Some of Important Sources of Natural Antioxidants. *Int Food Res J*. 2016;23(3):928-933.
34. Santo, A.; Zhu, H.; Li, Y. R.: Free Radicals: From Health to Disease. *React Oxyg Species*. 2016;(January).
35. Santo, M. G.; Nunez, C. V.; Moya, H. D.: A New Method for Quantification of Total Polyphenol Content in Medicinal Plants Based on the Reduction of Fe(III)/1,10-Phenanthroline Complexes. *Adv Biol Chem*. 2013;03(06):525-535.
36. Yulianto, B.; Wijaya, W. A.; Setyati, W. A.; Sunaryo.; Santosa, A.; Putranto, T. W. C.; Soegianto, A.: Health Risk Analysis of Cd, Pb and Hg in Blood Mussel (*Anadara granosa*) from Demak, Central Java, Indonesia. *Asian J Water, Environ Pollut*. 2020;17(3):25-30.
37. Jayashree, S.; Samuel, J.; Vashantha, R.: Sorption of Bivalent Ions by *Cymbopogon citratus*: Characterisation and Investigation of Biosorptive Capacity and Mechanism. *J Environ Sci Pollut Res*. 2018;4(3):297-302.
38. Candoğan, K.; Altuntas, E. G.; İğci, N.: Authentication and Quality Assessment of Meat Products by Fourier-Transform Infrared (FTIR) Spectroscopy. *Food Eng Rev*. 2021;13(1):66-91. doi:10.1007/s12393-020-09251-y
39. Ilyasa, A. T.; Susatyo, E. B.; Prasetya, A. T.: Penurunan Kadar Ion Pb<sup>2+</sup> dan Cd<sup>2+</sup> pada Kerang dengan Menggunakan Filtrat Kulit Nanas. *Indones J Chem Sci*. 2016;5(3):2-7.



40. Agung, I. G.; Wiadnyana, G.: Analisis Kandungan Logam Berat Timbal (Pb) dan Kadmium ( Cd) pada Kerang Hijau (*Perna viridis* L.) yang Beredar di Pasar Badung. *J Emasains J Edukasi Mat dan Sains*. 2019;8(2):161-169.
41. Jia, Y.; Wang, L.; Qu, Z.; Yang, Z.: Distribution, Contamination and Accumulation of Heavy Metals in Water, Sediments, and Freshwater Shellfish from Liuyang River, Southern China. *Environ Sci Pollut Res*. 2018;25(7):7012-7020.
42. Zein, R.; Tomi, Z. B.; Fauzia, S.; Zilfa, Z.: Modification of Rice Husk Silica with Bovine Serum Albumin (BSA) for Improvement in Adsorption of Metanil Yellow Dye. *J Iran Chem Soc*. 2020;17(10):2599-2612.
43. Sadeek, S. A.; Negm, N. A.; Hefni, H. H. H.; Abdel, W. M. M.: Metal Adsorption by Agricultural Biosorbents: Adsorption Isotherm, Kinetic and Biosorbents Chemical Structures. *Int J Biol Macromol*. 2015;81:400-409.
44. Syauqiah, I.; Kusuma, F. I.; Mardiana, M.: Adsorption of Zn and Pb Metal in Printing Waste of PT. Grafika Wangi Kalimantan Using Corn Cobs Charcoal as Adsorbent. *Konversi*. 2020;9(1):28-34.
45. Troy, D. J.; Ojha, K. S.; Kerry, J. P.; Tiwari, B. K.: Sustainable and Consumer-friendly Emerging Technologies for Application within the Meat Industry: An overview. *Meat Sci*. 2016;120:2-9.
46. Rohman, A.: The Employment of Fourier Transform Infrared Spectroscopy Coupled with Chemometrics Techniques for Traceability and Authentication of Meat and Meat Products. *J Adv Vet Anim Res*. 2019;6(1):9-17.
47. Baker, M. J.; Trevisan, J.; Bassan, P.; Bhargava, R.; Butler, H. J.; Dorling, K. M.; Fielden, P. R.; et al.: Using Fourier Transform IR Spectroscopy to Analyze Biological Materials. *Nat Protoc*. 2014;9(8):1771-1791.
48. Deniz, E.; Güneş, A. E.; Ayhan, B.; İçci, N.; Özel, D. D.; Candoğan, K.: Differentiation of Beef Mixtures Adulterated with Chicken or Turkey Meat Using FTIR Spectroscopy. *J Food Process Preserv*. 2018;42(10):1-12.
49. İçci, N.; Demiralp, F. D. O.: A Fourier Transform Infrared Spectroscopic Investigation of *Macrovipera lebetina lebetina* and *M. l. obtusa* Crude Venoms. *Eur J Biol*. 2020;79(December 2009):14-22.
50. Zein, R.; Astuti A. W.; Wahyuni D.; Furqani, F.; Munaf, E.: Removal of Methyl Red from Aqueous Solution by *Nepthelium lappaceum* . *Res J Pharm Biol Chem Sci*. 2015;6(86):86-97.
51. Badan Standardisasi Nasional. SNI 7387:2009. Batas Maksimum Cemaran Logam Berat dalam Pangan. *Batas Maksimum Cemaran Logam Berat dalam Pangan*. Published online 2009:17.
52. Ibisi, N. E.; Asoluka, C. A.: Use of Agro-waste (*Musa paradisiaca* peels) as a Sustainable Biosorbent for Toxic Metal Ions Removal from Contami. *Chem Int*. 2018;4(1):52-59.
53. Puryanti, D.; Deswati, S.: Kajian Kualitas Air Permukaan Di Sekitar Kawasan Muaro Kota Padang Menggunakan Parameter Konduktivitas Dan Kandungan

- Logam Berat. *J Ilmu Fis | Univ Andalas*. 2012;4(2):40-45.
54. Utami, R.; Rismawati, W.; Sapanli, K.: Pemanfaatan Mangrove untuk Mengurangi Logam Berat di Perairan. *Pros Semin Nas Hari Air Dunia*. 2018;2(1):141-153.
  55. Barros J.: Biosorption of Cadmium Using the Fungus *Aspergillus Niger*. *Brazilian J Chem Eng*. 2003;20:1-7.
  56. Anwar, M.; Sanjaya, H.; Maliki, A.: Pengaruh Ion Logam Cd (II) Terhadap Adsorpsi Ion Logam Pb (II) dengan Adsorben Tanah Napa. *Periodic*. 2013;2(1):29-33.
  57. Susanti, M. M.; Priamsari, M. R.: Pengaruh Perendaman Larutan Tomat ( *Solanum lycopersicum L.* ) Terhadap Penurunan Kadar Logam Berat Timbal ( Pb ) dan Kadmium ( Cd ) pada Kerang Darah ( *Anadara granosa* ). *Int J Med Sci*. 2016;3(2):11-16.
  58. Anggraini, W.; Puryanti, D.: Identifikasi Pencemaran Logam Berat Tembaga (Cu), Timbal (Pb) dan Kadmium (Cd) Air Laut di Sekitar Pelabuhan Teluk Bayur Kota Padang. 2019;11(2):95-101.
  59. Azhar, H.; Widowati, I.; Suprijanto, J.: Studi Kandungan Logam Berat Pb, Cu, Cd, Cr Pada Kerang Simping (*Amusium pleuronectes*), Air Dan Sedimen Di Perairan Wedung, Demak Serta Analisis Maximum Tolerable Intake Pada Manusia. *Diponegoro J Mar Res*. 2012;1(2):35-44.
  60. Roza, S. Y.; Muhelni, L.: Analisis Kandungan Cd, Cu dan Pb pada Air Permukaan dan Sedimen Permukaan di Muara-Muara Sungai Kota Padang. *Akuatika Indones*. 2019;4(1):1.
  61. Nurmalasari.; Zaenab.: Pemanfaatan Air Perasan Jeruk Nipis ( *Citrus aurantifolia swingle* ) dalam Menurunkan Kadar Logam Berat Pb yang Terkandung pada Daging Kerang. *Higiene*. 2015;1(3):159-174.
  62. Sari, S. H. J.; Kirana, J. F. A.; Guntur, G.: Analisis Kandungan Logam Berat Hg dan Cu Terlarut di Perairan Pesisir Wonorejo, Pantai Timur Surabaya. *J Pendidik Geogr*. 2017;22(1):1-9.
  63. Ningsih, D.; Said, I.; Ningsih, P.: Adsorpsi Logam Timbal (Pb) dari Larutannya dengan Menggunakan Adsorben dari Tongkol Jagung. *J Akad Kim*. 2016;5(2):55-60.
  64. Indriana, L. F.; Anggoro, S.; Widodadi, I.: Kandungan 13 Jenis Logam Berat pada Kekekangan di Flores Timur sebagai Basis Biomonitoring di Lingkungan Perairan. 2010;(1995).
  65. Yanti, E. L.; Afdal, A.: Profil Pencemaran Air Sungai Batang Arau Daerah Lubuk Begalung Kota Padang. *Fis Unand*. 2016;5(2):101-106.
  66. Ramadhani, P.; Chaidir, Z.; Zilfa.; Tomi, Z. B.; Rahmiarti, D.; Zein, R.: Shrimp Shell (*Metapenaeus monoceros*) Waste as a Low-cost Adsorbent for Metanil Yellow Dye Removal in Aqueous Solution. *Desalin Water Treat*. 2020;197:413-423.

67. Nasution, A. N.; Amrina, Y.; Zein, R.; Aziz, H.; Munaf, E.: Biosorption Characteristics of Cd (II) Ions Using Herbal Plant of Mahkota Dewa ( *Phaleria macrocarpa* ). *J Chem Pharm Res.* 2015;7(7):189-196.
68. Setiawan, T.; Rachmawati, F.; Raharjo.: Efektivitas Berbagai Jenis Jeruk (Citrus Sp.) untuk Menurunkan Logam Berat Kadar Pb dan Cd pada Udang Putih (*Panaeus Marguiensis*). *LenteraBio.* 2012;1(1):34-40.
69. Suaniti, N. M.: Pengaruh EDTA dalam Penentuan Kandungan Timbal dan Tembaga pada Kerang Hijau (*Mytilus viridis*). *Ecotrophic.* 2007;2(1):1-7.
70. Hirota, S.; Lin, Y. W.: Design of Artificial Metalloproteins/Metalloenzymes by Tuning Noncovalent Interactions. *J Biol Inorg Chem.* 2018;23(1):7-25.
71. Hilmi, M. Z.; Swastawati, F.; Anggo, A. D.: Pengaruh Perendaman Berbagai Jenis Jeruk Terhadap Kandungan Logam Berat (Pb) dan Kromium (Cr) pada Kerang Hijau (*Perna viridis* Linn). *J Peng Biotek Has Pi.* 2017;110265(2):110493.
72. Chusein, A. F. A.; Ibrahim, R.: Lama Perendaman Daging Kerang Darah ( *Anadara Granosa* ) Rebus dalam Larutan Alginat Terhadap Pengurangan Kadar Kadmium. 2012;8(1):19-25.
73. Kama, N. A.; Ayu, A. R.; Akbar, M. N.: Efektivitas Bubur Rumput Laut Sebagai Reduktor Logam Timbal Pada Kerang Hijau. *J ABDI Vol2.* 2020;2(1):59-67.
74. Saher, N. U.; Kanwal, N.: Assessment of Some Heavy Metal Accumulation and Nutritional Quality of Shellfish with Reference to Human Health and Cancer Risk Assessment: a seafood safety approach. *Environ Sci Pollut Res.* 2019;26(5):5189-5201.
75. Griswold, C. M.; Matthews, A. L.; Bewley, K. E.; Mahaffey, J. W.: Molecular Characterization and Rescue of Acatalasemic Mutants of *Drosophila melanogaster*. *Genetics.* 1993;134(3):781-788.
76. Lushchak, V. I.; Bagnyukova, T. V.: Effects of Different Environmental Oxygen Levels on Free Radical Processes in Fish. *Comp Biochem Physiol - B Biochem Mol Biol.* 2006;144(3):283-289.
77. Rastuti, U.; Diastuti, H.; Chasani, M.; Purwati.; Hidayatullah, R.: Chemical Composition and Antioxidant Activities of Citronella Essential oil *Cymbopogon nardus* (L.) rendle fractions. *AIP Conf Proc.* 2020;2237(June).
78. Sunarni, T.; Pramono, S.; Asmah, R.: Antioxidant-free Radical Scavenging of Flavonoid from The Leaves of *Stelechocarpus burahol* (Bl.) Hook f. & Th. *Indones J Pharm.* 2007;18(3):111-116.