

## DAFTAR PUSTAKA

- Achmad, R., (2004). *Kimia Lingkungan*. ANDI. Yogyakarta.
- Agustiningsih, D., (2012). Kajian Kualitas Air Sungai Blukar Kabupaten Kendal dalam Upaya Pengendalian Pencemaran Air Sungai. *Tesis*. Program Magister Ilmu Lingkungan Universitas Diponegoro. Semarang.
- Alam, M.Z.B., Cantwell, R.E., Hofmann, R., Andrews, R.C., Rand, J.L., Gagnon, G.A., VanderMarck, M., Moffat, E., Andrews, S.A., (2008). Effect of ClO<sub>2</sub> pretreatment on subsequent water treatment processes. *J. Environ. Eng.* 134 (6), 478-485.
- Amirtharajah, A. and O'Melia, C. R., (1999). *Water Quality and Treatment (AWWA)*, 5th ed., AmericanWaterWorks Association, Denver, Colorado.
- Anirudhan, T.S., P.S. Suchithra, & S. Rijith, (2008). Amine-modified polyacrylamide-bentonite composite for the adsorption of humic acid in aqueous solutions. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 326(3), pp. 147-156.
- Baghoth, S.A., (2012). Characterizing natural organic matter in drinking water treatment processes and trains. *Dissertation*. UNESCO-IHE Institute for Water Education. Delft.
- Bertilsson, S., Jones, J.B., (2003). *Supply of dissolved organic matter to aquatic ecosystems: Autochthonous sources*, in: *Aquatic Ecosystems: Interactivity of Dissolved Organic Matter*. Academic Press. Cambridge.
- Bond, T., Goslan, E.H., Parsons, S.A. and Jefferson, B. (2010). Disinfection by-product formation of natural organic matter surrogates and treatment by coagulation, MIEEX and nanofiltration. *Water Res.* 44, pp. 1645-1653.
- Bond, T., Goslan, E.H., Parsons, S.A., Jefferson, B., (2012). A critical review of trihalomethane and haloacetic acid formation from natural organic matter surrogates. *Environmental Technology Rev.* 1, 93-113.
- Bourbonniree, R.A., (2009). Review of Water Chemistry Research in Natural and Disturbed Peatlands. *Canadian Water Resources Journal*, 34(4), 393-414.
- Broo, A.E., Berghult, B. and Hedberg, T. (1999). Drinking water distribution-The effect of natural organic matter (NOM) on the corrosion of iron and copper. *Water Sci. Technol.* 40(9), 17-24.
- Broo, A.E., Berghult, B. and Hedberg, T., (2001). Drinking water distribution-Improvements of the surface complexation model for iron corrosion. *Water Sci. Technol. Water Supply* 1(3), 11-18.
- Bull, R. J. and Kopfler, F. C., (1991). Health Effects of Disinfectants and Disinfection By-products. *AWWA Research Foundation*. Denver, CO.
- Chang, Raymond, 2005. *Kimia Dasar: Konsep-konsep Inti Jilid I*. Erlangga. Jakarta.
- Check, J. K., (2005). Characterization and Removal of NOM from Raw Waters in Coastal Enviroments. *Thesis*. Georgia Institute of Technology. Atlanta.
- Chen, W.J. and C.P. Weisel, (1998). Halogenated DBP concentration in distribution system. *J. Am. Water Work Assoc.* 90, 151-163.

- Cheng, W., S.A. Dastgheib, & T. Karanfil, (2005). Adsorption of dissolved natural organic matter by modified activated carbons. *Water Research*, 39, 2281-2290.
- Dachriyanus, (2004). Analisis Struktur Senyawa Organik Secara Spektroskopi. Lembaga Pengembangan Teknologi Informasi dan Komunikasi (LPTIK) Universitas Andalas. Padang.
- Dalimunthe, Juliana, (2007). Penetapan Konsentrasi Tawas dalam Pengolahan Air Sungai Ular. *Tugas Akhir*. Universitas Sumatera Utara. Medan.
- Driscoll, T.P., (2008). *Industrial Wastewater Management, Treatment, and Disposal (Third Edition)*. Water Environment Federation Alexandria. McGraw Hill. Virginia.
- Edzwald, J.K., (1993), Coagulation in Drinking Water Treatment: Particles, Organics, and Coagulants. *Wat. Sci. Tech.* Vol. 27, No.11, pp. 21-35.
- Edzwald, J.K., (2011). *Water Quality & Treatment A Handbook on Drinking Water Sixth Edition*. American Water Works Association, American Society of Civil Engineers, McGraw-Hill. Colorado.
- Effendi, H., (2003). Telaah Kualitas Air Bagi Pengelolaan Sumber Daya dan Lingkungan Perairan. Penerbit Kanisius. Yogyakarta.
- Fiedler, S., B. S. Holl, A. Freibauer, K. Stahr, M. Drosler, M. Schloter, and H.F. Jungkunst, (2008). Particulate organic carbon (POC) in relation to other pore water carbon fractions in drained and rewetted fens in Southern Germany. *Biogeosciences*, 5, 1615-1623.
- Golea, D.M., Upton, A., Jarvis, P., Moore, G., Sutherland, S., Parsons, S.A., Judd, S.J., (2017). THM and HAA formation from NOM in raw and treated surface waters. *Water Research*. Vol. 112, 226-235.
- Goslan, E.H., Seigle, C., Purcell, D., Henderson, R., Parsons, S.A., Jefferson, B., Judd, S.J., (2017). Carbonaceous and nitrogenous disinfection by-product formation from algal organic matter. *Chemosphere* 170, 1-9.
- Hidayah, E.N., Y.C. Chou, & H.H. Yeh, (2017). Comparison between HPSEC-OCD and F-EEMs for assessing DBPs formation in water. *Journal of Environmental Science and Health Part A, Toxic/Hazardous Substances and Environmental Engineering*, Vol. 52(4): 391-402.
- Huang, X, M. Leal, Q. Li, (2008). Degradation of natural organic matter by TiO<sub>2</sub> photocatalytic oxidation and its effect on fouling of low-pressure membranes. *Water Research*, Vol. 42, 1142-1150.
- Hur, J., M.A. Williams, M.A. Schlautman, (2006). Evaluating spectroscopic and chromatographic techniques to resolve dissolved organic matter via end member mixing analysis. *Chemosphere* 63(3), 387-402.
- Jarvis, P., Jefferson, B., Parsons, S., (2004). Characterizing natural organic matter flocs. *Water Sci. Technol. Water Supply* 4, 79-87.
- Jarvis, P., Banks, J., Molinder, R., Stephenson, T., Parsons, S.A., Jefferson, B., (2008). Processes for enhanced NOM removal: beyond Fe and Al coagulation. *Water Sci. Technol. Water Supply* 8, 709-716.
- Jermann, D., Pronk, W., Meylan, S. and Boller, M., (2007). Interplay of different NOM fouling mechanisms during ultrafiltration for drinking water production. *Water Res.* 41, 1713–1722.

- Kanokkantung, V., T.F. Marhaba, B. Panyapinyophol, and P. Pavasant, (2006). FTIR evaluation of functional groups involved in the formation of haloacetic acids during the chlorination of raw water. *Journal of Hazardous Materials*, B136, 188-196.
- Kimura, K., Hane, Y., Watanabe, Y., Amy, G. and Ohkuma, N., (2004). Irreversible membrane fouling during ultrafiltration of surface water. *Water Res.* 38, 3431-3441.
- Knappe, D.R.U., Belk, R.C., Briley, D.S., Gandy, S.R., Rastogi, N., Rike, A.H., Glasgow, H., Hannon, E., Frazier, W.D., Kohl, P., Pugsley, S., (2004). *Algae Detection and Removal Strategies for Drinking Water Treatment Plants*. AwwaRF, Denver, CO.
- Komulainen, H., Kosma, V. -M., Vaittinen, S. -L., Vartianinen, T., Kaliste-Korhonen, E., Lotjonen, S., Tuominen, R. K. and Tuomisto, J., (1997). Carcinogenicity of the Drinking Water Mutagen 3-Chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanon. *J. Nat. Cancer Inst.* Vol. 89, 848-856.
- Lamsal R., M.E. Walsh, & G.A. Gagnon, (2011). Comparison of advanced oxidation processes for the removal of natural organic matter. *Water Research*, volume 45: 3263-3269.
- Liang, H., Tian, J., He, W., Han, H., Chen, Z., Li, G., (2009). Combined preoxidation by permanganate and chlorine in enhancing the treatment of surface water. *J. Chem. Technol. Biotechnol.* 84 (8), 1229-1233.
- Lin, H-C, G-S Wang, (2011). Effects of UV/H<sub>2</sub>O<sub>2</sub> on NOM fractionation and corresponding DBPs formation. *Desalination*, Vol. 270, 221-226.
- Liu, J.-F., Jiang, X.-D., Zhai, X.-D., (2011). Enhanced coagulation of low turbidity and low temperature surface water by potassium permanganate composite preoxidation. *In: International Conference on Electric Technology and Civil Engineering*, Lushan, pp. 5927-5930.
- Ma, J., G.B. Li, Z.L. Chen, G.R. Xu, G.Q. Cai, (2001). Enhanced Coagulation of Surface Waters with High Organic Content by Permanganate Preoxidation. *Water Science and Technology: Water Supply* Vol 1 No 1, 51-61.
- Ma, J., & W. Liu, (2002). Effectiveness of ferrate (VI) preoxidation in enhancing the coagulation of surface waters. *Water Research*, Vol. 36, 4959-4962.
- Masduqi, Ali & A.F. Assomadi, (2012). *Operasi dan Proses Pengolahan Air*. ITS Press. Surabaya.
- Matilainen, A., (2007). Removal of the Natural Organic Matter in the Different Stages of the Drinking Water Treatment Process. *Thesis*. Tampere University of Technology. Tampere.
- Matilainen, A, M. Sillanpää M, (2010). Removal of natural organic matter from drinking water by advanced oxidation processes. *Chemosphere*, volume 80:351-365.
- Matilainen, A., E.T. Gjessing, T. Lahtinen, L. Hed, A. Bhatnagar, M. Sillanpää, (2011). An overview of the methods used in the characterisation of natural organic matter (NOM) in relation to drinking water treatment. *Chemosphere*, Vol. 83:1431-1442.

- Michael-Kordatou, I., C. Michael, Duan, X.He, D.D. Dionysiou, M.A. Mills, D. Fatta-Kassinosa, (2015). Dissolved effluent organic matter: Characteristics and potential implications in wastewater treatment and reuse applications. *Water Research* 77(15), 213-248.
- Pavita, K.D., B.R. Widiatmono, &L. Dewi, (2014). Studi Penentuan Daya Tampung Beban Pencemaran Sungai Akibat Buangan Limbah Domestik (Studi Kasus Kali Surabaya – Kecamatan Wonokromo). *Jurnal Sumberdaya Alam dan Lingkungan* Volume 1, Nomor 3.
- Permana, M.A. & A.D. Syafei, (2011). Penyisihan Kandungan Organik Dengan Metode Pelapisan Fotokatalis TiO<sub>2</sub> Pada Permukaan Keramik. *Skripsi. Teknik Lingkungan Institut Teknologi Sepuluh Nopember. Surabaya.*
- Peuravuori, J., Koivikko, R., and Pihlaja, K. (2002). Characterization, Differentiation and Classification of Aquatic Humic Matter Separated with Different Sorbents: Synchronous Scanning Fluorescence Spectroscopy. *Water Research*, 36, 4552-4562.
- Pine, S.H. 1988. *Kimia Organik*. Terbitan Keempat. Penerbit ITB. Bandung.
- Priyono, T.S.C., E. Yuliani, & R.W. Sayekti, (2013). Studi Penentuan Status Mutu Air di Sungai Surabaya untuk Keperluan Bahan Baku Air Minum. *Jurnal Teknik Pengairan*, Volume 4, Nomor 1, hal. 53-60.
- Prayitno, (2007). Kajian Kinetika Kimia Model Matematik Reduksi Kadmium Melalui Laju Reaksi, Konstante dan Orde Reaksi dalam Proses Elektrokimia. *Ganendra*, Volume X, Nomor 1, 27-34.
- Pulungan, Amanda Desviani, (2012). Evaluasi Pemberian Dosis Koagulan Aluminium Sulfat Cair dan Bubuk Pada Sistem Dosing Koagulan di Instalasi Pengolahan Air Minum PT. Krakatau Tirta Industri. *Skripsi. Fakultas Teknologi Pertanian Institut Pertanian Bogor. Bogor.*
- Richardson, S. D., (1998). Drinking Water Disinfection By-products, in R.A. Meyers (ed). *The Encyclopedia of Environmental Analysis & Remediation*, vol. 3, John Wiley & Sons. New York.
- Said, N.I & R. Tresnawaty, (2001). Penghilangan Amoniak di Dalam Air Baku Air Minum dengan Proses Biofilter Tercelup Menggunakan Media Plastik Sarang Tawon. *Jurnal Teknologi Lingkungan*, Vol.2, No. 1, hal. 11-27.
- Schneider, O.D., Tobiason, J.E., (2000). Preozonation effects on coagulation. *J. Am. Water Works Assoc.* 92 (10), 74-87.
- Serrano, M., Montesinos, I., Cardador, M.J., Silva, M., Gallego, M., (2015). Seasonal evaluation of the presence of 46 disinfection by-products throughout a drinking water treatment plant. *Science of the Total Environment* 517, 246-258.
- Sillanpää, Mika, (2015). *Natural Organic Matter In Water Characterization And Treatment Methods*. IWA Publishing. London.
- Sillanpää, Mika, Mohamed C. Ncibi, A. Matilainen, M. Vepsäläinen, (2018). Removal of natural organic matter in drinking water treatment by coagulation: A comprehensive review. *Chemosphere* 190, 54-71.
- Shammas, Nazih K. & Lawrence K. Wang, (2016). *Water Engineering: Hydraulics, Distribution*. John Wiley & Sons, Inc., Hoboken, New Jersey, USA.

- Søndergaard, M., Thomas, D.N., (2004). Dissolved Organic Matter (DOM) in Aquatic Ecosystems: A Study of European Catchments and Coastal Waters. The EU project DOMAINE (EVK3-CT-2000-00034). Hillerød.
- Sontheimer, H., Kollé, W. and Snoeyink, V.L. (1981). The siderite model of the formation of corrosion-resistant scales. *J. Am. Water Works Assoc.* 71(11), 572-579.
- Sorrell, T.N. (1988). *Interpreting Spectra of Organic Molecules*. Mill Valley, Calif.
- Srinivasan, S. and Harrington, G.W. (2007). Biostability analysis for drinking water distribution systems. *Water Res.* 41, 2127-2138.
- Stuart, B., (2004). *Infrared Spectroscopy: Fundamentals and Applications* ISBNs: 0-470-85427-8 (HB); 0-470-85428-6 (PB). Wiley.
- SUEZ, (2018). Sum parameters: the relationship between common analytical tools- BOD, COD, & TOC. Water Technologies & Solutions application note.
- Sugiarto, (2006). *Dasar-Dasar Pengelolaan Air Limbah*. UI Press. Jakarta.
- Talley, Jeffry W., *et al.*, (2007). Effect of Copper (II) on Natural Organic Matter Removal During Drinking Water Coagulation Using Aluminum-Based Coagulants. *Water Environment Research*, 79, 6: 593.
- Tarmizi, Tasrief, (2013). 62 persen Pencemaran Kali Surabaya Limbah Domestik diakses dari <http://www.antaraneews.com/berita/367264/62-persen-pencemaran-kali-surabaya-limbah-domestik> [30 Oktober 2017].
- Triyati, E., (1985). Spektrofotometer Ultra-violet dan Sinar Tampak Serta Aplikasinya dalam Oseanologi. *Jurnal Oseana*, volume X, nomor 1:39-47.
- Toming, K., Tuvikene, L., Vilbaste, S., Agasild, H., 2013. Contributions of autochthonous and allochthonous sources to dissolved organic matter in a large, shallow, eutrophic lake with a highly calcareous catchment. *Limnol Ocean.* 58, 1259-1270.
- US EPA, (1999). *Alternative Disinfectants And Oxidants Guidance Manual*, EPA, 815-R-99-014.
- Volk, C., Kaplan, L.o.A., Robinson, J., Johnson, B., Wood, L., Zhu, H.W. and Lechevallier, M. (2005). Fluctuations of Dissolved Organic Matter in River Used for Drinking Water and Impacts on Conventional Treatment Plant Performance. *Environ. Sci. Technol.* 39, 4258-4264.
- Wardani, R.S., B. Iswanto, & Winarni, (2009). Pengaruh pH pada Proses Koagulasi dengan Koagulan Aluminium Sulfat dan Ferri Klorida. *Jurnal Teknologi Lingkungan Universitas Trisakti*, Volume 5 Nomor 2, 40-45.
- Weishaar JL, Aiken GR, Bergamaschi BA, Fram MS, Fujii R, Mopper K., (2003), Evaluation of specific ultraviolet absorbance as an indicator of the chemical composition and reactivity of dissolved organic carbon. *Environmental Science & Technology.* 37(20):4702-4708.
- Widiarsih, W. (2002). Kajian Pencemaran Bahan Organik di Kawasan Pesisir Semarang. *Tesis*. Universitas Diponegoro. Semarang.
- Xie, Pengchao, Yiqun Chen, Jun Ma, Xiang Zhang, Jing Zou, Zongping Wang, (2016). A Mini Review of Preoxidation to Improve Coagulation. *Chemosphere* 155: 550-563.

- Xing, Y., (2010). Characterization Of Dissolved Organic Carbon In Prairie Surface Waters Using Fourier Transform Infrared Spectroscopy. *Thesis*. University of Saskatchewan. Saskatoon.
- Zhao, F.W., X. Li, Y.L. Yang, (2009). Effect of pre-oxidation of potassium manganate in the process of coagulation. *J Beijing Univ Tech*, Vol. 35: 1527-1531.
- Zazouli, M.A., S. Nasser, A. Mahvi, A. Mesdaghinia, M. Younecian, & M. Gholami, (2007). Determination of hydrophobic and hydrophilic fractions of natural organic matter in raw water of Jalalieh and Tehranspars water treatment plants (Tehran). *Journal Application Science*, volume 7:2651-2655.
- Zhang, W. and DiGiano, F.A. (2002). Comparison of bacterial regrowth in distribution systems using free chlorine and chloramine: a statistical study of causative factors. *Water Res.* 36, 1469-1482.