

## DAFTAR PUSTAKA

- Alaerts, G., dan Santika, S.S., 1984, *Metode Penelitian Air*, Surabaya: Usaha Nasional.
- Atkins, P.W., 1999, *Kimia Fisika*, Jakarta: Erlangga.
- Bada, S.O., 2007, *Adsorption of Phenols onto Fly Ash*, Dissertation the Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg, South Africa.
- Bernasconi, G., 1995, *Teknologi Kimia Jilid 2 Edisi Pertama*, Jakarta: PT. Pradaya Paramita.
- Castellan, 1982, *Physical Chemistry Third Edition*, New York: Addison-Wesley Publishing Company.
- Castilla, C.M., Utrilla, J.R., Ramon, M.L.V., and Marin, F.C., 1995, Adsorption of some Substituted Phenols on Activated Carbons from a Bituminous Coal, *Journal Carbon*, Vol.33(6): 845-851.
- Chandra, T.C., Mirna, M.M., Sudaryanto, Y., and Ismadji, S., 2006, Adsorption of Basic Dye onto Activated Carbon Prepared from Durian Shell: Studies of adsorption equilibrium and kinetics, *Chemical Engineering Journal*, Vol.12: 121-129.
- Dong, F., Wang, L., Wang, C., Cheng, J., He, Z., Sheng, Z., and Shen, R., 1992, Molecular Cloning and Mapping of Phenol Degradation Genes from *Bacillus Stearothermophilus* FDTP-3 and Their Expression in *Escherichia coli*, *Journal of Applied and Environmental Microbiology*, Vol.58(8): 2531-2535.
- Franz, M., Arafat, H. A., and Pinto, N.G., 2000, Effect of Chemical Surface Heterogeneity on the Adsorption Mechanism of Dissolved Aromatics on Activated Carbon, *Journal Carbon*, Vol.38(13): 1807-1819.
- Gupta, V.K., Srivastava, S.K., and Tyagi, R., 2000, Design Parameters or The Treatment of Phenolic Wastes by Carbon Columns (Obtained from Fertilizer Waste Material), *Journal Water Research*, Vol.34(5):1543-1550.
- Harfi, 2003, *Senyawa-Senyawa Organik*, Jakarta: Bumi Aksara.
- Hart, H., Craine, L.E., dan Hart, D.J., 2003, *Kimia Organik Suatu Kuliah Singkat*, Jakarta: Erlangga.

- Hendra, R., 2008, *Pembuatan Karbon Aktif Berbahan Dasar Batu Bara Indonesia dengan Metode Aktivasi Fisika dan Karakteristiknya*, Skripsi, Program Studi Teknik Mesin, Fakultas Teknik, Universitas Indonesia, Depok.
- Hines, A.L., and Robert N.M., 1985, *Mass Transfer, Fundamental and Applications*, New Jersey: Prentice-Hall Inc.
- Isyuniarto, Usada, W., Purwadi, A., dan Suryadi, 2005, *Degradasi Fenol dalam Limbah Pengolahan Minyak Bumi dengan Ozon*, P3TM – BATAN Yogyakarta, 0216-3128.
- Jannatin, R.D., Razif, M., dan Mursid, M., 2011, *Uji Efisiensi Removal Adsorpsi Arang Batok Kelapa untuk Mereduksi Warna dan Permanganat Value dari Limbah Cair Industri Batik*, Tugas Akhir, Program Studi Teknik Lingkungan, Institut Teknologi Sepuluh November, Surabaya.
- Karabacakoglu, B., Tmsek, F., Demiral, H., and Demiral, I., 2008, Liquid Phase Adsorption of Phenol by Activated Carbon Derived From Hazelnut Bagasse, *Journal of International Environmental Application & Science*, Vol.3(5): 373-380.
- Keputusan Menteri Lingkungan Hidup No.42 Tahun 1996, Tentang Baku Mutu Limbah Cair (BMLC) bagi Kegiatan Minyak dan Gas serta Panas Bumi.
- Kermani, M., Pourmoghaddhas, H., Bina, B., and Khazaei, Z., 2006, Removal of Phenol from Aqueous Solution by Rice Husk Ash and Activated Carbon, *Pakistan Journal of Biological Science*, Vol.9(10): 1905-1910.
- Kim, M.J., and Chea, G.H., 2012, Study on the PV Driven Dehumidifying System with Oyster Shell and Thermoelectric Device, *Journal of the Korean Society of Marine Environment & Safety*, Vol.18(3): 287-293.
- Kvech, S. and Tull, E., 1998, *Activated Carbon in Water Treatment Primer*, Environmental Information Management Civil Engineering Dept, Virginia Tech.
- Laszlo, K., and Szucs, A., 2001, Surface Characterization of Polyethyleneterephthalate (PET) based Activated Carbon and the effect of pH on its Adsorption Capacity from Aqueous Phenol and 2,3,4-Trichlorophenol Solutions, *Journal Carbon*, Vol.39: 1945-1953.
- Lynam, M.M., Kilduff, J.E. dan Weber, W.J.Jr., 1995, Adsorption of p-nitrophenol from Dilute Aqueous Solution. *Journal of Chemical Education*, Vol.72: 80-84.

- Malik, U., 2013, Efek Suhu terhadap Pembentukan Besaran Butiran Arang Karbon Tempurung Kelapa Sawit, *Jurnal Ilmiah Education Research*, Vol.2(1): 1-8.
- Michailof, C., Stavropoulos, G.G., Panayiotou, C., 2008, Enhanced Adsorption of Phenolic Compounds, Commonly Encountered in Olive Mill Wastewaters, on Olive Husk Derived Activated Carbons, *Journal of Bioresource Technology*, Vol.99: 6400-6408.
- Mulyono, P., dan Wibisono, 2007, Kecepatan Adsorpsi Amoniak dalam Air dengan Karbon Aktif, *Forum Teknik*, Vol.31(3): 255-263.
- Nevskaia, D. M., Castillejos-Lopez, E., Guerrero-Ruiz, A., and Muñoz, V., 2004, Effects of the Surface Chemistry of Carbon Materials on the Adsorption of Phenol-aniline Mixtures from Water, *Journal Carbon*, Vol.42 (3): 653-665.
- Okolo, B., Park, C., and Keane, M. A., 2000, Interaction of Phenol and Chlorophenols with Activated Carbon and Synthetic Zeolites in Aqueous Media, *Journal Colloid and Interface Science*, Vol.226(2): 308-317.
- Osick, J., 1983, *Adsorption*, Chichester, England: Ellis Horwood Ltd.
- Patrick, G. L. 2004, *Organik Chemistry*, London: Biosscientific.
- Priyanka, O., Sudesh, R., and Kunwar, S., 2014, Modified Coconut Fiber used as Adsorbent for the Removal Of 2-Chlorophenol and 2, 4, 6-Trichlorophenol from Aqueous Solution, *South African Journal of Chemical Engineering*, Vol.19(1): 1-21.
- Reynolds, 1982, *Unit Operation and Processes in Environmental Engineering*, Texas A&M University, Engineering Division, Brook/Cole Publishing Company: California.
- Science Lab, 2013, *Material Safety Data Sheet (Phenol MSDS)*.
- Sediawan, W.B. dan Prasetya, A., 1997, *Pemodelan Matematis dan Penyelesaian Numeris dalam Teknik Kimia dengan Perograman Bahasa Basic dan Fortran*, Yogyakarta: Andi.
- Sibelzor, 2004, Investigation of the Adsorption of Anionic Surfactants at Different pH Values by means of Active Carbon and the Kinetics of Adsorption, *Journal Serbian Chemical Society*, Vol.69: 25-32.
- Smisek, M. dan Cerny, S., 1970, *Activecarbon: Manufacture, properties and application*, New York: Elsevier Publishing Company.

SNI (Standar Nasional Indonesia) 06-3730-1995, *Mutu dan Cara Uji Arang Aktif Teknis*, Badan Standardisasi Nasional, Jakarta.

Stoeckli, F., Ramon, V. L., and Castilla C.M., 2001, Adsorption of Phenolic Compounds from Aqueous Solutions, by Activated Carbons, Described by the Dubinin-Astakhov Equation, *Journal Langmuir*, Vol.17(11): 3301-3306.

Sudarman, 2001, *Manfaat Arang Aktif*, Makassar: Universitas Hassanudin.

Sukandar, D., Prihadi, T.H., dan Hayati, A.F., 2007, *Identifikasi dan Penentuan Kadar Senyawa Fenol pada Sedimen Tambak di Kabupaten Sidoarjo*, Pusat Riset Teknologi, Badan Riset Kelautan dan Perikanan (BRKP), Departemen Kelautan dan Perikanan RI, Jakarta.

Sukardjo, 1990, *Kimia Fisika*, Yogyakarta: Rineka Cipta.

Suzuki, M., 1990, *Adsorption Engineering*, Tokyo: Elsevier.

Tan, L. A. W., Ahmad, A.L., and Hameed, B.H., 2008, Adsorption of Basic Dye on High-Surface-Area Activated Carbon Prepared from Coconut Husk: Equilibrium, Kinetic and Thermodynamic Studies, *Journal of Hazardous Materials*, Vol.154: 337-346.

Tanasale, M.F., Killay, A., dan Saily, M., 2006, Kitosan dari Limbah Udang Windu (*Penaeus monodon*) sebagai Adsorben Fenol, *Journal Alchemy*, Vol.5: 23-30.

Taufan, A., 2008, *Pengujian Alat Pendingin Adsorpsi Dua Adsorber dengan menggunakan Metanol 250 ml sebagai Refrigeran*, Tugas Akhir, Program Studi Teknik Mesin, Fakultas Teknik, Universitas Indonesia, Depok.

Treybal, R.E., 1981, *Mass Transfer Operation 3rd ed.*, Singapore: Mc. Graw-Hill Book Company.

Wu, P.X., Liao, Z.W., Zhang, H. F., and Guo, J.G., 2001, Adsorption of Phenol on Inorganic-Organic Pillared Montmorillonite in Polluted Water, *Journal Environment International*, Vol.26(5-6): 401-407.

Yapar, S., Klahre, P., and Klumpp, E., 2004, Hydrotalcite as a Potential Sorbent for the Removal of 2,4-Dichlorophenol, *Turkish Journal Engginering Environment Science*, Vol.28: 41-48.

Zhang, Y., Granite, E.J., Valer, M.M., and Tang, Z., 2003, Activated Carbons Produced from Unburned Carbon in Fly Ash and their Application for Mercury Capture, *Journal of Fuel Chemistry*, Vol.48(1): 32-33.