

## **DAFTAR PUSTAKA**

**www.itk.ac.id**

- Asri, N. P., Budikarjono, K., Suprapto, S., dan Roesyadi, A. (2015), "Kinetics of Palm Oil Transesterification Using Double Promoted Catalyst CaO/KI/ $\gamma$ -Al<sub>2</sub>O<sub>3</sub>", *Journal of Engineering and Technological Sciences*, Vol. 47, No. 4, hal. 353-363.
- Badan Standarisasi Nasional. (2015), "SNI 7182:2015. Biodiesel", Jakarta: Badan Standarisasi Nasional..
- Banchero, M., dan Gozzelino, G. (2015), "Nb<sub>2</sub>O<sub>5</sub>-catalyzed Kinetics of Fatty Acids Esterification for Reactive Distillation Process Simulation", *Chemical Engineering Research and Design*, Vol. 100, hal. 292-301.
- Barnwal, B. K. dan Sharma, M.P. (2005), "Prospects of Biodiesel Production from Vegetable Oils in India", *Renewable and Sustainable Energy Review*; Vol. 9, No. 4, hal. 363-378.
- Boon-anuwat, N. N., Kiatkittipong, W., Aiouache, F., dan Assabumrungrat, S. (2015), "Process Design of Continuous Biodiesel Production by Reactive Distillation: Comparison between Homogeneous and Heterogeneous Catalysts", *Chemical Engineering and Processing: Process Intensification*, Vol. 9, hal. 33-44.
- Carmo, F. R do., Evangelista, N. S., de Santiago-Aguiar, R. S., Fernandes, F. A., dan de Sant'Ana, H. B. (2014), "Evaluation of Optimal Activity Coefficient Models for Modeling and Simulation of Liquid–liquid Equilibrium of Biodiesel + Glycerol + Alcohol Systems", *Fuel*, Vol. 125, hal. 57-65.
- Constant, L. L. N. B., Godswill, N. N., Frank, N. E. G., Hermine, N. B., Achille, N., dan Martin, B. J. (2017), "A Review of Main Factors Affecting Palm Oil Acidity Within The Smallholder Oil Palm (*Elaeis Guineensis* Jacq.) Sector in Cameroon", *African Journal of Food Science*, Vol. 11, No. 9, hal. 296-301.

Dange, P. N., Sharma, A., & Rathod, V. K. (2014), "Synthesis of Methyl Butyrate Using Heterogeneous Catalyst: Kinetic Studies", *Catalysis Letters*, Vol. 144 No. 9, hal. 1537-1546.

Gaikwad, N. D., dan Gogate, P. R. (2015), "Synthesis and Application of Carbon Based Heterogeneous Catalysts for Ultrasound Assisted Biodiesel Production", *Green Processing and Synthesis*, Vol. 4, No. 1, hal. 17-30.

Geankoplis, C. J. (1993), *Transport Processes and Unit Operations*, 3<sup>rd</sup> edition, Prentice Hall, New Jersey.

Gupta, A. R., Chiplunkar, P. P., Pratap, A. P., dan Rathod, V. K. (2020), "Esterification of Palm Fatty Acid Distillate for FAME Synthesis Catalyzed by Super-Acid Catalyst  $\text{HClO}_3\text{-ZrO}_2$ ", *Waste and Biomass Valorization*, hal. 1-12.

Hayes, A. W. (2008), *Principles and Methods of Toxicology*, 5<sup>th</sup> edition. Informa Healthcare USA, Inc., USA

He, B. B., Singh, A. P., dan Thompson, J.C. (2006), "A Novel Continuous-Flow Reactor Using a Reactive Distillation Technique for Biodiesel Production", *Transactions of the ASABE*, Vol. 49, No. 1, hal. 107-112.

Henri, S. P. (2007), *Reaksi Samping yang Ditimbulkan Free Fatty Acid (FFA) dan Air pada Proses Transesterifikasi Menggunakan Katalis Basa pada Pembuatan Biodiesel*, Tesis, Universitas Gajah Mada, Yogyakarta.

Japir, A. A. W., Salimon, J., Derawi, D., Bahadi, M., Al-Shuja'a, S., dan Yusop, M. R. (2017), "Physicochemical Characteristic of High Free Fatty Acid Crude Palm Oil", *OCL*, Vol 24, No. 5, hal. D506.

Kim, H. J., Kang, B. S., Kim, M. J., Park, Y. M., Kim, D. K., Lee, J. S., dan Lee, K. Y. (2004), "Transesterification of Vegetable Oil to Biodiesel Using Heterogeneous Base Catalyst", *Catalysis Today*, Vol. 93, hal. 315-320.

Kiss, A. A., Dimian, A. C., dan Rothenberg, G. (2007), "Biodiesel by Catalytic Reactive Distillation Powered by Metal Oxides", *Energy & Fuels*, Vol. 22 No.1, hal. 598-604.

Krawczyk, T. (1996), "Biodiesel-alternative Fuel Makes Inroads But Hurdles Remain", *Inform*, Vol. 7, hal. 801-815.

Kumar, D., dan Ali, A. (2013). "Transesterification of Low-Quality Triglycerides over a Zn/CaO Heterogeneous Catalyst: Kinetics and Reusability Studies", *Energy & Fuels*, Vol. 27, No.7, hal. 3758-3768.

Kumar, P. P., dan Krishna, A. G. (2014), "Physico-chemical Characteristics and Nutraceutical Distribution of Crude Palm Oil and Its Fractions", *Grasas y Aceites*, Vol. 65, No. 2, hal. E018.

Kuramochi, H., Maeda, K., Kato, S., Osako, M., Nakamura, K., dan Sakai, S. I. (2009), "Application of UNIFAC Models for Prediction of Vapor-liquid and Liquid-liquid Equilibria Relevant to Separation and Purification Processes of Crude Biodiesel Fuel", *Fuel*, Vol. 88, No. 8, hal. 1472-1477.

Kusumaningtyas, R. D., Budiman, A., Sutijan, S., dan Purwono, S. (2009), "Design of Reactive Distillation Process for a Sustainable Biodiesel Production from Palm Oil", In *Word Congress on Oils and Fats & 28<sup>th</sup> ISF Congress*, hal. 2.

Masterton, W., Hurley, C., (2006), *Chemistry: Principles and Reactions, Update Edition*, Thomson Learning, Inc., USA.

Mueanmas, C. (2010), *Feasibility of reactive distillation for transesterification process of palm oil*, Disertasi, Prince of Songkla University Faculty, Thailand.

Pesaresi, L., Brown, D. R., Lee, A. F., Montero, J. M., Williams, H., dan Wilson, K. (2009), "Cs-doped H<sub>4</sub>SiW<sub>12</sub>O<sub>40</sub> Catalysts for Biodiesel Applications", *Applied Catalysis A: General*, Vol. 360, hal. 50-58.

Petchsoongsakul, N., Ngaosuwan, K., Kiatkittipong, W., Aiouache, F., dan Assabumrungrat, S. (2017), "Process Design of Biodiesel Production: Hybridization of Ester and Trasnesterification in a Single Reactive Distillation", *Energy Conversion and Management*, Vol. 153, hal. 493-503.

Smith, J. M, Van Ness, H.C., dan Abbott, M.M. (2001), *Introduction to Chemical Engineering Thermodynamics*, 6<sup>th</sup> edition, McGraw-Hill Book Company, Inc., New York.

Steinigeweg, S., dan Gmehling, J. (2003), "Esterification of a Fatty Acid by Reactive Distillation", *Industrial & Engineering Chemistry Research*, Vol. 42, No. 15, hal. 3612-3619.

Walas, S. M. (1990), *Chemical process equipment: Selection and design*, Butterworth-Heinemann, USA.

Xie, W., dan Li, H. (2006), "Alumina-supported Potassium Iodide as a Heterogeneous Catalyst for Biodiesel Production from Soybean Oil" *Journal of Molecular Catalysis A: Chemical*, Vol. 255, hal. 1-9.

Yadav, G. D., dan Murkute, A. D. (2004), "Preparation of a Novel Catalyst UDCaT-5: Enhancement in Activity of Acid-treated Zirconia-effect of Treatment with Chlorosulfonic Acid Vis-à-vis Sulfuric Acid", *Journal of Catalysis*, Vol. 224, No. 1, hal. 218-223.

Zabeti, M., Daud, W. M. A. W., & Aroua, M. K. (2010), "Biodiesel Production Using Alumina-Supported Calcium Oxide: An Optimization Study" *Fuel Processing Technology*, Vol. 91, No. 2, hal. 243-248.

Zhang, Y., Dube, M. A., McLean, D. D. L., & Kates, M. (2003). "Biodiesel Production from Waste Cooking Oil: 1. Process Design and Technological Assessment", *Bioresource Technology*, Vol. 89, No. 1, hal. 1-16.