



## DAFTAR PUSTAKA

- Alfajri, M., Munawaroh, H., & Marvie, I. (2018). The Utilization of Methyl Ester Sulfonate (Surfactant) from Jatropha curcas Oil as High Powercleaner, Renewable Biodegradable, and Better Quality of Detergent Colour. *Jurnal Penelitian Pascapanen Pertanian*, 15(0251), 73–79
- Alfonso, J., & Ortega, T. (2009). Sulfonation / Sulfation Processing Technology for Anionic Surfactant Manufacture. 9(January). <https://doi.org/10.21930/rcta.vol9>
- Ali, O. M., Yusaf, T., Mamat, R., Abdullah, N. R., & Abdullah, A. A. (2014). Influence of chemical blends on palm oil methyl esters' cold flow properties and fuel characteristics. *Energies*, 7(7), 4364–4380. <https://doi.org/10.3390/en7074364>
- Aries, R. S., & Newton, R. D. (1955). Chemical Engineering Cost Estimation. In McGraw-Hill Book Company (Vol. 33, Nomor 4). McGrawHill. <https://doi.org/10.1021/ed033p194.1>
- Asakura, Y., Karasawa, H., & Uchida, S. (1985). Hydrolytic desulfonation of cation exchange resins in high temperature water. *Journal of Nuclear Science and Technology*, 22(11), 939–941. <https://doi.org/10.1080/18811248.1985.9735746>
- Atkins, P., De Paula, J., & Keeler, J. (2017). Atkins' physical chemistry (11th ed.). Oxford University Press.
- Benjumea, P., Agudelo, J., & Agudelo, A. (2008). Basic properties of palm oil biodiesel-diesel blends. *Fuel*, 87(10–11), 2069–2075. <https://doi.org/10.1016/j.fuel.2007.11.004>
- Bin Musa, M. R., & Bin Mamat, R. (2012). Characteristic of Palm Oil Methyl Ester as Alternative Fuel. 2(2), 35–43.
- Bradley, M. S. (1994). Chemistry, Fifth Edition (Chang, Raymond). *Journal of Chemical Education*, 71(11), A289. <https://doi.org/10.1021/ed071pA289.1>
- Brendle, Eric. (2005). Adsorption of water on fumed silica. *Organosilicon Chemistry VI*. 888-894.
- Brown, G.G., Katz, D., Foust, A.S., dan Schneidewind, C., (1978). "Unit Operation". John Wiley and Sons, Inc. New York.



Clark, J. (2013). ENTHALPY CHANGE OF NEUTRALISATION.

<https://www.chemguide.co.uk/physical/energetics/neutralisation.html>

Department for Environment Food & Rural Affair (2021). "A Home with Water". Review of Domestic Water Use in Great Britain. Great Britain.

de Groot, W. H. (1991). Sulphonation Technology in the Detergent Industry. Springer Netherlands. <https://doi.org/10.1007/978-94-015-7918-6>

Dowell, A. M. (1997). 997 CCPS Conference and Workshop Proceedings Layer of Protection Analysis: A New PHA Tool After HAZOP, Before Fault Tree Analysis Layer of Protection Analysis: A New PHA Tool After Hazop, Before Fault Tree Analysis. [http://www.process-improvement-institute.com/\\_downloads/LOPA\\_Articles.pdf](http://www.process-improvement-institute.com/_downloads/LOPA_Articles.pdf)

Foster, N. C., MacArthur, B. W., Sheats, W. B., Shea, M. C., & Trivedi, S. N. (2009). Production of Methyl Ester Sulfonates. In Handbook of Detergents: Volume VI (hal. 201).

Global Asset Protection Services LLC. (2020). Oil and Chemical Plant Layout and Spacing. GAPS Guidelines, GAP.2.5.2, 1–13.

Gould, J., Glossop, M., & Ioannides, A. (2000). Review of Hazard Identification Techniques. 44(0), 1–27. [https://doi.org/10.1142/9789812776075\\_0001](https://doi.org/10.1142/9789812776075_0001)

Herman, A. M., & Jeffres, C. N. (2000). Process Safety Management (PSM). In Process Safety Management (OSHA 3132). <https://doi.org/10.1201/b15149-2>

Jain, A. (2019). Estimation of Melting Points of Organic Compounds In the Graduate College.

Jin, Pengkang & Jin, Xin & Wang, Xianbao & Feng, Yongning & C., Xiaochang. (2013). Biological Activated Carbon Treatment Process for Advanced Water and Wastewater Treatment. 10.5772/52021.

Martínez, D., Orozco, G., Rincón, S., & Gil, I. (2010). Simulation and pre-feasibility analysis of the production process of  $\alpha$ -methyl ester sulfonates ( $\alpha$ -MES). Bioresource Technology, 101(22), 8762–8771. <https://doi.org/10.1016/j.biortech.2010.06.059>

Metcalf dan Eddy. (1991). "Wastewater Engineering Treatment and Reuse", 4thed., Mc Graw Hill Companies, Inc., Hongkong

- Mignard, D. (2014). Correlating the chemical engineering plant cost index with macroeconomic indicators. *Chemical Engineering Research and Design*, 92(2), 285–294. <https://doi.org/10.1016/j.cherd.2013.07.022>
- Nasir Jamal, Muhammad & Ajaz, Ali & Ahmed, Shehzad. (2013). Guidelines for Local Manufacturing of Sand Media and Hydrocyclone Filters. [10.13140/RG.2.2.10552.03848](https://doi.org/10.13140/RG.2.2.10552.03848).
- National Center for Biotechnology. (2022a). Methanol. PubChem Compound Summary for CID 887. <https://pubchem.ncbi.nlm.nih.gov/compound/Methanol>
- National Center for Biotechnology. (2022b). Sulfur Trioxide. PubChem Compound Summary for CID 24682. <https://pubchem.ncbi.nlm.nih.gov/compound/Sulfur-trioxide>
- Perry, R.H. dan Green, D.W., (1987), “Perry’s Chemical Engineer’s Handbook”,6th ed., Mc Graw Hill Book Co., Singapore.
- Perry, R. H., Green, D. W., & Maloney, J. O. (1997). Physical and Chemical Data. In Perry’s chemical engineers’ handbook 7th edition.
- Peters, M. S., & Timmerhaus, K. D. (1991). Plant Design and Economics for Chemical Engineers. McGrawHill.
- Poel, Ibo & Hale, A.R. & Goossens, L.. (2002). Safety management in the Dutch oil and gas industry: The effect on the technological regime. *International Journal of Technology, Policy and Management*. 2. [10.1504/IJTPM.2002.003151](https://doi.org/10.1504/IJTPM.2002.003151).
- Powell, S.T., (1954), “Water Conditioning for Industry”, 1sted., Mc Graw HillBook Co., Tokyo.
- Primatech Inc. (2017). Comparison of Process Hazard Analysis (PHA) Methods. 1–10.
- Torres Ortega, J. A., Morales Medina, G., Surez Palacios, O. Y., & Snchez Castellanos, F. J. (2009). Mathematical model of a falling film reactor for methyl ester sulfonation. *Chemical Product and Process Modeling*, 4(5). <https://doi.org/10.2202/1934-2659.1393>
- Treybal, R.E., (1975), “Mass Transfer Operation”, 3rd ed., pp. 189-210; 252-261,McGraw-Hill Book Company, Singapore.

Ulrich, G. D. (1984). A guide to chemical engineering process design and economics. AIChE Journal, 30(6), 1036–1036. <https://doi.org/10.1002/aic.690300636>

US Department of Labor. (1994). Process Safety Management Guidelines for Compliance (OSHA 3133). In US Department of Labor Occupational Safety & Health Administration (hal. 14). <https://www.osha.gov/Publications/osha3133.html>

Willey, R. J. (2014). Layer of Protection Analysis. Procedia Engineering, 84, 12–22. <https://doi.org/10.1016/j.proeng.2014.10.405>

Xie, T., Zeng, C., Wang, C., & Zhang, L. (2013). Preparation of methyl ester sulfonates based on sulfonation in a falling film microreactor from hydrogenated palm oil methyl esters with gaseous SO<sub>3</sub>. Industrial and Engineering Chemistry Research, 52(10), 3714–3722. <https://doi.org/10.1021/ie3028763>

Zulina & Luqman Chuah, Abdullah & Anuar, Mohd Shamsul & Shah, Nor Nadiah Abdul & Idris, Zainab. (2020). Preparation, Characterization, Morphological and Particle Properties of Crystallized Palm-Based Methyl Ester Sulphonates (MES) Powder. Molecules. 25. 2629. 10.3390/molecules25112629.

<http://matche.com>, diakses pada tanggal 17 Juni 2022.

<http://mhhe.com>, diakses pada tanggal 17 Juni 2022

<http://www.bi.go.id>, diakses pada tanggal 19 Juni 2022.

<https://www.ojk.go.id/id/kanal/perbankan/Pages/Suku-Bunga-dasar.aspx>, diakses pada tanggal 20 Juni 2022.