

## DAFTAR PUSTAKA

1. Mentri ESDM. *Salinan Kepmen ESDM Nomor 301 RPMBN 2022-2027.*; **2022**.
2. Dinas Energi dan Sumber Daya Mineral. *Data Mineral Non Logam Provinsi Sumatera Barat.*; **2013**.
3. Cavalcanti JT de F, Lima JG de, Nascimento Melo MR do, Monteiro ECB, Campos-Takaki GM. Fossil fuels, nuclear energy and renewable energy. In: *A Look At Development.* ; **2023**. doi:10.56238/alookdevelopv1-146
4. Sundaramahalingam MA, Sivashanmugam P. Biodiesel production from a novel renewable source through the ultrasound-assisted transesterification process, using energy efficient nanocatalyst developed from waste material. *Fuel.* **2023**;346. doi:10.1016/j.fuel.2023.128397
5. Permana E, Naswir M. Kualitas Biodiesel Dari Minyak Jelantah Berdasarkan Proses Saponifikasi Dan Tanpa Saponifikasi. *JTT (Jurnal Teknologi Terapan).* **2020**;6(1). doi:10.31884/jtt.v6i1.244
6. Sisca, Deska A, Syukri, Zilfa, Jamarun N. Synthesis and characterization of CaO limestone from lintau buo supported by TiO<sub>2</sub> as a heterogeneous catalyst in the production of biodiesel. *Indonesian Journal of Chemistry.* **2021**;21(4):979-989. doi:10.22146/ijc.64675
7. Ningsih L, Deska A, Arief S, et al. Enrichment of Sawahlunto Clay with Cation Ca<sup>2+</sup> and Cu<sup>2+</sup> and Preliminary Test of its Catalytic Activity in CPO Transesterification Reaction. *Aceh International Journal of Science and Technology.* **2020**;9(3). doi:10.13170/aijst.9.3.17944
8. Freitas W, Trigueiro P, Marinho T, et al. The Role of Clay Mineral-Derived Photocatalysts in Insights of Remediation. *Ceramics.* **2022**;5(4). doi:10.3390/ceramics5040063
9. Elamathi V, Jayalekshmi S. Quantification of Clay Minerals and Its Correlation with Chemical and Index Properties of Soil. *Jordan Journal of Civil Engineering.* **2023**;17(1). doi:10.14525/jjce.v17i1.14
10. Sun X, Zhang Y, Yang H, Ren XM. Crystal Engineering for Achievement of Functional Materials Through Facile Intercalation of Lamella Mineral Kaolinite. *Journal of Material Science and Technology Research.* **2023**;10. doi:10.31875/2410-4701.2023.10.07
11. O'Day PA, Parks GA, Brown GE. Molecular structure and binding sites of Cobalt(II) surface complexes on kaolinite from X-ray absorption spectroscopy. *Clays Clay Miner.* **1994**;42(3). doi:10.1346/CCMN.1994.0420312

12. Gupta P, Das SS, Sing NB. Kaolinite-Starch based Nano-Composites and Applications. In: *Adv. App. of Micro and Nano Clay – Biopolymer-Based Composites* . ; **2022**. doi:10.21741/9781644901915-9
13. Chen M, Yang T, Han J, et al. The Application of Mineral Kaolinite for Environment Decontamination: A Review. *Catalysts*. **2023**;13(1). doi:10.3390/catal13010123
14. Amrutkar RD, Bhalerao SS, Bhoir AS, Bhusare RH, Bodhare SS, Borse JN. Role of catalyst in organic synthesis. *Current Trends in Pharmacy and Pharmaceutical Chemistry*. **2022**;4(3). doi:10.18231/j.ctppc.2022.019
15. Liu M, Ye Y, Ye J, et al. Recent Advances of Magnetite (Fe<sub>3</sub>O<sub>4</sub>)-Based Magnetic Materials in Catalytic Applications. *Magnetochemistry*. **2023**;9(4). doi:10.3390/magnetochemistry9040110
16. Anavatan GE, Ant Bursali E, Yurdakoç M. Synthesis and characterization of bentonite-based zinc complexes. *Journal of Sustainable Construction Materials and Technologies*. **2023**;8(2). doi:10.47481/jscmt.1272416
17. Kukreja S. An Ambient Protocol for Polycyclic 1,4-Dihydropyridines Using a Heterogeneous Catalyst. *International Journal For Multidisciplinary Research*. **2023**;5(2). doi:10.36948/ijfmr.2023.v05i02.2038
18. Sedenho GC, Colombo RNP, Crespilho FN. Insights from Enzymatic Catalysis: A Path towards Bioinspired High-Performance Electrocatalysts. *ChemCatChem*. **2023**;15(15). doi:10.1002/cctc.202300491
19. Kunisada Y, Sakaguchi N. Chemical modification of graphene for atomic-scale catalyst supports. *Nano Express*. **2022**;3(4). doi:10.1088/2632-959X/aca41f
20. Padmanabhan S, Selvamuthukumar M, Mahalingam S, Giridharan K, Ganesan S. Influential study of oxygenated additives in waste cooking biodiesel blends on diesel engine performance. *Multidisciplinary Science Journal*. **2023**;5(2). doi:10.31893/multiscience.2023015
21. Nguyen VG, Pham MT, Le NVL, Le HC, Truong TH, Cao DN. A comprehensive review on the use of biodiesel for diesel engines. *International Journal of Renewable Energy Development*. **2023**;12(4). doi:10.14710/ijred.2023.54612
22. Dubey R, Singh L. Utilization of Biodiesel By-Products in Various Industrial Applications. In: *Advanced Nanocatalysts for Biodiesel Production* . ; **2022**. doi:10.1201/9781003120858-10
23. Biswal T, Shadangi KP, Kataki R. Advanced Practices in Biodiesel Production. In: *Biodiesel Production: Feedstocks, Catalysts, and Technologies* . ; **2022**. doi:10.1002/9781119771364.ch20

24. Sahu G, Datta S, Saha S, Chavan PD, Yadav D, Chauhan V. Efficiency of catalysts during biofuel extraction. In: *Biofuel Extraction Techniques*. ; **2023**. doi:10.1002/9781119829522.ch15
25. Syahputra RA, Z.Rani, R Ridwanto, D. Miswanda, Pulungan AF. Isolation And Characterization Of Glycerol By Transesterification Of Used Cooking Oil. *Rasayan Journal of Chemistry*. **2023**;16(02). doi:10.31788/rjc.2023.1628178
26. Badan Standardisasi Nasional. *SNI 7182:2015*.; **2015**.
27. Kumar A. Investigating Catalyzed Transesterification for Castor Oil Ethyl Ester Production: A Promising Biodiesel Substitute. *Int J Res Appl Sci Eng Technol*. **2023**;11(5). doi:10.22214/ijraset.2023.52368
28. Mittal V, Ghosh UK. Optimization of biodiesel production from Spirulina microalgae via nanocatalytic transesterification process. *Bioresour Technol Rep*. **2023**;23. doi:10.1016/j.biteb.2023.101504
29. Kašpárek A, Kocík J, Tokarová V. Rape oil transesterification by methanol and ethanol on extruded hydrotalcite catalyst. *Reaction Kinetics, Mechanisms and Catalysis*. **2021**;132(1). doi:10.1007/s11144-020-01915-4
30. Kathumbi LK, Home PG, Raude JM, et al. Influence of Transesterification Catalysts Synthesized with Citric Acid on the Quality and Oxidative Stability of Biodiesel from Black Soldier Fly Larvae. *Fuels*. **2022**;3(3). doi:10.3390/fuels3030032
31. Haryanto A, Silviana U, Triyono S, Prabawa S. Produksi Biodiesel dari Transesterifikasi Minyak Jelantah dengan Bantuan Gelombang Mikro: Pengaruh Intensitas Daya dan Waktu Reaksi Terhadap Rendemen dan Karakteristik Biodiesel. *Jurnal Agritech*. **2015**;35(02). doi:10.22146/agritech.13792
32. Salaheldeen M, Mariod AA, Aroua MK, Rahman SMA, Soudagar MEM, Fattah IMR. Current state and perspectives on transesterification of triglycerides for biodiesel production. *Catalysts*. **2021**;11(9). doi:10.3390/catal11091121
33. Solikhah MD, Prismantoko A, Prawitasari A, et al. Perancangan Reaktor untuk Produksi Biodiesel Generasi 2 dari Biomasa Sawit. *jurnal.umj.ac.id*. 2022;14(2).
34. Yaqoob H, Teoh YH, Jamil MA, Rasheed T, Sher F. An experimental investigation on tribological behaviour of tire-derived pyrolysis oil blended with biodiesel fuel. *Sustainability (Switzerland)*. **2020**;12(23). doi:10.3390/su12239975
35. Aboelazayem O, Gadalla M, Alhajri I, Saha B. Advanced process integration for supercritical production of biodiesel: Residual waste heat recovery via organic Rankine cycle (ORC). *Renew Energy*. **2021**;164. doi:10.1016/j.renene.2020.09.058

36. Nayab R, Imran M, Ramzan M, et al. Sustainable biodiesel production via catalytic and non-catalytic transesterification of feedstock materials – A review. *Fuel*. **2022**;328. doi:10.1016/j.fuel.2022.125254
37. Youlla D, Widarti S, Ellyta E. The Reducing Household Waste by Utilizing Used Cooking Oil into Soap for Housewives in Pontianak City. *Mattawang: Jurnal Pengabdian Masyarakat*. **2023**;4(1). doi:10.35877/454ri.mattawang1553
38. Ullah Z, Bustam MA, Man Z. Characterization of Waste Palm Cooking Oil for Biodiesel Production. *International Journal of Chemical Engineering and Applications*. **2014**;5(2). doi:10.7763/ijcea.2014.v5.366
39. Mahmudah R, Shofiah N. From waste to wealth: A novel approach for empowering society through recycling used cooking oil into soap. *Journal of Community Service and Empowerment*. **2023**;4(2). doi:10.22219/jcse.v4i2.25816
40. Nova P, Gomes AM, Costa-Pinto AR. It comes from the sea: macroalgae-derived bioactive compounds with anti-cancer potential. *Crit Rev Biotechnol*. Published online 2023. doi:10.1080/07388551.2023.2174068
41. Fewster PF. The Limits of X-ray Diffraction Theory. *Crystals (Basel)*. **2023**;13(3). doi:10.3390/cryst13030521
42. Nasir S, Zobir M, Zaniat Z, Azah N, Afif S, Mustapha I. Potential valorization of by-product materials from Oil palm: A review of alternative and sustainable carbon sources for carbon-based nanomaterials synthesis. *Bioresources*. **2020**;14(2019).
43. Xiao J, Song Y, Li Y. Comparison of Quantitative X-ray Diffraction Mineral Analysis Methods. *Minerals*. **2023**;13(4). doi:10.3390/min13040566
44. Ichikawa S, Nakamura T. Solid Sample Preparations and Applications for X-Ray Fluorescence Analysis. In: *Encyclopedia of Analytical Chemistry*. ; **2023**. doi:10.1002/9780470027318.a9562.pub2
45. Wu 吴 B秉骏, Xia 夏 J经铠, Zhang 张 S硕, et al. Elemental composition x-ray fluorescence analysis with a TES-based high-resolution x-ray spectrometer. *Chinese Physics B*. **2023**;32(9). doi:10.1088/1674-1056/acd926
46. Anshu K, Lee JS, Mohan V, et al. Torrefaction severity influence on the nutrient composition of biomass. *Biomass Convers Biorefin*. Published online **2023**. doi:10.1007/s13399-023-04625-8
47. Patil Y, Bawase M, Thipse SS. Quick Analysis of Elemental Composition of Automotive Materials Using Non-destructive Technique. In: *SAE Technical Papers*. ; **2023**. doi:10.4271/2023-28-1327

48. Thamer FH, Thamer N. Gas chromatography – Mass spectrometry (GC-MS) profiling reveals newly described bioactive compounds in *Citrullus colocynthis* (L.) seeds oil extracts. *Heliyon*. **2023**;9(6). doi:10.1016/j.heliyon.2023.e16861
49. Huang TY, Yu JCC. Intelligent framework for cannabis classification using visualization of gas chromatography/mass spectrometry data and transfer learning. *Frontiers in Analytical Science*. **2023**;3. doi:10.3389/frans.2023.1125049
50. Rudrapal M, Kothawade AP, Ezzat SM, Egbuna C. Bioanalysis: Methods, techniques, and applications. In: *Analytical Techniques in Biosciences: From Basics to Applications*. ; **2022**. doi:10.1016/B978-0-12-822654-4.00002-6
51. Sari MT, Anwar Y, Putra AMJ. Identification Chemical Compounds of *Cymbopogon nardus* (L.) Rendle Essential Oil Using Gas Chromatography and Mass Spectrophotometry (GC-MS). *Bioedukasi*. **2023**;21(2). doi:10.19184/bioedu.v21i2.39692
52. Mohadesi M, Aghel B, Gouran A, Razmehgir MH. Transesterification of waste cooking oil using Clay/CaO as a solid base catalyst. *Energy*. **2022**;242. doi:10.1016/j.energy.2021.122536
53. Sharma, Bhavani A, Geetha. Green, cost effective barium loaded montmorillonite catalyst for biodiesel synthesis from waste cooking oil. In: *Materials Today: Proceedings*. Vol 45. ; **2021**. doi:10.1016/j.matpr.2020.12.1202
54. Parajuli D, Kaphle GC, Murali N, Samatha K. Structural Identification of Cubic Aluminum and Non-Cubic Titanium using X-Ray Diffractometer. *Journal of Lumbini Engineering College*. **2022**;4(1). doi:10.3126/lecj.v4i1.49369
55. Aylikci NK, Oruc O, Bahceci E, Kahoul A, Depci T, Aylikci V. Preparation of sample for x-ray fluorescence analysis. In: *X-Ray Fluorescence in Biological Sciences: Principles, Instrumentation, and Applications*. ; **2022**. doi:10.1002/9781119645719.ch7
56. Brands M, Gutbrod P, Dörmann P. Lipid analysis by gas chromatography and gas chromatography–mass spectrometry. In: *Methods in Molecular Biology*. Vol 2295. ; **2021**. doi:10.1007/978-1-0716-1362-7\_4
57. Santos Junior JJP, Pereira RG, Rosendahl M, Santo Filho DME, Gouveia JMG. The use of ethanol to determine the volume of a pycnometer used to measure the density of liquids at different temperatures and pressures. *Journal of the Brazilian Society of Mechanical Sciences and Engineering*. **2020**;42(1). doi:10.1007/s40430-019-2107-y
58. Matusiewicz H. Sample preparation for inorganic trace element analysis. *Physical Sciences Reviews*. **2017**;2(5). doi:10.1515/psr-2017-8001

59. Garcia-Valles M, Cuevas D, Alfonso P, Martínez S. Thermal behaviour of ceramics obtained from the kaolinitic clays of Terra Alta, Catalonia, Spain. *J Therm Anal Calorim.* **2022**;147(9). doi:10.1007/s10973-021-11075-9
60. Fatimah I, Fadillah G, Yanti I, Doong RA. Clay-Supported Metal Oxide Nanoparticles in Catalytic Advanced Oxidation Processes: A Review. *Nanomaterials.* **2022**;12(5). doi:10.3390/nano12050825
61. Karami H, Soltanali S, Najafi AM, Ghazimoradi M, Yaghoobpour E, Abbasi A. Amorphous silica-alumina as robust support for catalytic dehydrogenation of propane: Effect of Si/Al ratio on nature and dispersion of Cr active sites. *Appl Catal A Gen.* **2023**;658. doi:10.1016/j.apcata.2023.119167
62. Hu J, Yu B, Sun W, Lu L. Calcination-controlled performance optimization of iron-vanadium bimetallic oxide nanoparticles for synergistic tumor therapy. *J Mater Chem B.* **2023**;11(13). doi:10.1039/d3tb00113j
63. Xue H, Dong X, Fan Y, Ma X, Yao S. Study of Structural Transformation and Chemical Reactivity of Kaolinite-Based High Ash Slime during Calcination. *Minerals.* **2023**;13(4). doi:10.3390/min13040466
64. Nurhayati, Muhdarina, Susanto, Amri AT. Sintesis Biodiesel dengan Katalis Lempung Palas Aktivasi NaOH yang Dikalsinasi pada Suhu 300 o C. *Prosiding Semirata FMIPA Universitas Lampung.* Published online **2013**.
65. Kusuma RI, Hadinoto JP, Ayucitra A, Soetaredjo FE, Ismadji S. Natural zeolite from Pacitan Indonesia, as catalyst support palm oil. *Appl Clay Sci.* **2013**;74.
66. Pawelec B, Fierro JLG. Chapter 4 Applications of thermal analysis in the preparation of catalysts and in catalysis. In: *Handbook of Thermal Analysis and Calorimetry.* Vol 2. ; **2003**. doi:10.1016/S1573-4374(03)80008-0
67. Sheraz M, Anus A, Le VCT, Swamidoss CMA, Kim S. The effect of catalyst calcination temperature on catalytic decomposition of hfc-134a over  $\gamma$ -al<sub>2</sub>O<sub>3</sub>. *Catalysts.* **2021**;11(9). doi:10.3390/catal11091021