

DAFTAR PUSTAKA

1. Lima KCDS De, Paiva VM, Perrone D, et al. Glycine max meal extracts as corrosion inhibitor for mild steel in sulphuric acid solution. *J Mater Res Technol* 2020;9(6):12756–12772. Available from: <https://doi.org/10.1016/j.jmrt.2020.09.019>
2. Anderez A, Alguacil FJ, López FA. Acid pickling of carbon steel. *Rev Metal* 2022;58(3).
3. Wahyuni S, Suryati, Emriadi. Ekstrak Daun Kecapi Sebagai Inhibitor Korosi Baja Dalam Medium Asam Klorida. *Katalisator* 2022;7(1):41–51.
4. Shang Z, Zhu J. Overview on plant extracts as green corrosion inhibitors in the oil and gas fields. *J Mater Res Technol* 2021;15:5078–5094. Available from: <https://doi.org/10.1016/j.jmrt.2021.10.095>
5. Stiadi Y, Arief S, Aziz H, Efdi M, Emriadi E. Inhibisi Korosi Baja Ringan Menggunakan Bahan Alami Dalam Medium Asam Klorida: Review. *J Ris Kim* 2019;10(1):51–65.
6. Harsimran S, Santosh K, Rakesh K. Overview of Corrosion and Its Control: a Critical Review. *Proc Eng Sci* 2021;3(1):13–24.
7. Tu S, Jiang J, Li P, Li R, Tang Q. *Gleditsia sinensis* extract as green corrosion inhibitor for N80 steel in 1 M HCl. *J Mol Struct* 2025;1321(P2):139890. Available from: <https://doi.org/10.1016/j.molstruc.2024.139890>
8. Paiva VM, Nunes R da S, Lima KC de S de, et al. Novel eco-friendly green inhibitor of corrosion based on acerola (*Malpighia glabra*) waste aqueous extract for mild steel in 1 mol L⁻¹ HCl solution. *Surfaces and Interfaces* 2024;47(September 2023).
9. Sedik A, Lerari D, Salci A, et al. Dardagan Fruit extract as eco-friendly corrosion inhibitor for mild steel in 1 M HCl: Electrochemical and surface morphological studies. *J Taiwan Inst Chem Eng* 2020;107:189–200. Available from: <https://doi.org/10.1016/j.jtice.2019.12.006>
10. Guo L, Tan B, Li W, Li Q, Zheng X, Obot IB. Banana leaves water extracts as inhibitor for X70 steel corrosion in HCl medium. *J Mol Liq* 2021;327:114828. Available from: <https://doi.org/10.1016/j.molliq.2020.114828>
11. Zuo X, Li W, Luo W, et al. Research of *Lilium brownii* leaves extract as a commendable and green inhibitor for X70 steel corrosion in hydrochloric acid. *J Mol Liq* 2021;321:114914. Available from: <https://doi.org/10.1016/j.molliq.2020.114914>
12. Kusuma IW, Rahmini, Arung ET, Pramono AY, Erwin, Supomo. Biological activities and phytochemicals of *hyptis capitata* grown in east kalimantan, indonesia. *J Appl Biol Biotechnol* 2020;8(2):58–64.
13. John R, Sabu KR, Manilal A. Chemical Composition, Antioxidant, and Mosquito Larvicidal Activity of Essential Oils from *Hyptis capitata* Jacq. *J Exp Pharmacol* 2022;14:195–204.
14. Kurniasari AP, Amalia Y. Pengaruh Korosi Terhadap Kegagalan Logam pada

Jembatan : Literature Review. J Mek Terap 2022;3(2):65–69.

15. Rawat A, Karade SR, Thapliyal PC. Mechanism of inhibitors in control of corrosion of steel in concrete. Mater Today Proc 2023;(xxxx). Available from: <https://doi.org/10.1016/j.matpr.2023.06.210>
16. Reza NA, Akhmal NH, Fadil NA, Taib MFM. A review on plants and biomass wastes as organic green corrosion inhibitors for mild steel in acidic environment. Metals (Basel) 2021;11(7).
17. Karki N, Neupane S, Gupta DK, et al. Berberine isolated from *Mahonia nepalensis* as an eco-friendly and thermally stable corrosion inhibitor for mild steel in acid medium. Arab J Chem 2021;14(12):103423. Available from: <https://doi.org/10.1016/j.arabjc.2021.103423>
18. Setiawan A. Perencanaan Struktur Baja Dengan Metode LRFD, Erlangga. Jakarta: Penerbit Erlangga, 2008; Available from: <http://www.erlangga.co.id>
19. Prayogi A, Suhardiman. Analisa Pengaruh Media Pendingin Pada Perlakuan Panas Terhadap Kekerasan Dan Struktur Mikro Baja Karbon Rendah. 2019;17:29–36.
20. Leni, D., & Sumiati R. Perbandingan Alogaritma Machine Learning Untuk Prediksi Sifat Mekanik Pada Baja Paduan Rendah. J Rekayasa Mater Manufaktur dan Energi 2022;5(2):167–174. Available from: <https://jurnal.umsu.ac.id/index.php/RMME/article/view/11407>
21. Chen Y, Hu Y, Ding C, et al. The corrosion behaviors of carbon steel under the effect of AC and imidazoline quaternary ammonium salt corrosion inhibitor. Int J Electrochem Sci 2023;18(6):100143. Available from: <https://doi.org/10.1016/j.ijoes.2023.100143>
22. Putri SE, Gusniardi VA. Inhibisi Korosi Baja Lunak dengan Ekstrak Daun Miana Coleus scutellaroides (L.) Benth.) dalam medium HCl. 2023;15(2):110–119.
23. Stiadi Y, Efdi M, Aziz H, Emriadi. *Gleichenia linearis* burm. Leaf extract as corrosion inhibitor of mild steel in hydrochloric acid medium. Int J Corros Scale Inhib 2020;9(4):1498–1515.
24. Ullah I, Ali R, Nawab H, et al. Theoretical Analysis of Activation Energy Effect on Prandtl-Eyring Nanoliquid Flow Subject to Melting Condition. J Non-Equilibrium Thermodyn 2022;47(1):1–12.
25. Emriadi, Santoni A, Stiadi Y. Adsorptive and thermodynamic properties of methanol extract of Toona sinensis leaves for the corrosion of mild steel in HCl medium. Der Pharma Chem 2016;8(18):266–273.
26. Km S, Praveen BM, Devendra BK. A review on corrosion inhibitors: Types , mechanisms , electrochemical analysis , corrosion rate and efficiency of corrosion inhibitors on mild steel in an acidic environment. Results in Surfaces and Interfaces 2024;16(May):100258. Available from: <https://doi.org/10.1016/j.rsufi.2024.100258>
27. Foo KY, Hameed BH. Insights into the modeling of adsorption isotherm systems. Chem

Eng J 2010;156(1):2–10.

28. Obaïke Adejo S, Uzah T, Akuhwa J. Adsorption Isotherm Modeling in Corrosion Inhibition Studies. *Corros Eng - Recent Break Innov Solut* 2024;
29. Aralu CC, Chukwuemeka-Okorie HO, Akpomie KG. Inhibition and adsorption potentials of mild steel corrosion using methanol extract of *Gongronema latifolium*. *Appl Water Sci* 2021;11(2). Available from: <https://doi.org/10.1007/s13201-020-01351-8>
30. Aigbogun JA, Adebayo MA. Green inhibitor from *Thaumatococcus daniellii* Benn for corrosion mitigation of mild steel in 1M HCl. *Curr Res Green Sustain Chem* [internet] 2021;4(August):100201. Available from: <https://doi.org/10.1016/j.crgsc.2021.100201>
31. Adamu AA, Iyun ORA, Habila JD. Adsorption and thermodynamic studies of the corrosion Inhibition effect of *Desmodium adscendens* (Swartz) extract on carbon steel in 2 M HCl. *BMC Chem* 2025;19(1).
32. Mahmmod AA, Khadom AA, Kadhum AAH, Al-Amiery AA. On the adsorption isotherms behavior of quinoxaline as corrosion inhibitor for copper in nitric acid. *Moroccan J Chem* 2025;13(2):495–514.
33. Abd-El-Nabey BA, El-Housseiny S, Abd-El-Fatah MA. Trizma as an eco-friendly efficient inhibitor for the acidic corrosion of steel: experimental and computational studies. *Sci Rep* 2022;12(1):1–16. Available from: <https://doi.org/10.1038/s41598-022-19060-4>
34. Pratiwi RA, Nandiyanto ABD, Bayu A, Nandiyanto D. Indonesian Journal of Educational Research and Technology How to Read and Interpret UV-VIS Spectrophotometric Results in Determining the Structure of Chemical Compounds. *Indones J Educ Res Technol* 2022;2(1):1–20.
35. Verma G, Mishra M. Development and Optimization Of UV-Vis Spectroscopy - A Review. *World J Pharm Res* 2018;7(11):1170–1180.
36. Rbaa M, Benhiba F, Obot IB, et al. Two new 8-hydroxyquinoline derivatives as an efficient corrosion inhibitors for mild steel in hydrochloric acid: Synthesis, electrochemical, surface morphological, UV-visible and theoretical studies. *J Mol Liq* 2019;276:120–133. Available from: <https://doi.org/10.1016/j.molliq.2018.11.104>
37. Khan MZH, Aziz MA, Hasan MR, Al-Mamun MR. The role of drug as corrosion inhibitor for mild steel surface characterization by SEM, AFM, and FTIR. *Anti-Corrosion Methods Mater* 2016;63(4):308–315.
38. Wong HS, Angst UM, Geiker MR, et al. Methods for characterising the steel–concrete interface to enhance understanding of reinforcement corrosion: a critical review by RILEM TC 262-SCI. *Mater Struct Constr* 2022;55(4).
39. Akbari R, Antonini C. Contact angle measurements: From existing methods to an open-source tool. *Adv Colloid Interface Sci* 2021;294:1–22.
40. Isimjan TT, Wang T, Rohani S. A novel method to prepare superhydrophobic, UV resistance and anti-corrosion steel surface. *Chem Eng J* 2012;210:182–187.

41. To N. Pemanfaatan dan Skrining Fitokimia Infusa Daun Rumput Knop (*Hyptis capitata* Jacq .) Utilization and Phytochemicals Screening of Knobweed (*Hyptis capitata* Jacq .) Leaves Infusion Pendahuluan Salah satu kearifan lokal yang saat ini Metode Penelitian. 2020;5(3):149–154.
42. Parveen M, Mobin M, Zehra S, Aslam R. L-proline mixed with sodium benzoate as sustainable inhibitor for mild steel corrosion in 1M HCl: An experimental and theoretical approach. Sci Rep 2018;8(1):1–18. Available from: <http://dx.doi.org/10.1038/s41598-018-24143-2>
43. Malaret F. Exact calculation of corrosion rates by the weight-loss method. Exp Results 2022;3:1–12.
44. Paramasivam S, Kulanthai K, Sadhasivam G, Subramani R. Corrosion inhibition of mild steel in hydrochloric acid using 4-(pyridin-2-yl)-N-p-tolylpiperazine-1-carboxamide. Int J Electrochem Sci 2016;11(5):3393–3414.
45. Gapsari F, Setyarini PH, Kurniawan F, Ahnaf A, Anwar MS, Zuryati UK. Corrosion inhibition of weldment by *Nephelium lappaceum* peel extract in 3.5% NaCl solution. South African J Chem Eng 2022;41(June):223–232. Available from: <https://doi.org/10.1016/j.sajce.2022.06.006>
46. Chen L, Lu D, Zhang Y. Organic Compounds as Corrosion Inhibitors for Carbon Steel in HCl Solution: A Comprehensive Review. Materials (Basel) 2022;15(6):1–59.
47. Szauer T, Brandt A. On the role of fatty acid in adsorption and corrosion inhibition of iron by amine-fatty acid salts in acidic solution. Electrochim Acta 1981;26(9):1257–1260.
48. Jasim AS, Rashid KH, AL-Azawi KF, Khadom AA. Synthesis of a novel pyrazole heterocyclic derivative as corrosion inhibitor for low-carbon steel in 1M HCl: Characterization, gravimetric, electrochemical, mathematical, and quantum chemical investigations. Results Eng 2022;15(July):100573. Available from: <https://doi.org/10.1016/j.rineng.2022.100573>
49. Egbeneje VO, Okhale SE, Imoisi C, Ogbogo IO, Ojo O. Evaluation of the Inhibitive Properties of Silver Nanoparticles in Senna occidentalis Root Extract as Corrosion Inhibitor of Mild Steel. Tanzania J Sci 2023;49(3):655–663.
50. Emembolu L, Igwegbe C. Investigation of Temperature Correlations on Corrosion Inhibition of Carbon Steel in Acid Media by Flower Extract. Eur J Eng Appl Sci 2022;5(1):29–36.
51. Hassannejad H, Nouri A. Sun flower seed hull extract as a novel green corrosion inhibitor for mild steel in HCl solution. J Mol Liq 2018;254:377–382. Available from: <https://doi.org/10.1016/j.molliq.2018.01.142>
52. Mobtaker H, Azadi M, Rassouli M. The corrosion inhibition of carbon steel in 1 M HCl solution by *Oestrus ovis* larvae extract as a new bio-inhibitor. Heliyon

- 2022;8(12):e12297. Available from: <https://doi.org/10.1016/j.heliyon.2022.e12297>
53. Fergachi O, Benhiba F, Rbaa M, et al. Corrosion Inhibition of Ordinary Steel in 5.0 M HCl Medium by Benzimidazole Derivatives: Electrochemical, UV–Visible Spectrometry, and DFT Calculations. *J Bio- Tribo-Corrosion* 2019;5(1).
54. Umoren SA, Eduok UM, Solomon MM, Udoh AP. Corrosion inhibition by leaves and stem extracts of *Sida acuta* for mild steel in 1 M H₂SO₄ solutions investigated by chemical and spectroscopic techniques. *Arab J Chem* 2016;9:S209–S224. Available from: <http://dx.doi.org/10.1016/j.arabjc.2011.03.008>
55. Alimohammadi M, Ghaderi M, Ramazani S.A A, Mahdavian M. *Falcaria vulgaris* leaves extract as an eco-friendly corrosion inhibitor for mild steel in hydrochloric acid media. *Sci Rep* 2023;13(1):1–16. Available from: <https://doi.org/10.1038/s41598-023-30571-6>
56. Al-Amiery AA, Isahak WNRW, Al-Azzawi WK. Corrosion Inhibitors: Natural and Synthetic Organic Inhibitors. *Lubricants* 2023;11(4).
57. Rizi A, Sedik A, Acidi A, et al. Sustainable and Green Corrosion Inhibition of Mild Steel: Insights from Electrochemical and Computational Approaches. *ACS Omega* 2023;8(49):47224–47238.
58. Dwivedi D, Lepková K, Becker T. Carbon steel corrosion: a review of key surface properties and characterization methods. *RSC Adv* 2017;7(8):4580–4610.
59. Krainer S, Hirn U. Contact angle measurement on porous substrates: Effect of liquid absorption and drop size. *Colloids Surfaces A Physicochem Eng Asp* 2021;619(October 2020):126503. Available from: <https://doi.org/10.1016/j.colsurfa.2021.126503>

