

DAFTAR PUSTAKA

- Abdallah, M., I. Zaafarany, K.S. Khairou and M.Sobhi. 2012. Inhibition of Carbon Steel Corrosion by Iron(III) and Imidazole in Sulfuric Acid. *Int. J. Electrochem. Sci.*7: 1564 – 1579.
- Abd El-Maksoud, S.A. 2008. The Effect of Organic Compound on the Electrochemical Behaviour of Steel in Acidic Media. A review. *Int. J. of Electrochem. Sci.* 3: 528 – 555.
- Adejo, S.O., J. A. Gbertyo and J. U. Ahile. 2013. Inhibitive Properties and Adsorption Consideration of Ethanol Extract of *Manihot esculentum* Leaves for Corrosion Inhibition of Aluminium in 2 M H₂SO₄. *International Journal of Modern Chemistry*, 4(3): 137-146.
- Adejo, S.O, S. G. Yiase, U. J. Ahile, T. G. Tyohemba and J. A. Gbertyo. 2013. Inhibitory effect and adsorption parameters of extract of leaves of *Portulaca oleracea* of corrosion of aluminium in H₂SO₄ solution. *Archives of Applied Science Research*, , 5 (1):25-32
- Ahmad, Z, 2006. Principles of Corrosion Engineering and Corrosion Control. *IchemE*. Butterworth-Heinenmann. pp 70-75
- Akalezi, C.O., Enenebaku, C.K, and E.E. Oguzie. 2012. Application of Aqueous Extracts of Coffee Senna For Control of Mild Steel Corrosion in Acidic Environments, *Intern. Journ. of Industr. Chem.* 3(13): 1- 12.
- Amin, M.A., S. Sayed., A.El-Rehim., E.E.F. El-Sherbini., and R. S. Bayoumi. 2007. The inhibition of low carbon steel orrosion in hydrochloric acid solutions by succinic acid Part I. Weight loss, polarization, EIS, PZC, EDX and SEM studies. *Electrochimica Acta.* 52. 3588–3600.
- Ashokkumar, K., Selvaraj, K., and D.K.M. Saradha. Reverse phase-high performance liquid chromatography-diode array detector (RP-HPLC-DAD) analysis of flavonoids profile from curry leaf (*Murraya koenigii*. L). *Journal of Medicinal Plants Research.* 7 (47): 3393-3399.
- Babolan, R. 2005. Corrosion Test and Standards: Application and Interpretation. 2nd Edition. ASTM International. West Conshohocken. p.3.
- Bahekar, S and R.Kale. 2013. Phytomarcological Aspect of Manihot Esculenta Crantz (Cassava) – A Review. *Mintage Journal of Pharmaceutical & Medical Science*, 2 (1): 4-5.
- Bakhtiar, A.2007. Pemanfaatan Daun Singkong Hasil Sampung Industri Etanol Sebagai Sumber Bioflavonoid. *Prosiding, Konferensi Nasional 2007. Pemanfaatan Hasil Sampung Industri Biodiesel dan Industri Etanol serta*

Peluang Pengembangan Industri Integrated,. 17 Maret 2007. Jakarta. 212-218.

- Bokanisereme, U.F. Yusuf, P.N. Okechukwu. 2013. Anti Inflammatory, Analgesic and Anti-Pyretic Activity of Cassava Leaves Extract, *Asian Journ. of Pharm. and Clin Res.* 6(4): 89-92.
- Chakravarthy, M.P., and K.N. Mohana. 2014. Adsorption and Corrosion Inhibition Characteristics of Some Nicotinamide Derivatives on Mild Steel in Hydrochloric Acid Solution. *ISRN Corrosion.* 3. pp.1-13.
- Chaturvedula, V.S.P., J.K. Schilling, S. Malone, J.H. Wisse, M.C.M. Werkhoven, D.G.I. Kingston. 2003. New Cytotoxic Triterpene Acids From Aboveground Parts of *Manihot esculenta* from the Suriname Rainforest. *Planta Med.* 69(3):271-4.
- Chen, G., M. Zhang., J. Zhao., R. Zhou., Z. Meng., and J. Zhang. 2013. Investigation of ginkgo biloba leaf extracts as corrosion and Oil field microorganism inhibitors. *Chemistry Central Journal.* 7(83): 1-7.
- Chiou, S. 1998. A Study of the Effect of Some Inhibitors on the Corrosion Rates of a Austenitic Stainless Steels in Sulfuric Acid. *Thesis.* New Jersey Institute Technology. Pp 4-6.
- Cicek, V., and B. Al-Nunman. 2011. *Corrosion Chemistry.* Schrivene. Publishing. Salem. Canada. pp. 1-4
- Emmanuel, O. A., A. Clement., S.B. Agnes., L. Chiwona-Karlun., and B.N. Drinah., 2012. Chemical composition and cyanogenic potential of traditional and high yielding CMD resistant cassava (*Manihot esculenta* Crantz) varieties. *International Food Research Journal.* 19(1): 175-181.
- Emriadi, Santoni A., and Stiadi Y., Adsorptive and thermodynamic properties of methanol extract of *Toona sinensis* leaves for the corrosion of mild steel in HCl medium, *Der Pharma Chemica*, 2016, 8(18): 266-273.
- Emriadi., Y. Stiadi, ., dan I. Dewi. 2011. Inhibisi Korosi Baja Oleh Ekstrak Daun Kakao (*Theobrama Cacao*) Dalam Medium Asam Sulfat, *Jurnal Kimia Andalas*, 8-9.
- Emriadi, 2006, *Kimia Koloid dan Permukaan*, cetakan pertama, Andalas University Press, Padang. 69-71.
- Erna, M., Emriadi, A. Alif., dan S. Arief. 2011, Efektifitas Kitosan sebagai Inhibitor Korosi pada Baja Lunak dalam Air Gambut. *J. Nature Indonesia.* 13(2), 118-122.
- Faustin M., A. Maciuk, P. Salvin, C. Roos, and M. Lebrini. 2016. Corrosion inhibition of C38 steel by alkaloids extract of *Geissospermum laeve* in 1 M

hydrochloric acid: Electrochemical and phytochemical studies. *Corr. Sci.* 92: 287–300.

Fiori-Bimbi., M.V., P.A. Alvarez., H. Vaca., and C.A. Gervazi. 2015. Corrosion Inhibition of Mild Steel in HCl Solution by Pectin, *Corr. Sci.* 92, 192- 199.

Fontana, M. G. 1987. *Corrothion Engineering*, 3rd ed. Mac Graw Hill Book Company. Singapura. pp. 14-31

Fayyad, E.M., [K.K. Sadasivuni](#), D. [Ponnamma](#), M. and A.A [Al-Maadeed](#). 2016. Oleic acid-grafted chitosan/graphene oxide composite coating for corrosion protection of carbon steel, *J. Carbpol*, 51:871 – 878

Gandy,D. 2007. *Carbon Steel Handbook*. Electric Power Research Institute. Palo Alto. pp. 1.1– 4.10

Garai, S., S. Garai., P. Jaisankar., S.K. Singh., and A. Elango. 2012. A comprehensive study on crude methanolic extract of *Artemisia pallens* (Asteraceae) and its active component as effective corrosion inhibitors mild steel in acid solution. *Corr. Sci.* 60:193–204.

Grassino, A.N., J. Halambek, S. Djakovi, S. Rimac, and M. Dent, Z. Grabari. 2016. Utilization of tomato peel waste from canning factory as a potential source for pectin production and application as tin corrosion inhibitor, *Food Hydrocolloids.* 52: 265 – 274.

Hameed, R.S.A., O.M. Ismaile, F.M. Eissa, and R. Ghanem. 2012. New non ionic polymeric surfactants as corrosion inhibitors for the C- Steel alloy in hydrochloric acid corrosive medium. *Der Chemica Sinica*, , 3(1):236-248.

Hanzaa, A.P., R. Naderib, E. Kowsaric, M. Sayebani. 2016. Corrosion behavior of mild steel in H₂SO₄ solution with 1,4-di[1_-methylene-3_-methyl imidazolium bromide]-benzene as an ionicliquid. *Corr. Sci.* 107: 96–106.

Harbone, J.B., and N.W. 1964. *Phytochemical Dictionary: A Handbook of Bioactive Compounds from Plants*. 2nd edition. Academic Press. New York. Pp. 490-517.

Ikeuba., I., B. I. Ita., P.C. Okafor., B. U. Ugi., and E. B. Kporokpo. 2015 Green Corrosion Inhibitors for Mild Steel in H₂SO₄ Solution: Comparative Study of Flavonoids Extracted from *Gongronema Latifoliumm* with Crude the Extract. *Protection of Metals and Physical Chemistry of Surfaces.* 51,(6): 1043–1049.

Intarakasem, P., T. Padumanonda, S. Nualkaew. 2014. Determination of biomarker in cassava leaves and the minimization of cyanogenic glycosides. *The 6th Annual Northeast Pharmacy Research Conference of 2014. A Celebration of 100 years of Thai Pharmacy and 20 Years of UBU*

Pharmacy. Faculty of Pharmaceutical Sciences. Ubonratchathani University. Thailand. February 1-2, 2014.

Ji, G., Anjum, S., S. Sundaram., R. Prakash. 2015. Musa paradisica peel extract as green corrosion inhibitor for mild steel in HCl solution. *Corr. Sci.* 90: 107–117.

Kairi, N.I. and J. Kassim. 2013. The Effect of Temperature on the Corrosion Inhibition of Mild Steel in 1 M HCl Solution by *Curcuma Longa* Extract. *Int. J. Electrochem. Sci.*, 8: 7138 – 7155.

Kanematsu., and D.M. Barry. 2016. Corrosion Control and Surface Finishing: Environmentally Friendly Approaches. Springer. Japan. p. 215.

Karthik, R., P. Muthukrishnan., S.M Chen., B. Jeyaprabha., P. Prakash. 2015. Anti-Corrosion Inhibition of Mild Steel in 1M Hydrochloric Acid solution by using *Tiliacora acuminate* leaves Extract, *Int. J. Electrochem. Sci.* 10: 3707 – 3725.

Kairi, N. I., and J. Kassim. 2013. The Effect of Temperature on the Corrosion Inhibition of Mild Steel in 1 M HCl Solution by *Curcuma Longa* Extract. *Int. J. Electrochem. Sci.*, 8: 7138 - 7155

Khadiri, A., A. Ousslim, K. Bekkouche, A. Aouniti, A. Elidrissi and B. Hammouti. 2014. Phenolic and non-Phenolic Fractions of the Olive Oil Mill Wastewaters as Corrosion Inhibitor for Steel in HCl medium. *Portugaliae Electrochimica Acta.* 32,(1): 35-50.

Kuntic, V., N.P. Pejic, B. Ivkovic., Z. Vujic, K. Ilic., S. Micic., and V. Vukojevic. 2007. Isocratic RP-HPLC method for rutin determination in solid oral dosage forms. *Journ. of Pharm. and Biomedic. Analysis.* 43: 718–721.

Khor, H.T. and H.L. Tan. 1981. The Lipids of Young Cassava (*Manihot esculenta*, Crantz) Leaves. *J. Sci. Food Agric.* 32. 399-402.

Landolt. D. 2007. Corrosion and Surface Chemistry of metals. Lausanne. Switzerland. EPFL Press. pp. 125 – 132.

Leelavathi, S. , R. Rajalakshmi. 2013. *Dodonaea viscosa* (L.) Leaves extract as acid Corrosion inhibitor for mild Steel – A Green approach. *J. Mater. Environ. Sci.* 4(5):. 625-638

Li, L., X. Zhang., J. Lei., H. Jianxin., S. Zhang., and F. Pan. 2012. Adsorption and corrosion inhibition of *Osmanthus fragran* leaves extract on carbon steel, *Corr. Sci.*, 63 : 82–90.

- Li, X., S. Deng., X. Xie., H. Fu. H. 2014. Inhibition effect of bamboo leaves extract on steel and zinc in citric acid solution. *Corr. Sci.* 87: 15–26.
- Li, X., S. Deng, X. Xie., X., H. Fu. 2014. Synergistic inhibition effects of bamboo leaf extract/major components and iodide ion on the corrosion of steel in H₃PO₄ solution. *Corr. Sci.* 78: 29–42.
- Lim, T.K. 2016. Edible Medicinal and Non Medicinal Plants, Modified Stems, Roots, Bulbs. Volume 10. Springer. Dordrecht. p. 27.
- Lough, W.J. and I.W. Wayner. 1995. *Hight Performance Liquid Chromatography, Fundamental and Principles Practise*. 1st Edition. Chapman and Hall. London. pp. 3-20.
- Marcus, P. 2002. Corrosion Mechanisms in Theory and Practice. Second edition. Marcel Dekker, Inc. New York Bassel. pp. 5-11.
- Manimegalai, S., and P. Manjula. 2015. Thermodynamic and Adsorption studies for corrosion Inhibition of Mild steel in Aqueous Media by *Sargassum swartzii* (Brown algae), *J. Mater. Environ. Sci.* 6 (6): 1629-1637.
- Manssouri, M, Y. E Ouadi, M. Znini, J. Costa, A. Bouyanzer, J-M. Desjobert, and L. Majidi. 2015. Adsorption proprieties and inhibition of mild steel corrosion in HCl solution by the essential oil from fruit of Moroccan *Ammodaucus leucotrichus*. *Mater. Environ. Sci.* 6 (3) 631-646.
- Mccafferty, E. 2010. Introduction to Corrosion Science. Springer. Alexandria. USA. pp. 373-375.
- Moretti, G., F. Guidi. And F. Fabris. 2013. Corrosion inhibition of the mild steel in 0.5 M HCl by 2-butyl-hexahydropyrrolo[1,2-b][1,2]oxazole. *Corr. Sci.* 76: 206–218.
- Mourya, P., S. Banerjee, and M.M. Singh. 2014. Corrosion inhibition of mild steel in acidic solution by *Tagetes erecta* (Marigold flower) extract as a green inhibitor. *Corrosion Science.* 85: 352–363
- Ngobiri, N.C and K. Okorosaye-Orubite. 2017. Adsorption and corrosion inhibition characteristics of two medicinal molecules. *Chemistry International.* 3(2): 185-194.
- Nnanna, L., G. Nnanna, J. Nnakaife, N. Ekekwe, P. Eti. 2016. Aqueous Extracts of *Pentaclethra macrophylla Bentham* Roots as Eco-Friendly Corrosion Inhibition for Mild Steel in 0.5 M KOH Medium. *International Journal of Materials and Chemistry*, 6(1): 12-18

- Obi-Egbedi, N.O., and Obot, I.B. 2013. Xanthione: A new and effective corrosion inhibitor for mild steel in sulphuric acid solution. *Arabian J. of Chem.* 6: 211–223.
- Odewunmi, N.A., Umoren, S.A., and Gasem, Z.M.. 2015. Watermelon waste products as green corrosion inhibitors for mild steel in HCl solution. *J.of Environ. Chem. Eng.*, 3: 286–296.
- Oldhan, Keith., Jan, B., Myland, C., and A. Bond, 2012, *Electrochem. Sci. and Tech.* 1st edition, John Willey & Sons. Ltd Publication. New York. pp. 213 – 230.
- Park, H.R., Y. Daun., J.K. Park., and K.M. Bark.,2013. Spectroscopic Properties of Flavonoids in Various Aqueous-Organic Solvent Mixtures, *Bull. Korean Chem. Soc.*, 34: 1-211.
- Patel, R.R. 2008. Corrosion Damage Studies Through Microscopy and Stress Analysis. *Thesis.* Virginia Commonwealth University. Richmond. Virginia. pp. 11-12
- Prabakarana, M., S. Kima, K. Kalaiselvb., V. Hemapriyab., and I.M. Chunga. 2015. Highly efficient *Ligularia fischeri* green extract for the protection against corrosion of mild steel in acidic medium: Electrochemical and spectroscopic investigations. *Journal of the Taiwan Institute of Chemical Engineers.* 1–10.
- Perez, N. 2004. *Electrochemistry and Corrosion Science.* Boston. Kluwe Academic Publishers. Boston.p. 377
- Raja, P.B., A.K. Qureshi., A.A. Rahim., H. Osman., and K. Awang., 2013. Neolamarckia cadamba alkaloids as eco-friendly corrosion inhibitors for mild steel in 1 M HCl media. *Corros. Sci.* 69: 292–301
- Raja, P.B and M.G. Sethuraman. 2008. Natural Products as Corrosion Inhibitor for Metals in Corrosive Media—A review. *Materials Letters.* 62:113-116.
- Rajendran, A. 2011. Isolation, Characterization, Pharmacological and Corrosion inhibition Studies of Flavonoids obtained from Nerium oleander and Tecoma stans. *International Journal of PharmTech Research.* 3(2), 1005-1013.
- Ramaan, N. 2006. *Phytochemical Techniques.* New India Publishing Agency. New Delhi. pp. 1-30.
- Rani, B. E. A., and B. J. Basu. 2012. Green Inhibitors for Corrosion Protection of Metals and Alloys: An Overview. *International Journal of Corrosion* Volume 2012, 1-15.

- Rashidi, M., Sohrabi, B., Golafshan, S., A. Bahramian. 2014. Extraction of Nonionic Natural Surfactants (Saponin) From Ginseng Medical Plant. *The 18th International Electronic Conference on Synthetic Organic Chemistry*. 1-30 November 2014. University of Santiago de Compostela. Spain.
- Ridhwan, A.M, A.A. Rahim., and A.M. Shah. 2012. Synergistic Effect of Halide Ions on the Corrosion Inhibition of Mild Steel in Hydrochloric Acid Using Mangrove Tanin. *Intern. J. of Electrochem Sci.* 7. 8091 - 8107.
- Roberge, P.R. 2007. Corrosion Inspection and Monitoring. John Wiley & Sons, Inc., Publication. p. 3-11.
- Rubatzky E, Vincent, dan Yamaguchi, Mas, 1998, **Sayuran Dunia I**, Edisi Kedua, Institut Teknologi Bandung: Bandung
- Sangeethaa, Y., S. Meenakshia., C.S. Sundaram. 2016. Interactions at the mild steel acid solution interface in the presence of O-fumaryl-chitosan: Electrochemical and surface studies. *Carbohydrate Polymers*. 136: 38–45
- Sastri, V.S. 2011. Adsorption in Corrothion Inhibition, Green Corrosion Inhibitor, Wiston Review. Canada. pp. 103-105
- Sastri, V.S., Ghali, E., Elboujdaini, M. 2007. Corrosion Prevention and Protection, Practical Solution. John Wiley & Sons, Ltd. Canada. pp. 80—81.
- Selvaraj, K., C. Ranjana., C. Bhattacharjee. 2013. Isolation and Structural Elucidation of Flavonoids From Aquatic Fern *Azolla Microphylla* and Evaluation of Free Radical Scavenging Activity. *Int J Pharm Pharm Sci*, 5(3): 743-749
- Silverstein, R.M., W.X. Webster., D.J. Kiemle. 2005. Spectrometric Identification of Organic Compounds. Seven edition. Danvers, John Wiley & Sons. pp 122-124
- Singh, A.K., A. K Singh., E.E. Ebenso., Inhibition Effect of Cefradine on Corrosion of Mild Steel in HCl Solution.2014. *Int. J. Electrochem. Sci.*, 9: 352 – 364.
- Shylesha, B.S., T.V. Venkatesha and B. M. Praveen. 2011. New Electroactive compounds as corrosion inhibitors for zinc in acidic medium. *Advances in Applied Science Research*, 2 (2): 333-341.
- Suresh, R.,M. Saravanakumar., P. Suganyadevi. 2011. Anthocyanins Form India Cassavaa (*Manihot Esculenta Crantz*). *International J. of Pharm Sci. and Research*. 2. p 7.

- Surmea, Y., Gurtenb, A.A., and E. Bayol.2011. Corrosion Behavior of Mild Steel in the Presence of Scale Inhibitor in Sulfuric Acid Solution, *Protection of Metals and Physical Chemistry of Surfaces*. 47(1) 117- 120.
- Tammam, R.H., A.M. Fekry, M.M. and Saleh. 2016. Understanding Different Inhibition Actions of Surfactants for Mild Steel Corrosion in Acid Solution. *Int. J. Electrochem. Sci.*, 11: 1310 – 1326
- Tjitrosoepomo, G. 2005. Taksonomi Tumbuhan (Spermatophyta). Yogyakarta. UGM Press.
- Trethewey,K.R., dan J. Chamberlain. 1991. korosi ed 1 (diterjemahkan oleh Widodo, T.K.). Gramedia Pustaka Utama. Jakarta. pp. 17 – 35.
- Vinod, K.P., Pillai, M.N.N., and Thusnavis, R.G. 2010. Pericarp of the Fruit of *Garcinia Mangostana* as Corrosion Inhibitor for Mild Steel in Hydrochloric Acid Medium, *Portugaliae Electrochim. Acta*. 28: 373– 383.
- Vinutha, M.R., and T.V. Venkatesha. 2016. Review on Mechanistic Action of Inhibitors on Steel Corrosion in Acidic Media. *Portugaliae Electrochim. Acta*. 34(3) : 157-184.
- Xavier, G.T. , Thirumalairaj, B., and M. Jaganathan. 2015. Effect of Piperidin-4-ones on the Corrosion Inhibition of Mild Steel in 1 N H₂SO₄. *International Journal of Corrosion*. (410120). 1-15.
- Yetri, Y., Emriadi, N. Jamarun., M. Gunawarman. 2016. *Inhibitory* Action of *Theobroma cacao* Peels Extract on Corrosion of Mild Steel in Different Media, *Rasayyan. J. Chem*, 9, 4, 716 – 727.
- Yetri, Y., Emriadi, N. Jamarun., and Gunawarman. 2015. Corrosion inhibitor of mild steel by polar extract of *Theobroma cacao* peels in hydrochloric acid solution. *Asian Journal of Chemistry*. 27,(3): 875-880
- Yi, B., L. Hu., W. Mei., K. Zhou., H. Wang., Y. Luo., X. Wei., and H. Dai.2010. Antioxidant Phenol compounds of Cassava (*Manihot esculenta*) from Hainan, *Molecules*. 16 : 10157-10167.
- Zakaria, K., A. Hamdy., M.A. Abbas., O.M. Abo-Elenien., 2016, New organic compounds based on siloxane moiety as corrosion inhibitors for carbon steel in HCl solution: Weight loss, electrochemical and surface studies, *J. of the Taiwan Instof Chem Eng*. 1–14.
- Zulfareen, N., K. Kannan., T. Venugopal., S. Gnanavel., *Synthesis*. 2016. Characterization and corrosion inhibition efficiency of N-(4-(Morpholinomethyl Carbamoyl Phenyl) Furan-2-Carboxamide for brass in HCl Medium. *Arabian J. of Chem*. 121–135.