

DAFTAR PUSTAKA

- Abd-Alla, H.I., Shaaban, M., Shaaban K.A, Abu-Gabal, N.S., Shalaby, N.M. and Laatsch, H. 2009. New bioactive compounds from *Aloe hijazensis*. *Nat. Prod. Res.*, 23:1035–1049.
- Ahamed, B.K.M., Krishna, V., Gowdru, H.B., Rajanaika, H., Kumaraswamy, H.M., Rajshekarappa, S., Dandin, C.J. and Mahadevan, K.M. 2007. Isolation of bactericidal constituents from the stem bark extract of *Grewia tiliaefolia* Vahl, *Res. J. Med. Plant* : 72-82.
- Ahmed, Y., Sohrab, M.H., Al-Reza, S.M., Tareq, F.S., Hasan, C.M. and Sattar, M.A. 2010. Antimicrobial and cytotoxic constituents from leaves of *Sapium baccatum*. *Food Chem. Toxicol.*, 48:549–52.
- Akiyama, H., Fujii, K., Yamasaki, O., Oono, T. and Iwatsuki, K. 2001. Antibacterial action of several tannins against *Staphylococcus aureus*. *J. Antimicrobial Chemotherapy*, 48 : 487–491
- Alam, M.A., Haque, M.E., Shilpi, J.A. and Daulila, K., A. 2006. Antinociceptive effect of the crude ethanolic extract of *Crataeva nurvala* Buch on Mice, *Bangl. J. Vet. Med.*, 4(1) : 65-68.
- Ali, M.S., Dey, A., Sayeed, M.A., Rahman A.A., Kuddus, M.R. and Rasyid, M.A., 2014. In Vivo sedative and cytotoxic activities of methanol extract of leaves of *Crataeva nurvala* Buch-Ham. *Pakistan J. Biological Sci.*, 17(3) : 439 – 442.
- Ammor, S.C., Rachmanb, S., Chaillouc, H., Prevostb, X., Doussetb, M., Zagorecc, E., Dufoura, I. and Chevalliera. 2005. Phenotypic and genotypic identification of lactic acid bacteria isolated from a small-scale facility producing traditional dry sausages. *J Food Microbiol.*, 22: 373–382
- Anand, R., Patnaik, G.K., Kulshresta, D.K. and Dhawan, B.N. 1994. *Proceeding 24th Indian Pharmacol. Soc. Conference*, Ahmadabad Gujarat Indian. A.10.
- Anandjiwala, S., Srinivasa, H. and Rajani, M. 2007. Isolation and TLC densitometric quantification of gallicin, gallic acid, Lupeol and β -sitosterol from *Bergia suffruticosa*, a hitherto unexplored plant. *Chromatographia*, 66 : 725 – 734
- Andrikopoulos, N.K., Kaliora, A.C., Assimopoulou, A.N. and Papapeorgiou, V.P. 2003. Biological activity of some naturally occurring resin, gums, and pigments against in vitro LDL oxidation. *Phytotherapy Res.*, 17: 501-507.

- Anonim, 2011. *Crataeva-nurvala*.<http://www.herbalcureindia.com/herbs/.htm>. akses Ahad, 6 November 2011. jam 18.13 Wib.
- Anonim^a, 2012. Abiyuch (*Crataeva Religiosa*)/Caper (*Capparis Spinosa*).<http://www.vegtalk.org/fruits/abiyuch-crataeva-religiosa-caper-capparis-spinosa-t1684.html>. Akses senin, 7 November 2012, jam 09.00 Wib
- Anonim^b, 2012. Gundruk. <https://localnepalifood.wordpress.com/local-nepali-food/gundruk/>. Akses 03 Januari 2012. Jam 11.33 Wib.
- Asp, N.G., Johansson, C.G., Hallmer, H. and Siljestrom, M. 1983. Rapid enzymatic assay of insoluble and soluble dietary fiber. *J. Agric. and Food. Chem.* 31: 476-482.
- Avila, M., Hidalgo, M., Moreno, C.S., Pelaez, C., Requena, T. and de-Pasquel Teresa, S. 2009. Bioconversion of Anthocyanin glycosides by Bifidobacteria and Lactobacillus, *Food Res. Int.*, 42:1453-1461.
- Axelsson, L. T. 1998. *Lactic Acid Bacteria Classification and Physicly. Dalam: Lactic Acid Bacteria*. Seppo Salminen and Atte Vin Wright (Eds). Marcel Dekker Inc., New York
- Barthelmebs, L., Divies, C.and Cavin, J.F., 2000. Knockout of the p-coumarate decarboxylase gene from Lactobacillus plantarum reveals the existence of two other inducible enzymatic activities involved in phenolic acid metabolism. *Appl. and Environ. Microbiol.*, 66: 3368–3375
- Bashir, H. S., Mohammed, A. M., Magsoud, A. S., and Shaoub, A. M. 2014. Isolation and Identification of Two Flavonoids from *Acacia nilotica* (Leguminosae) Leaves. *J. Forest Prod. & Industries.* 3(5), 211-215
- Baskar, R.and Varalakshmi, P.1996. Effect of lupeol, a pentacyclic triterpene, on urinary enzymes in hyperoxaluric rats. *J. Med. Sci. Biol.*, 48(5-6):211-20.
- Bauer A.W., Kirby, W.M.M., Sherris, J.C.and Turck, M. 1966. Antibiotic susceptibility testing by a standardized single disc method. *Am. J. Clin. Pathol*, 45: 493-496.
- Bhaskar, V. H., Profulla, Kumar M, Balakrishnan, andSangameswaran. 2009. Evaluation of the anti-fertility activity of stem bark of *Crataeva nurvala* buch-hum. *African J. Biotech.*, 8 (22): 6453-6456.
- Bhat, T.K., Bhupinder, S.and Om, P.S. 1998. Microbial degradation of Tannin-A Current perspective. *Biodegradation*, 9 : 343-357.

- Bhattacharjee, A., Shashidhara, S.C. and Aswathanarayana. 2012. Phytochemical and ethno-pharmacological profile of *Crataeva nurvala* Buch-Hum (Varuna): A review. *Asian Pacific J. Tropical Biomed.*, S1162-S1168.
- Bianchi, G., 2003. Lipids and phenols in table olives. *Eur. J. Lipid Sci. Technol.* 105 : 229 - 242.
- Blackman, S.A., Smith, T.J. and Foster, S.J. 1998. The role of autolysins during vegetative growth of *Bacillus subtilis* 168. *Microbiology*. 144:73-82.
- Blandino, A., Al-Aseeri, M.E., Pandiella, S.S., Cantero, D. and Webb, C. 2003. Cereal-based fermented foods and beverages, *Food Res. Int.*, 36(6) : 527-543.
- Bringel, F., Churk, M.C. and Hubert, J.C. 1996. Characterization of *Lactobacilli* by southern-type hybridization with a *Lactobacillus plantarum* pyrDFE probe. *Int. J. Syst. Bacteriol.*, 46 : 588 – 594.
- Buckle, K.A., Edwards, R.A., Fleet, H.H. and Wootton, M. 2010. *Ilmu Pangan*. Terjemahan Hari Purnomo & Adiono, UI Press, Jakarta.
- Buckenhüskes, H.J. 1997. *Fermented vegetables*. In: Doyle, P.D., Beuchat, L.R. and Montville, T.J. (Eds.), *Food Microbiology: Fundamentals and Frontiers*, seconded. ASM Press, Washington, DC, 595-609.
- Cavin, J.F., Barthelmebs, L., Guzzo, J., Van Beeumen, J., Samyn, B., Travers, J.F. and Diviès, C. 1997. Purification and characterization of an inducible p-coumaric acid decarboxylase from *Lactobacillus plantarum*. *FEMS Microbiol. Lett.*, 147 : 291–295.
- Chaaib, F., Queiroz, E.F., Ndjoko Kdiallo, D. and Hostettman, K. 2003. Antifungal and Antioxidant Compounds from the rootbark of *Fagara zanthoxyloides*, *Planta Medica*, 69 : 316-320.
- Chein, H.L., Huang, H.Y. and Chou, C.C. 2006. Transformation of isoflavone phytestrogen during the fermentation of soymilk with lactic acid bacteria and bifidobacteria, *Food Microbiol.*, 23: 772-778.
- Chelule, P.K., Mbongwa, H.P., Carries, S. and Qaleni N.G. 2010. Lactic Acid Fermentation improved the quality of amahewu, a traditional South african maize-based porridge, *Food Chem.*, 122: 656-661.
- Ciafardini, G., Marsilio, V., Lanza, B. and Pozzi, N. 1994., Hydrolysis of oleuropein by *Lactobacillus plantarum* strains associated with olive fermentation. *Appl. and Env. Microbiol.*, 60(11): 4142–4147.

- CLSI (Clinical and Laboratory Standards Institute), 2012. *Methods for dilution antimicrobial susceptibility tests for bacteria that grow aerobically*. approved standard. 9th ed., 32 (2). USA
- Cowan, M.M. 1999. Plant Product as Antimicrobial Agents. *Clinical Microbiol. Rev.*, Oct :564 – 582.
- Crozier, A., Jaganat, I.B. and Clifford, M.N. 2006. Phenols, polyphenols and tannins: An overview. In: Crozier A, Clifford MN, Ashihara H, *Plant secondary metabolites: Occurrence, Structure and Role in the human diet*. Blackwell Publ. Oxford : 1–24
- Cushnie, T.P.T. and Lamb, A.J. 2005. Antimicrobial activity of Flavonoids. Review. *International Journal of Antimicrobial Agents*, 26: 343-356.
- Daisy, P., Suveena, S. and Sr lilly, V. 2011. Molecular Docking of Medicinal compound Lupeol with autolysin and Potential drug target of UTI. *J. Chem. and Pharmaceutical Res.*, 3(3) : 557-562.
- Das, P.K., Rathor, R.K., Lal, R., Tripathi, R.M., Ram, A.M. and Biswas, M. 1974. Antiinflammatory and anti-arthritic activity of *Crataeva nurvala* Buch Ham (Varuna). *J. Res Indian Med.*, 9 : 9-16.
- Daeschel, M.A. 1989. Antibacterial substances from lactic acid bacteria for use as food preservatives. *Food technol.*, 43 : 164-167.
- Deshpanda, P.J., Sahu, M. and Kumar, P. 1982. *Crataeva nurvala* Hook and forst (varuna)- the Ayurvedic drug of Choice in Urinary disorders. *Indian J. Med. Res. Suppl*: 46-53.
- Dewick, P.M. 2002. *Medicinal Natural Products*. A Biosynthetic Approach. John Wiley and Son, Ltd. Chichester.
- Di Cagno, R., Surico, R. F., Siragusa, S., De Angelis, M., Paradiso, A., Minervini, F., De Gara, L. and Gobbetti, M. 2008. Selection and use of autochthonous mixed starter for lactic acid fermentation of carrots, French beans or marrows. *Int. J. Food Microbiol.*, 127: 220-228.
- Di Cagno, R., Coda, R., De Angelis, M. and Gobbetti, M. 2013. Review exploitation of vegetables and fruits through lactic acid fermentation. *Food Microbiol.*, 33: 1-10
- Dixon, R.A., Howles, P.A., Lamb, C., He, X.Z. and Reddy, J.T. 1998. Prospects for the metabolic engineering of bioactive flavonoids and related phenylpropanoid compounds. *Adv. Exp. Med. Biol.*, 439: 55–66.

- Djafaar., T.F., Santoso U., Cahyanto, M.N., Takuya, S., Endang, S.R. and Kosuke, N. 2013. Effect of Indigenous lactic acid bacteria fermentation on enrichment of isoflavon and antioxidant properties of kerandang (*Canavalia virosa*) extract. *Int. Food Res. J.* 20(5) : 2945-2950.
- Dord-ovic´ , T. M., Šiler-Marinkovic´ , S. S.and Dimitrijevic´ -Brankovic´ , S. I. 2010. Effectof fermentation on antioxidant properties of some cereals and pseudo cereals.*Food Chem.*, 119(3) : 957–963.
- Drury, C.H. 1978. In : *The Useful plants of Indian*. International Book Dist.Dehradun. P.353.
- Dwiyitno, 2010. Identifikasi bakteri patogen pada produk perikanan dengan teknik molekuler. *Squalen* 5 (2) :67-77
- Edilu, A., Adane, L. and Woyessa, D. 2015. In vitro antibacterial activities of compoundsisolated from roots of *Caylusea abyssinica*. *Ann. Clin. Microbiol. and Antimicrobials*. 14 (15) : 1 – 8.
- Eizanhamer, D.A. and Xu, Z.Q. 2004. Betulinic acid: a Promising anticancer candidates.I drug, 7: 359-373
- Eloff, N. 1998. Which extractant should be used for the screening and isolation of antimicrobial components from plants?..*J. Ethnopharm.*, 60 : 1–8
- Erazo, S., Rocco, G., Zaldivar, M., Delporte,C., Backhouse, N. and Castro, C. 2008. Active metabolitesfrom *Dunalia Spinosa resinous* exudates. *Z. für Nat. C.*, 63:492–6.
- Flekhter, O.B., Karachurina, L.T., Poroikov, V.V., Nigmatullina, L.P., Baltina, L.A., Zarudii, F.S., Davydova, V.A., Spirikhin, L.V., Baikova, I.P., Galin, F.Z.and Toistikov, G.A. 2000. The synthesis and hepatoprotective activity of ester of the lupane group triterpenoids. *Russian J. Bioorganic Chem.*, 26:192 – 200.
- Freire, M.F.I., Carvalho, Mario, G., Berbara, R.L.L.and Freire, R.B. 2002. Antimicrobial activity of Lupeol acetate from *Vernonia scorpioides* (Laam) Pers., Asteraceae, *Revista Brasileira de Farmacia*, 83: 83-87.
- Gagandep, Meera, S.B. and Kalidhar. 2006. Chemical Constituents of *Crataeva nurvala* (Buch-ham) Leaves. *Indian J. Pharmaceutical Sci.*, 68(6) : 804-806
- Gagandep, Meera, S,B.and Kalidhar. 2009. Chemical Investigationof *Crataeva nurvala* (Buch-ham) Fruits. *Indian J.Pharmaceutical Sci.*, 71(2) : 129-130.

- Gallo, Margaret, B.B.and Sarachine, M.J., 2009. Biological activities of Lupeol. Review. *Int. J. Biomedical and Pharmaceutical Sci.*, (Special Issue 1) : 46-66.
- Ganiswara, G.S, 1995. (ed), *Farmakologi dan Terapi*.Fakultas Kedokteran Bagian Farmakologi Universitas Indonesia. Jakarta.
- Geetha and Varalakshmi, P. 1999. Anticomplement activity of triterpenes from *Crataeva nurvala* stem bark in adjuvant arthritis in rats.*General Pharm.*, 32: 495-497.
- Geetha, T., Varalakshmi, P. and Latha, R.M. 1998. Effect of triterpenes from *Crataeva nurvala* stem bark on lipid peroxidation in adjuvant induced arthritis in rats. *Pharm. Res.*, 37(3) : 191–195.
- Hajnos, M.W., Sherma, J. and Kowalska, T.2008. *Thin layer chromatography in phytochem.*,CRC Press. Boca Raton.
- Hapip, A.D. 2008. *Kamus Banjar Indonesia*. Cetakan ke VI. CV.Rahmat Hafiz Al Mubaraq. Banjarmasin.
- Haraguchi, H, Tanimoto, K., Tamura, Y., Mizutani, K.and Kinoshita T.1998.Mode of antibacterial action of retrochalcones from *Glycyrrhiza inflata*. *Phytochemistry*, 48:125–9.
- Harborne, J.B. 2006. *Metode Fitokimia*. Penuntun Cara Modern Menganalisis Tumbuhan. Cetakan ke-4. ITB. Bandung.
- Hernández-Pérez, M., López-García, R.E., Rabanal, R.M., Darias, V.and Arias, A. 1994. Antimicrobialactivity of *Visnea mocanera* leaf extracts. *J. Ethnopharmacol.*, 41:115–119.
- Heyne,K. 1987. *Tumbuhan Berguna Indonesia*. Terjemahan Badan Litbang Kehutanan. Yayasan Sarana Wana Jaya. Jakarta.
- Hsu, B., Coupur, I.M.and Ng, K. 2006. Antioxidant activity of water extract from the fruit of the Doum palm, *Hyphanea thebaica*, *Food Chem.*, 98 : 317 – 328.
- Hung, C. Y. and Yen, G. C. 2000. Effect of alkaline and heat treatment on antioxidative activity and total phenolic of extract from Hsian-tsao (*Mesona procumbens* Hemsl.) *Food Res. Int.*, 33: 487 – 492.
- Hur, S. J., Lee, S. Y., Kim, Y. C., Choi, I. and Kim, G.B. 2014. Effect of fermentation on the antioxidant activity in plant-based foods. *Food Chemistry*, 160: 346–356

- Iskandar.2004. Pengembangan Pemanfaatan Daun Tigarun Sebagai Produk Makanan Khas Kalimantan Selatan. *Laporan Penelitian Rutin*. Baristand Indag Banjarbaru.
- Inayathulla, Shariff, W.R., Asif A.K.and Mukesh, S.2010. Evaluation of antidiarrhoeal activity of *Crataeva nurvala* root bark in experimental animals.*Int. J. Pharm. and Pharmaceutical Sci.*, 2(1) : 158 – 161.
- Jang, S.M., Yee, S.T., Choi, J., Choi, M.S., Do, G.M.and Jeon, S.M. 2009. Ursolic acid enhances the cellular immune system and pancreatic beta-cell function in streptozotocin-induced diabetic mice fed a high-fat diet. *Int. Immunopharmacol.*, 9:113–119.
- Jayapal, M.R. and Sreedhar, N.Y. 2010. Anhydrous K₂CO₃ as Catalyst for the synthesis of Chalcones under Microwave Irradiation. *J.Pharmaceutical Sci.and Res.*, 2 (10): 644-647.
- Jenie, B. S. L. dan S. Fardiaz. 1989. *Uji Sanitasi dalam Industri Pangan*. PAU Pangan dan Gizi. Institut Pertanian Bogor, Bogor.
- Jeon, K.S., Ji, G.E. and Hwang, I.K. 2002. Assay of β -glucosidase activity of Bifidobacteria and hydrolysis of isoflavone glycoside Bifidobacterium sp int-57 in soymilk fermentation. *J. Microbiol. and Biotech.*, 12:8-13.
- Johnston, M.D., Hanlon, G.W., Denyer, S.P.and Lambert, R.J.W. 2003. Membrane damage to bacteria caused by single and combined biocides. *J. Appl. Microbiol.*, 94: 1015–1023.
- Joyeux, M., Lobstein, M., Anton, R. and Mortier, F. 1995. Comparative antilipoperoxidant, antinecrotic and scavenging properties of terpenes and biflavones from ginkgo and some flavonoid. *Planta Medica.*, 61: 126 – 129.
- Kamath, R., Shetty, D., Bhat, P., Shabaraya, A.R. and Hegde, K. 2011. Evaluation of antibacterial and anthelmintic activity of root Extract of *Crataeva nurvala*. *Pharmacologyonline* 1: 617-622.
- Kapil, A. and Moza, A. 1992. Anticomplementary activity of boswellic acids : an inhibition of C3-convertase of the classical complement pathway. *Int. J. Immunopharmac.*, 14: 1139 – 1143.
- Kabouche, A., Boutaghane, N., Kabouche, Z., Seguin, E., Tillequin, F. and Benlabed, K. 2005. Components and antibacterial activity of the roots of *Salvia jaminiana*. *Fitoterapia*, 76 : 450–452

- Katina, K., Laitila, A., Juvonen, R., Liukkonen, K. H., Kariluoto, S. and Piironen, V. 2007. Bran fermentation as a means to enhance technological properties and bioactivity of rye. *Food Microbiol.*, 24(2) : 175–186.
- Khatun, F., Alam, M.M.E., Tithi, N.S., Nasrin, N. and Asaduzzaman, M. 2015. Evaluation of phytochemical, antioxidant, anthelmintic and antimicrobial properties of *Crataeva nurvala* Buch. Ham. leaves. *Int. J. Pharmaceutical Sci. and Res.*, 6(4): 1422-1429.
- Khattar, V. and Wal, A. 2012. Utilities of *Crataeva nurvala*. *Int.J. Pharmacy and Pharmaceutical Sci.*, 4 (4) :21-26.
- Kim, T. J., Silva, J. L., Kim, M. K. and Jung, Y. S. 2010. Enhanced antioxidant capacity and antimicrobial activity of tannic acid by thermal processing. *Food Chem.*, 118: 740–746
- Kiruba, S., Mahesh, M., Paul, Z.M. and Jeeva, S. 2011. Preliminary phytochemical screening of the pericarp of *Crataeva magna* (Lour.) DC.-a medicinal tree. *Asian Pacific J. Tropical Biomed.*, S129-S130.
- Kumari, A. and Kakkar, P. 2008. Screening of Antioxidant Potential of Selected Bark of Indian Medicinal Plants by Multiple in Vitro Assay. *Biomed. and environm. Sci.*, 21: 24-29.
- Li, W.H. and Graur, D. 1991. *Fundamentals of Molecular Evolution*. Sinauer Associates, Sunderland, Massachusetts.
- Liby, K.T., Yore, M.M. and Sporn, M.B. 2007. Triterpenoids and rexinoids as multifunctional agents for the prevention and treatment of cancer. *Nat. Rev. Cancer*, 7:357–69.
- Lorian, V. 1980. *Antibiotics in Laboratory Medicine*. The Williams and Wilkins company. Baltimore.
- Lutta, K.P., Bii, C., Akenga, A.T. and Cornelius, W.W. 2008. Antimicrobial marine natural product from the sponge *Axinella infundibulliformis*. *Rec.Nat.Prod.*, 2: 116-127.
- Maisuthisakul, P., Suttajit, M. and Pongsawatmanit, R. 2007. Assessment of Phenolic content and free radical scavenging capacity of some Thai indigenous plants. *Food Chem.*, 100 : 1409-1418.
- Marazza, J. A., Garro, M. S. and Savoy de Giori, G. 2009. Aglycone production by *Lactobacillus rhamnosus* CRL981 during soymilk fermentation. *Food Microbiol.*, 26(3), 333–339.

- Martelanc, M., Vovk, I. and Simonovska, B. 2009. Separation and Identification of some common isomeric plant triterpenoids by thin layer chromatography and high performance liquid chromatography. *J. Chromatography A*, 1216: 6662-6670.
- Marxen, K., Vanselow, K.H., Lippemeier, S. and Hansen, U.P. 2007. Determination of DPPH Radical Oxidation Caused by Metanolic Extract of Some Microalgal Species by Linear Regression Analysis of Spectrophotometric Measurement. *Sensors*, 7 : 2080-2095.
- Mathabe, M.C., Hussein, A.A., Nikolova, R.V., Basson, A.E., Meyer, J.J.M. and Lali, N. 2008. Antibacterial Activities and Cytotoxicity of Terpenoid Isolated from *Sphirotachys africana*. *J. Ethnopharm.*, 116: 194-197
- Matsuda, S., Norimoto, F., Matsumoto, Y., Ohba, R., Teramoto, Y. and Ohta, N. 1994. Solubilization of novel isoflavon glycoside-hydrolyzing β -glucosidase from *Lactobacillus casei* subsp *rhamnosus*. *J. Ferm. and Bioeng.*, 77(4): 439-441.
- Matsuo, Y., Tanaka, T. and Kouno, I. 2006. A new mechanism for oxidation of epigallocatechin and production of benzotropolone pigments. *Tetrahedron*, 62 : 4774-4783.
- Mazid, M., Khan, T.A. and Mohammad, F. 2011. Role of Secondary Metabolites in Defense Mechanisms of Plants. Review. *Biology and Medicines*, 3(2) special issue : 232-249.
- Messens, W. and Vuyst, L. D. 2002. Inhibitory substances produced by *Lactobacilli* isolated from sourdoughs—a review. *Int. J. Food Microbiol.*, 72(1-2): 32-43.
- Ministry of Health and Family Welfare Government of India. 2012. Manual of Methods of Analysis of Food. *Microbiological Testing*. Food Safety Standards and Authority of India. New Delhi.
- Ming, L.S., Yao, K., Jia, D.Y. and Qiang, H.E. 2006. Microbial Degradation of Hydrolysable Tannin. *Chem. and Industry of Forest Prod.*, 26(2): 105-111.
- Mirzoeva, O.K., Grishanin, R.N. and Calder, P.C. 1997. Antimicrobial action of Propolis and some of its components – the effect on growth, membrane potential and motility of bacteria. *Microbiol. Res.*, 152: 239-246.
- Miyashita, M., Yukphan, P., Chaipitakchonlatarn, W., Malimas, T., Sugimoto, M., Yoshino, M., Potacharoen, W., Tanasupawat, S., Nakagawa, Y., Kirtikara, K., Tanticharoen, M. and Suzuki, K. 2012. 16S rRNA gene sequence analysis of lactic acid bacteria isolated from fermented food in Thailand. *Microbiol. Cult. Coll.*, 28(1) : 1 – 9.

- Miyazaki, K., Arai, S., Iwamoto, T., Takasaki, M. and Tomoda, A. 2004. Metabolism of pyrogallol to purpurogallin by human erythrocytic hemoglobin. *The Tohoku J. Exp. Med.*, 203 : 319–330.
- Moniruzzaman, M. and Imam, M.Z. 2014. Evaluation of antinociceptive effect of methanolic extract of leaves of *Crataeva nurvala* Buch.-Ham. *BMC Compl. and Alternative Med.*, 14:354
- Mutschler, E. 1991. *Dinamika Obat*. Edisi 4. Terjemahan Widiyanto, MB dan Setiadi, A.R. Penerbit ITB. Bandung.
- Nazarni, R. 2006. Teknologi Proses Fermentasi Dan Pengemasan Pada Pengolahan Bunga Tigarun. *Laporan Riset DIPA*. Departemen Perindustrian. Baristand Banjarbaru.
- Nishitani, Y. and Osawa, R. 2003. A novel colorimetric method to quantify tannase activity of viable bacteria. *J. Microbiol. Methods*, 54 : 281–284.
- Nyanga, L.K., Nout, M.J.R., Gadaga, T.H., Theelen, B., Boekhout, T. and Zwietering, M.H. 2007. Yeasts and lactic acid bacteria microbiota from masau (*Ziziphus mauritiana*) fruits and their fermented fruit pulp in Zimbabwe. *Int. J. Food Microbiol.*, 120: 159-166.
- Ohemeng, K.A., Schwender, C.F., Fu, K.P. and Barret, J.F. 1993. DNA gyrase inhibitory and antibacterial activity of some flavones (1) *Bioorg. Med. Chem. Lett.*, 3:225-30.
- Ordóñez, A. A. L., Gómez, J. D., Vattuone, M.A. and Isla, M. I. 2006. Antioxidant activities of *Sechium edule* (Jacq.) Swartz extracts. *Food Chem.*, 97: 452-458.
- Osawa, R. and T. P. Walsh. 1993. Visual reading method for detection of bacterial tannase. *Appl. Environ. Microbiol.* 59:1251–1252.
- Osawa, R. and T. P. Walsh. 1995. Detection of bacterial gallate decarboxylation by visual color discrimination. *J. Gen. Appl. Microbiol.* 41:165–170.
- Osawa, R.O., Kuroiso, K., Goto, S. and Shimizu. 2000. Isolation of Tannin Degrading Lactobacilli from Humans and Fermented Foods. *Appl. and Env. Microbiol.*, 3093-3097.
- Otieno, D.O., Ashton, J.F. and Shah, N.P. 2005. Stability of β -glucosidase activity produced by *Bifidobacterium* and *Lactobacillus* spp in fermented soy milk during processing and storage. *J. Food sci.*, 70(4):236-241.

- Ovesná, Z., Vachálková, A., Horváthová, K. and Tóthová, D. 2004. Pentacyclic triterpenoic acids: new chemoprotective compounds. *Neoplasma*, 51:327–330.
- Paadashetty, S.A. and Mishra, S.H. 2007. An HPLC method for the Evaluation of two medicinal plants commercially available in the Indian Market under the common trade name Brahmadandi. *Chromatographia*, 66: 447-449.
- Paarakh, P. M., Chanda, S., Deepak, M. and Agarwal, A. 2011. Phytochemical studies on stem bark of *Crataeva nurvala* Ham. *J. Pharm. Res.*, 4(2): 401-402.
- Parves, S., Malik, K.A., Kang Sah. and Hy Kim. 2006. Probiotic and their fermented food products are beneficial for health. *J. Appl. Microbiol.*, 100: 1171-1185.
- Parvin, S., Kadeer, M.A., Rahman, M.A., Wahed, M.I. and Haque. 2012. Antibacterial Activities and Brine Shrimp Lethality Bioassay Of The Chloroform Extract Of Stem Bark Of *Crataeva Nurvala* Buch Ham. *Int. J. Pharm. Sci. and Res.*, 3(3): 830-834.
- Parvin, S., Kader, M.A., Muhiit, M.A., Haque, M.E., Mosaddik, M.A. and Wahed, M.I. 2011. Triterpenoids and phytosteroids from stem bark of *Crataeva nurvala* buch ham. *J. Appl. Pharmaceutical Sci.*, 01 (09) :2011: 47-50
- Patil, C.B., Mahajan, S.K. and Katti, S.A. 2009. Chalcone: A Versatile Molecule. *J. Pharm. Sci. and Res.*, 1(3): 11-12.
- Pearson, W.R. 2013. An Introduction to Sequence Similarity (“Homology”) Searching. *Curr. Protoc. Bioinformatics*. 3: 1-9
- Pelczar, M. and Chan, E.C.S. 2007. *Dasar – Dasar Mikrobiologi*, Jakarta : UI Press.
- Perez, C., Pauli, M. and Bazerque, P. 1990. An antibiotic assay by the agar well diffusion method. *Act. Biol. Med. Exp.*, 15: 113 – 115.
- Phillips, D.R., Rasbery, J.M., Bartel, B. and Matsuda, S.P. 2006. Biosynthetic diversity in plant triterpenecyclization. *Curr. Opin. Plant Biol.*, 9:305–14.
- Plaper, A., Golob, M., Hafner, I., Oblak, M., Solmajer, T. and Jerala, R. 2003. Characterization of quercetin binding site on DNA gyrase. *Biochem. Biophys. Res. Commun.*, 306:530–6
- Prasad, Y.R., Kumar, P.R., Deepti, C.A. and Ramana, M.V. 2006. Synthesis and Antimicrobial Activity of Some Novel Chalcones of 2-Hydroxy-1 Acetonaphthone and 3-Acetyl Coumarin. *E-Journal of Chem*, 3(13): 236-241.

- Priyanto, 2010. *Farmakologi Dasar Untuk Mahasiswa Farmasi dan Keperawatan*. Leskonfi. Depok.
- Pyo, Y.H.and Lee, Y.C. 2005. Enrichment of Bioactives Isoflavones in Soymilk Fermentation with β -glukosidase-producing-lactic acid bacteria. *Food Res. Int.*, 38:551-559.
- Rahayu, E.S., Yogeswara, A. Mariyatun, Hartono, P., Utami I.S., Utami, T.,Nurfiani, S. dan Cahyanto, M.N. 2013. Bakteri asam laktat indigenous berpotensi probiotik dan aplikasinya untuk produksi susu fermentasi. *Laporan Ristek*.
- Rangana. 1977. *Manual of analysis of fruit and vegetable products*.Tata Mc Graw-Hill Publishing Company, Ltd. New Delhi
- Rodriguez, H., Curiel, J. A., Landete, J. M., de las Rivas, B., de Felipe, F. L.and Gomez-Cordoves, C. 2009. Food phenolics and lactic acid bacteria. *Int. J. Food Microbiol.*, 132(2–3), 79–90.
- Rohman, A., Riyanto, F., Yuniarti, N., Saputra, W.R., Utami, R. and Mutasih, W. 2010. Antioxidant activity, total phenolic, and total flavonoid of extract and fraction of red fruit (*Pandanus conoideus* Lam). *Int. Food Res. J.*, 17 : 97-106.
- Rosini, G., Federici, F.and Martini, A. 1982. Yeast flora of grape berries duringripening.*Microbial. Ecology*, 8: 83-89.
- Roy, J. J. and Abraham, T. E. 2006. Continuous biotransformation of pyrogallol topurpurogallin of pyrogallol to purpurogallin using cross-linked enzyme crystals of laccase as catalyst in a packed-bed reactor. *J. Chem. Tech. and Biotech.*, 81: 1836–1839.
- Ruíz-Barba, J.L., Cathcart, D.P., Warner, P.J.and Jiménez-Díaz. 1994. Use of *Lactobacillus plantarum* LPCO10, a bacteriocin producer, as a starter culture in Spanish-style greenolive fermentations. *Appl. and Env. Microbiol.*, 60: 2059–2064.
- Sakagami, Y., Mimura, M.and Kajimura, K. 1998. Anti-MRSA activity of sophoraflavanone G and synergism with other antibacterial agents.*Lett. Appl. Microbiol.*,27:98–100
- Saleem, M. 2009. Lupeol, a novel anti-inflammatory and anti cancer dietary triterpene. *Cancer Letter*, 285: 109-115.

- Sambrook, J., Fritsch, E.F. and Maniatis, T. 1989. *Molecular cloning : a laboratory manual*. 2nd ed. Cold Spring Harbor Laboratory press. New York.
- Sanchez, P.C. 2009. *Philippine Fermented Food: Principles and Technology*. University of Hawaii Press. Hawaii. 219-220
- Sato, M., Tsuchiya, H., Takase, I., Kureshiro, H., Tanigaki, S. and Iinuma, M. 1995. Antibacterial activity of flavanone isolated from *Sophora exigua* against methicillin-resistant *Staphylococcus aureus* and its combination with antibiotics. *Phytother. Res.*, 9:509-12.
- Sell, S. 1980. Arthus (toxic complex) reaction. In: Sell, S. (Ed), *Immunology, Immunopathology and Immunity*, 3rd ed. Harper & Row, Hagerstown : 242-283.
- Shai, L.J., McGaw, L.J., Aderogba, M.A., Mdee, L.K. and Eloff, J.N. 2008. Four pentacyclic triterpenoids with antifungal and antibacterial activity from *Curtisia dentata* (Burm.f) C.A. Sm. leaves. *J. Ethnopharm.*, 119: 238-244.
- Shailadjan, S. and Menon, S.N. 2009. Simultaneous quantification of Lupeol and β -sitosterol from the whole plant powder of *Aserachanta longifolia* Nees. *Analyt. Chem.*, 8: 77-81.
- Shirwaikar, A., Setty, M. and Bommu, P. 2004. Effect of Lupeol isolated from *Crataeva nurvala* Buch Ham stem Bark extract against free radical induced nephrotoxicity in Rats. *Indian J. Exp. Biol.*, 42 : 686-690.
- Siahaan, R.O.I. 2010. Isolasi *Salmonella* spp. pada sayuran segar di wilayah Bogor dan evaluasi pengaruh perlakuan pencucian dengan sanitaisir komersial. *Skripsi*. Fakultas Teknologi Pertanian. IPB. Bogor.
- Silva, L.L.D., Nascimento, M.S., Cavaleiro, A.J., Silva, D.H.S., Castro Gamboa, I., Furlan, M. and Bolzani, V.S. 2008. Antibacterial Activity of Labdane Diterpenoids from *Stemodia foliosa*. *J. Nat. Prod.*, 71: 1291-1293.
- Singh, A.P.K. and Singh. 2009. An Ethnobotanical study of Medicinal plants in Chandauli District of Uttar Pradesh, India. *J. Ethnopharm.*, 121:324-329.
- Sirait, M. 2007. *Penuntun Fitokimia Dalam Farmasi*. Penerbit ITB. Bandung.
- Sikarwar, M.S. and Patil, M.B. 2015. Anti-hyperlipidemic activity of *Crataeva nurvala* Buch-Hum ethanolic extract fractions. *Int. Med. J. Sifa Univ.* 2 (2) : 31 - 36
- Spurr, H.W. 1994. The microbial ecology of fruit and vegetable surfaces, its relationship to postharvest biocontrol. In: Wilson, C., Wisniewski, M.

(Eds.), *Biological Control of Postharvest Diseases: Theory and Practice*. CRC Press, Boca Raton FL : 11-23.

Sreeramulu, D. and Raghunath, M. 2010. Antioxidant activity and phenolic content of roots, tubers and vegetables commonly consumed in India. *Food Res. Int.*, 43 : 1017 – 1020.

Stamer, J.R. 1979. The lactic acid bacteria : microbes of diversity. *Food Tech.*, 1:60-65

Steinkraus-Keith, H. 1996. *Handbook of Indigenous Fermented Foods*. CRC Press Marcel Dekker Inc.

Stiles, M.E. and Holzapfel, W.H. 1997. Lactic acid bacteria of food and their current taxonomy. *Int. J. Food Microbiol.*, 36(1): 1-29.

Sudalayandi, K and Manja, K.S. 2012. Repressive efficacy of lactic acid bacteria against the human pathogenic and fish-borne spoilage microbiota of fresh Indian mackerel fish chunks. *African J. Biotech.*, 11(90), 15695-15701.

Sultana, B., Anwar, F. and Ashraf, M. 2009. Effect of Extraction Solvent/ Technique on the Antioxidant Activity of Selected Medicinal Plant Extracts. *Molecules*. 14 : 2167-2180.

Suksamrarn, S., Panseeta, P., Kunchanawatta, S., Distaporn, T., Ruktasing, S. and Suksamrarn, A. 2006. Ceanothan-and Lupane-Type Triterpenes with Antiplasmodial and Antimycobacterial Activities from *Ziziphus cambodiana*. *Chem. and pharmaceutic. Bull.*, 54: 535-537.

Swofford, D., Olsen, G., Waddell, P. and Hillis, D.M. 1996. Phylogenetic interference. In Hillis Moritz and Mable (eds). *Molecular sytematic*. 2nd ed. Sinauer, Sunderland, MA. 407-511

Tamang, J.P., Sarkar, P.K. and Hesseltine, C.W. 1988. Traditional Fermented Foods And Beverages of Darjeeling and Sikkim—a review. *J. Sci. Food and Agricult.*, 44: 375–385.

Tamang, J.P., Tamang B., Schillinger, U., Guigas, C. and Holzapfel, W.H. 2009. Functional properties of lactic acid bacteria isolated from ethnic fermented vegetables of the Himalayas. *Int. J. Food Microbiol.*, 135 :28–33

Tamang, J.P., Tamang, B., Schillinger, U., Franz, C.M.A.P., Gores, M. and Holzapfel, W.H. 2005. Identification of predominant lactic acid bacteria isolated from traditional fermented vegetable products of the Eastern Himalayas. *Int. J. Food Microbiol.*, 105: 347–356

- Tanaka, T., Ikeda, T., Kaku, M., Zhu, X.H., Okawa, M., and Yokomizo, K. 2004. A new lignan glycoside and phenylethanoid glycosides from *Strobilanthes cusia* BREMEK. *Chem. Pharm. Bull. Tokyo*, 52:1242–5.
- Tang, A.L., Shah, N.P., Wilcox, G., Walker, K.Z. and Stojanovska, L. 2007. Fermentation of calcium-fortified soymilk with *Lactobacillus*: effects on calcium solubility, isoflavone conversion, and production of organic acids. *J Food Sci.*, 72(9):M431-6.
- Tanwar, A., Bafna, P.A., and Bafna, A.R., 2014. Anti-amnesic effect of aqueous extract of *Crataeva nurvala* stem bark in scopolamine induced amnesia. *J. Appl. Pharmaceutical Sci.*, 4 (09) : 066-072.
- Tauber, H. 1953. Oxidation of pyrogallol to purpurogallin by crystalline catalase. *The J. Biologic. Chem.*, 205: 395–400.
- Teffo, L.S., Aderogba, M.A., and Eloff, L.S. 2009. Antibacterial and antioxidant activities of four kaempferol methyl ethers isolated from *Dodonaea viscosa* Jacq. var. *angustifolia* leaf extracts. *South African J. Botany* xx, xxx–xxx
- Tereschuk, M. L., Quarenghi de Riera, M, Castro, G. R. and Abdala, L. R. .1997. Antimicrobial Activity of Flavonoids From Leaves of *Tagetes minuta*. *J. Ethnopharmacol.*, 56: 227–232.
- Thompson, J.D., Gibson, T.J., Plewniak, F., Jeanmougin, F. and Higgins, D.G. 1997. The clustal X window interface strategies for multiple sequence alignment aided by quality analysis tools. *Nucleic acids. Res.*, 25 : 4876 – 4882.
- Tsuchiya H., Sato, M. and Inuma, M. 1994. Inhibition of The Growth of Cariogenic Bacteria In Vitro By Plant Flavanones. *Experientia*, 50:846–9.
- Tsuchiya, H. and Inuma, M. 2000. Reduction of Membrane Fluidity By Antibacterial Sophoraflavanone G isolated From *Sophora exigua*. *Phytomedicine*, 7:161–5.
- Tyrakowska, B., Leman´ska, K., Szymusiak, H., Borkowski, T. and Rietjens, I. M. C. M. 2003. Modified TEAC test for determination of the antioxidant properties of dietary polyphenolic compounds over a wide pH range. *Polish J. Food and Nutrition Sci.*, 12(Suppl. 2): 141–148.
- Ulyatu Fitrotin. 2016. Aktivitas Antioksidan dan Perubahan Lignan Sesaminol Triglukosida susu Wijen (*Sesamun indicum*) yang di fermentasi menggunakan *Lactobacillus plantarum* Dad 13. Disertasi. FTP UGM. Yogyakarta.

- Van de-Lagemaat, J. and Pyle, D.L. 2005. Modelling the uptake and growth kinetics of *Penicillium glabrum* in a tannic acid-containing solid-state fermentation for tannase production. *Process Biochem.*, 40(5) :1773-1782.
- Vattem, D. A. and Shetty, K. 2003. Ellagic acid production and phenolic antioxidant activity in cranberry pomace (*Vaccinium macrocarpon*) mediated by *Lentinusedodes* using a solid-state system. *Process Biochem.*, 39(3): 367–379.
- Vega Leal-Sánchez, M., Ruiz-Barba, J.L., Sánchez, A.H., Rejano, L., Jimenez-Diaz, R. and Garrido, A. 2003. Fermentation profile and optimization of green olive fermentation using *Lactobacillus plantarum* LPCO10 as a starter culture. *Food Microbiol.*, 20 : 421-430.
- Venugopalan, V., Dinesh, M.S. and Geetha, K.S., 2010. Enhancement of Antimicrobial Potential of *Phyllanthus niruri* by Fermentation. *J. Herbal med. and Toxicol.*, 4(2) : 167-175.
- Voigt, R. 1995. *Buku Pelajaran Teknologi Farmasi*. Gajah Mada University Press, Yogyakarta
- Wagner, H. dan Bladt, S., 2009. *Plant drug analysis*. A thin layer chromatography atlas. 2nd ed. Springer. Heidelberg.
- Ward, N.L., Rainey, F.A., Hedlund, B.P., Staley, J.T., Ludwig, W. and Stackebrandt. 2000. Comparative phylogenetic analyses of members of the order *Planctomycetes* and the division *Verrucomicrobia* : 23S rRNA gene sequence analysis support the 16S rRNA gene sequence-derived phylogeny. *Int. J. Systematic and Evolution Microbiol.*, 50 : 1965 – 1972.
- Widyatamma. 2011. *Kamus Saku Kedokteran*. Cetakan kedua. Widyatamma. Jakarta
- Wei, Q., Chen, T. and Chen, J. 2007. Using of *Lactobacillus* and *Bifidobacterium* to product the isoflavone aglycones in fermented soymilk. *Intl. J. Food Microbiol.* 117:120–124.
- Wood, B.J.B., 1998. *Microbiology of fermented food*. Vol.2. Springer. New York.
- Woldeyes, S., Adane, L., Tariku, Y., Muleta, D. and Begashaw, T. 2012. Evaluation of antibacterial activities of compounds isolated from *Sida rhombifolia* Linn. (*Malvaceae*). *Nat. Prod. Chem. Res.*, 1 (1) : 1-8.
- Yuenyongsawad, S., Bunluepuech, K., Wattanapiromsakul, C. and Tewtrakul, S. 2013. Anti-cancer activity of compounds from *Bauhinia strychnifolia* stem. *J. Ethnopharmacology*. 150 : 765–769

Ziegler, H.L., Staals, T.and Jaroszewski, J.W. 2006. Loading of Erythrocyte membrane with pentacyclic triterpene inhibits *Plasmodium falcifarum* invasion. *Planta Medica*, 72 : 640-642.