



DAFTAR PUSTAKA

- Ajandouz, E. H., Tchiakpe, L. S., Ore, F. D., Benajiba, A., & Puigserver, A. 2001. *Effects of pH on caramelization and Maillard reaction kinetics in fructose-lysine model systems*. Journal of Food Science, 66, 926–931.
- Ames, J.M., R.C.E. Guy and G.J. Kipping. 2001. *Effect of pH, temperature and moisture on the formation of volatile compounds in glycine/glucose model systems*. J. Agric. Food Chem., 49(9): 4315-4323.
- Apriyantono, A., A. Aristyani., Nurhayati., Y. Lidya., S. Budiyanto & S.T.Soekarto. 2002. *Rate of browning reaction during preparation of coconut and palm sugar*. International Congress Series 1245 (2002) 275–278.
- Apriyantono, A dan J. M. Ames. 1993. *Xylose-lysine model systems: The effect of pH on the volatile reaction products*. Journal of Science and Food Agricultural., 61: 477-484.
- Asano J, Chiba K, Tada M, Yoshii T. 1996. *Cytotoxic xanthones from Garcinia hanburyi*. Phytochemistry 41:815-820.
- Asikin, Y., A. Kamiya., M. Mizu., K. Takara., H. Tamaki dan K. Wada. 2013. *Changes in the physicochemical characteristics, including flavour components and Maillard reaction products, of non-centrifugal cane brown sugar during storage*. Food Chemistry 149 (2014) 170-177.
- Asikin, Y., M. Takahashi., T. Mishima., M. Mizu., K. Takara dan K. Wada. 2013. *Antioxidant activity of sugarcane molasses against 2,2'-azobis(2-amidinopropane) dihydrochloride-induced peroxyl radicals*. Journal Of Food Chemistry 141 (2013) 466–472.
- Ba, H. V., I. Hwang, D. Jeong dan A. Touseef. 2012. *Principle of Meat Aroma Flavors and Future Prospect*. In Tech, Open Access Article. <http://dx.doi.org/10.5772/51110>. Diakses pada tanggal 20 Maret 2016.
- Badan Pengawas Obat dan Makanan Republik Indonesia. 2013. *Peraturan Kepala Badan Pengawas Obat dan Makanan Tentang Batas Maksimum Penggunaan Bahan Tambahan Pangan Pengawet (On-Line)*. Diakses pada Maret 2015.
- Berg, H. E., & Van Boekel, M. A. J. S. 1994. *Degradation of lactose during heating of milk. I. Reaction pathways*. Netherlands Milk Dairy Journal, 48, 157–175.
- Bradley, R. L. Jr. 2010. Food Analysis 4th Edition: Chapter 6, *Moisture and Total Solids Analysis*. Springer, USA.



Buckle, K. A., Edwards, R.A., Fleet, G.H., and Wootton, M. 1985. *Ilmu Pangan*. Terjemahan oleh Adi Purnomo. UI Press. Jakarta.

Caderby, E., S. Baumberger., W. Hoareau., C. Fargues., M. Decloux dan M. N. Maillard. 2013. *Sugar Cane Stillage: A Potential Source of Natural Antioxidants*. Journal Of Agricultural and Food Chemistry. 2013, 16, 11494-11501.

Cammerer, B., V. Jalyschkov and L.W. Kroh. 2002. *Carbohydrate structure as part of the melanoidin skeleton*. International Congress Series, 1245: 269-273.

Chuyen, N. V. 2006. *Toxicity of the AGEs generated from the Maillard reaction: On the relationship of food-AGEs and biological-AGEs*. Molecular Nutrition and Food Research, 50, 1140–1149.

Creighton, T.E. 1984. *Chemical of Polypeptides*. In: *Proteins Structures and Molecular Principles*. Freeman, New York.

Crozier, A., Jaganath, I. B., & Clifford, M. N. 2009. *Dietary phenolics: Chemistry, bioavailability and effects on health*. Natural Products Reports, 26, 1001–10043.

De Bruin, J. M., 1986. *Monosaccharides in alkaline medium: Isomerisation, degradation, oligomerisation*. Ph.D. Dissertation. Delft, The Netherlands: University of Technology.

Deman, J.M. 1997. *Kimia Makanan*. Edisi Kedua. Institut Teknologi Bandung, Bandung. 550 hal.

Deman, J.M. 1999. *Proteins*. In: *Principles of Food Chemsitry*. 3rd Edn. An A VI Book, New York.

Dorly., S. Tjitrosemito., R. Poerwanto dan Juliarni. 2008. *Secretory Duct Structure and Phytochemistry Compounds of Yellow Latex in Mangosteen Fruit*. Hayati Journal Of Bioscience, September 2008, p 99-104 Vol.15, No.3

Efendi, M. Supli. 2009. *Teknologi Pengolahan dan Pengawetan Pangan*. Alfabeta, Bandung.

Eskin, N. A. M. 1990. *Biochemistry of Foods*. Academic Press. New York.

Fitri, Y. F. 2008. *Pengaruh Penambahan Susu Kapur (CaOH)2 Dan Gas SO2 Terhadap pH Nira Mentah Dalam Pemurnian Nira di Pabrik Gula Kwala Madu PT. PN. II Langkat*. Karya Ilmiah. Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Sumatera Utara. 38 hal.



- Gómez-Ruiz, J., Ames, J., & Leake, D. 2008. *Antioxidant activity and protective effects of green and dark coffee components against human low density lipoprotein oxidation*. European Food Research and Technology, 227, 1017–1024.
- Gordon, M.H. 1990. *The Mechanism of Antioxidants Action In Vitro*. *Didalam: B.J.F. Hudson, editor. Food Antioxidants*. Elsivier Applied Science. London.
- Gu, F. L., J. M. Kim., S. Abbas., X. M. Zhang., S. Q. Xia dan Z. X. Chen. 2010. *Structure and antioxidant activity of high molecular weight Maillard reaction products from casein–glucose*. Journal Of Food Chemistry 120 (2010) 505-51.
- Gu, F. L., Kim, J. M., Hayat, K., Xia, S. Q., Feng, B. A., & Zhang, X. M. (2009). *Characteristics and antioxidant activity of ultrafiltrated Maillard reaction products from a casein-glucose model system*. Food Chemistry, 117(1), 48–54.
- Hamzah, N. dan Hasbullah. 1997. *Evaluasi Mutu Gula Semut yang Dibuat dengan menggunakan Beberapa Bahan Laru Alami*. Prosiding Seminar Teknologi Pangan(On-Line). Fakultas Pertanian, Universitas Andalas, Padang. Diakses pada tanggal 23 Desember 2015.
- Hayati, P. M. 2011. *Xanthone Si Super Antioksidan Kulit Manggis* (On-Line). Diakses pada tanggal 25 November 2015.
- Ho, C.T., G. Lu dan T. H. Yu. 1997. *Generation of flavor compound by the reaction of 2-deoxyglucose with selected amino acid*. Journal Of Agricultural and Food Chemsity., 45: 233-236.
- Ho, C.T., H. I. Hwang dan T. G. Hartman, 1995. *Relative reactivities of amino acid in pyrazine formation*. Journal Of Agricultural and Food Chemistry., 43: 179-184.
- Ho, C. W., W.M. Wan Aida., M. Y. Maskat & H. Osman. 2008. *Effect of Thermal Processing of Palm Sap on the Physico-Chemical Composition of Traditional Palm Sugar*. Pakistan Journal of Biological Sciences 11 (7): 989-995, 2008.
- Huyghues-Despoints, A., & Yaylayan, V. A. 1996. *Retro-aldol and redox reactions of Amadori compounds: Mechanistic studies with variously labelled D-[13C] glucose*. Journal of Agricultural and Food Chemistry, 44, 672–681.
- Indahyanti, E., B. Kamulyan dan B. Ismuyanto. 2014. *Optimasi Konsentrasi Garam Bisulfit Pada Pengendalian Kualitas Nira Kelapa*. Jurnal Penelitian Saintek, Vol. 19, Nomor 1, April 2014.



Jabeen, S., S. Alam., M. Saleem., W. Ahmad., R. Bibi., F. S. Hamid., H. U. Shah.

2015. *Withering timings affect the total free amino acids and mineral contents of tea leaves during black tea manufacturing*. Arabian Journal of Chemistry (2015).

Jusuf, A. 1984. *Mempelajari Pengaruh Perlakuan Pendahuluan dan Natrium Metabisulfit Terhadap Sifat Fisiko-Kimia Pasta Santan Kelapa (Cocos nucifera L.) Selama Penyimpanan(On-Line)*. Institut Pertanian Bogor, Bogor. Diakses pada tanggal 19 Desember 2015.

Karadag, A., Ozcelik, B., & Saner, S. 2009. *Review of methods to determine antioxidant capacities*. Food Analytical Methods, 2, 41–60.

Karseno., R. Setyawati dan P. Haryanti. 2013. *Penggunaan Bubuk Kulit Buah Manggis Sebagai Laru Alami Nira Terhadap Karakteristik Fisik dan Kimia Gula Kelapa*. Jurnal Pembangunan Pedesaan Volume 13 Nomor 1, Juni 2013, hal 27 – 38.

Kroh, L. W. 1994. *Caramelisation in food and beverages*. Food Chemistry. 51: 371-379.

Kusnandar, F., dan Hariyadi, P. 2010. *Memahami Proses Termal dalam Pengawetan Pangan*. Fakultas Pertanian IPB. Bogor.

Labuza, T. P., & Baisier, W. M. 1992. *The kinetics of nonenzymatic browning*. In H. G. Schwartzberg & R. W. Hartel (Eds.), Physical chemistry of foods (pp. 595–649). New York: Marcel Dekker.

Landbo AK, Meyer AS 2004. *Effects of different enzymatic maceration treatments on enhancement of anthocyanins and other phenolics in black currant juice*. Innov. Food Sci. Emerg. 5: 235-244.

Landete, J. M. 2011. *Ellagitannins, ellagic acid and their derived metabolites: A review about source, metabolism, functions and health*. Food Research International, 44, 1150–1160.

Lertittikul, W., S. Benjakul & M. Tanaka. 2005. *Characteristics and antioxidative activity of Maillard reaction products from a porcine plasma protein-glucose model system as influenced by pH*. Food Chemistry 100 (2007) 669–677.

Lim, S. H., I. Darah dan K. Jain. 2006. *Antimicrobial Activities Of Tannins Extracted From Rhizophora Apiculata Barks*. Journal of Tropical Forest Science 18(1): 59--65 (2006) 59.

Liu, J., Ru, Q., & Ding, Y. (2012). *Glycation a promising method for food protein modification: Physicochemical properties and structure, a review*. Food Research International, 49, 170–183.



- Liu, Q., J. Li., B. Kong., N. Jia dan P. Li. 2014. *Antioxidant Capacity of Maillard Reaction Products Formed by a Porcine Plasma Protein Hydrolysate-sugar Model System as Related to Chemical Characteristics*. Journal Of Food Science and Biotechnology 23(1): 33-41 (2014).
- Lokeswari, N. 2010. *Production Of Tannase Through Submerged Fermentation Of Tannin-Containing Cashew Husk By Aspergillus Oryzae*. Rasayan Journal Of Chemistry Vol.3, No.1 (2010), 32-37, ISSN: 0974-1496.
- Mardawati, E., F. Filiany dan H. Marta. 2008. *Kajian Aktivitas Antioksidan Ekstrak Kulit Manggis (Garcinia mangostana L.) dalam Rangka Pemanfaatan Limbah Kulit Manggis di Kecamatan Puspahiang Kabupaten Tasikmalaya (On-Line)*. Fakultas Teknologi Industri Pertanian, Universitas Padjadjaran. Diakses tanggal 29 Maret 2015.
- Martins, S.I.F.S & Boekel, M.A.J.S. 2004. *Kinetics of the glucose/glysin Maillard reaction pathways: influences of pH and reactant initial concentrations*. Food Chemistry 92 (2005) 437–448.
- Mashud, N dan Y. Matana. 2009. *Kelapa Genjah Sebagai Sumber Nira Untuk Pembuatan Gula*. Prosiding Konferensi Nasional Kelapa VIII.
- Miller, G.L. 1959. *Use of Dinitrosalicylic Acid Reagent for Determination of Reducing Sugar*. Analytical Chemistry. 31(3):426–428.
- Morales, F., & Jiménez-Pérez, S. 2004. *Peroxyl radical scavenging activity of melanoidins in aqueous systems*. European Food Research and Technology, 218, 515–520.
- Muchtadi, T. R., Sugiyono dan F. Ayustaningwärno. 2010. *Ilmu Pengetahuan Bahan Pangan*. Alfabeta, Bandung.
- Naknean, P dan M. Meenune. 2011. *Characteristics and antioxidant activity of palm sugar syrup produced in Songkhla Province, Southern Thailand*. Asian Journal Of Food and Agry-Industry. 2011, 4(04), 204-212. ISSN 1906-3040.
- Naknean, P., M. Meenune dan G. Roudaut. 2010. *Characterization of palm sap harvested in Songkhla province, Southern Thailand*. International Food Research Journal 17: 977-986 (2010).
- Nicoli, M. C., Anese, M., & Lerici, C. R. 1993. *Influence of pH on the kinetics of non-enzymatic browning in heat-treated glucose-glycine model systems*. Italian Journal of Food Science, 2, 139–146.
- Naufalin, R., T. Yanto dan A. Sulistyaningrum. 2013. *Pengaruh Jenis dan Konsentrasi Pengawet Alami Terhadap Mutu Gula Kelapa*. Jurnal Teknologi Pertanian Vol. 14 No. 3 [Desember 2013] 165-174.



- Omosa, K. L., B. Amugune., B. Ndunda., T. K. Milugo., M. Heydenreich., A. Yenesew dan J. O. Midiwo. 2014. *Antimicrobial flavonoids and diterpenoids from Dodonaea angustifolia*. South African Journal of Botany 91 (2014) 58–62
- Pankasemsuk T, Garner Jr JO, Matta FB, Silva JL. 1996. *Translucent flesh disorder of mangosteen fruit (Garcinia mangostana L.)*. Hortscience 31:112-113.
- Payet, B., A. S. C. Sing dan J. Smadja. 2005. *Assessment of Antioxidant Activity of Cane Brown Sugars by ABTS and DPPH Radical Scavenging Assays: Determination of Their Polyphenolic and Volatile Constituents*. Journal Of Agricultural and Food Chemistry. 2005, 53, 10074-10079.
- Payet, B., A. S. C. Sing dan J. Smadja. 2006. *Comparison of the Concentrations of Phenolic Constituents in Cane Sugar Manufacturing Products with Their Antioxidant Activities*. Journal Of Agricultural and Food Chemistry. 2006, 54, 7270-7276.
- Pontoh, J. 2013. *Metode Analisa dan Komponen Kimia dalam Nira dan Gula Aren*. Proceeding Seminar Nasional Aren (On-Line). Universitas Sam Ratulangi Manado. Diakses pada tanggal 2 Februari 2016.
- Prakash, A. 2001. *Antioxidant Activity*. Medallion Laboratories AnalyticalProgress 19 : 2.
- Pratama, F., W. H. Susanto dan I. Purwantiningrum. 2015. *Pembuatan Gula Kelapa Dari Nira Terfermentasi Alami (Kajian Pengaruh Konsentrasi Anti Inversi dan Natrium Metabisulfat)*. Jurnal Pangan dan Agroindustri Vol. 3 No 4 p.1272-1282, September 2015.
- Prior, R. L., Wu, X., & Schaich, K. 2005. *Standardized method for the determination of antioxidant capacity and phenolics in foods and dietary supplements*. Journal of Agricultural and Food Chemistry, 53, 4290e4302.
- Putri, Y. N. 2007. *Mempelajari Pengaruh Penyimpanan Tape Ketan (Oryza Sativa Glutinosa) terhadap Daya Terima Konsumen*(On-Line). Institut Pertanian Bogor, Bogor.
- Rajalakshmi, D. Dan S. Narashiman. 1996. *Food Antioxidants: Sources and Methods of Evaluation*. *Food Antioxidants: technological, toxicological and health perspectives/* edited by D. L. Maldhavi, S. S. Deshpande, dan D. K. Salunkhe. 270 Madison Avenue, New York. 489 hal.
- Rufian-Henares, J. A., & Morales, F. J. 2007. *Effect of in vitro enzymatic digestion on antioxidant activity of coffee melanoidins and fractions*. Journal of Agricultural and Food Chemistry, 55, 10016–10021.



Rumokoi. 1994. *Prospek pengembangan gula kelapa di Indonesia*. Jurnal Penelitian dan Pengembangan. 8 (1) : 25.

Sacchetti, G., Di Mattia, C., Pittia, P., & Mastroccola, D. 2009. *Effect of roasting degree, equivalent thermal effect and coffee type on the radical scavenging activity of coffee brews and their phenolic fraction*. Journal of Food Engineering, 90, 74–80.

Samarajeewa, U dan M. C. P. Wijeratna. 1979. *A Method for determining suitability of coconut sap for preparation of jaggery and sugar*. Ceylon Coconut Quarterly 30, 72-80.

Samarajeewa, U dan M. C. P. Wijeratna. 1983. *Coconut Sap As Source Of Sugar*. Vidyodaya Journal of Arts, Science, Lett., Vol. 11 No. 1 & 2, January-July 1983 pp. 69-75.

Santoso, H. B. 1993. *Pembuatan Gula Kelapa*. Kanisius, Yogyakarta. 67 hal.

Setyamidjaja, D. 1991. *Bertanam Kelapa*. Kanisius, Yogyakarta. 116 hal.

Shahidi, F., and Naczk, M. 1995. *Food Phenolics: Sources, Chemistry, Effects and Applications*. Lancaster PA: Technomic Publishing Co.

Shahidi, F. dan Y. Zhong. 2015. *A Review: Measurement of antioxidant activity*. Journal of Functional Foods 18 (2015) 757-781.

Shin, K. D., S. T. Lim dan H. Son. 1998. *Effect Of Organic Acids on the Hygroscopicity and Browning of Sucrose Candies*. Journal of Food Science and Biotechnology Vol.7, No.2, pp. 107-111 (1998).

Shon, M., 1996. *Thermal deamination and deamidation of amino acids and their contribution to aroma generation*. Ph.D Thesis, The State University Of New Jersey, New Jersey.

Shon, M. and C, T. Ho. 1995. *Ammonia generation during thermal degradation of amino acids*. Journal Of Agricultural and Food Chemistry., 43: 3001-3003.

Siebert, J. K., Troukhanova, V. N. and Lynn, Y. P. 1996. *Nature of polyphenol-protein interactions*. Journal of Agricultural and Food Chemistry 44: 80-85.

Soedijanto dan Sianipar. 1981. *Kelapa*. CV Yasaguna, Jakarta.

Solyom, K., R. Sola., M. J. Cocero dan R. B. Mato. 2014. *Thermal degradation of grape marc polyphenols*. Food Chemistry 159 (2014) 361–366

Sudarmadji, S., B. Haryono dan Suhardi. 1984. *Prosedur Analisa untuk Bahan Makanan dan Pertanian*. Liberty Yogyakarta, Yogyakarta.



- Suliantari. 2009. *Aktivitas Antibakteri Dan Mekanisme Penghambatan Ekstrak Sirih Hijau (Piper Betle Linn) Terhadap Bakteri Patogen Pangan* (On-line). Institut Pertanian Bogor. Diakses pada tanggal 25 November 2015.
- Sunantyo. 1997. *Pengaruh Pemakaian Bahan Pengawet terhadap Kualitas Hasil Nira Sadapan Kelapa dan Hasil Gula Semut*. Prosiding Seminar Teknologi Pangan(On-Line). Pusat Penelitian Perkebunan Gula Indonesia Pasuruan, Pasuruan. Diakses pada tanggal 24 Desember 2015.
- Sunantyo dan S. Utami. 1997. *Suatu Upaya Peningkatan Kualitas Gula Merah Nabati Non Tebu* (On-Line). Prosiding Seminar Teknologi Pangan. Pusat Penelitian Perkebunan Gula Indonesia Pasuruan, Pasuruan. Diakses pada tanggal 5 Desember 2015.
- Tjahjaningsih, J. 1996. *Evaluasi Daya Simpan dan Prevalensi Berbagai Macam Gula Merah Palma Tradisional dari Berbagai Daerah Potensi Produksi di Karesidenan Banyumas*. Laporan Hasil Penelitian. LPM Universitas Jenderal Soedirman, Purwokerto. (Tidak Dipublikasikan)
- Turturica, M., N. S. Anciuc., G. Bahrim dan G. Rapeanu. 2015. *Effect of thermal treatment on phenolic compounds from plum (prunus domestica) extracts e A kinetic study*. Journal of Food Engineering 171 (2016) 200-207.
- Umemura T., Kodama Y., Hioki K., Inoue T., Nomura T., and Kurokawa Y. 2001. *Butylhydroxytoluene (BHT) Increases Susceptibility of Transgenic rasH2 Mice to Lung Carcinogenesis*. J Cancer Res ClinOncol, 127(10): 583-590
- Vhangani, L. N. dan J. V. Wyk. 2012. *Antioxidant activity of Maillard reaction products (MRPs) derived from fructose–lysine and ribose–lysine model systems*. Journal Of Food Chemistry, 137 (2013) 92-98.
- Vidanapathirana, S. Samarajeewa, U dan M. C. P. Wijeratna. 1983. *Microbiology Of Coconut Sap Fermentation*. Vidyodaya Journal of Arts, Science, Lett., Vol. 11 No. 1 & 2, January-July 1983 pp. 35-39.
- Wang, C. C., Chu, C. Y., Chu, K. O., Choy, K. W., Khaw, K. S., Rogers, M. S., and Pang, C. P. 2004. *Trolox-Equivalent Antioxidant Capacity Assay Versus Oxygen Radical Absorbance Capacity Assay in Plasma*. Clinical Chemistry Vol. 50 (5): 952-954.
- Wang, H. Y., H. Qian dan W. R. Yao. 2011. *Melanoidins produced by the Maillard reaction: Structure and biological activity*. Review. Journal Of Food Chemistry 128 (2011) 573-584.
- Wen-qiong, W., B. Yi-hong dan C. Ying. 2013. *Characteristics and antioxidant activity of water-soluble Maillard reaction products from interactions in a*



whey protein isolate and sugars system. Journal Of Food Chemistry 139 (2013) 355–361.

Wijewickreme AN, Krejpcio Z, Kitts DD. 1999. *Hydroxyl scavenging activity of glucose, fructose, and ribose–lysine model Maillard products*. J. Food Sci. 64: 457-461 (1999)

Winarno, F. G. 2004. *Kimia Pangan dan Gizi*. PT Gramedia Pustaka Utama, Jakarta. 253 hal.

Xia, Q., R. Liu., S. Zhaou., W. Chen., H. Chen., B. Xin., Y. Huang dan M. Tang. 2011. *Chemical composition changes of post-harvest coconut inflorescence sap during natural fermentation*. African Journal of Biotechnology Vol. 10(66), pp. 14999-15005, 26 October, 2011

Yayalayan, V. A., Ismail, A. A., & Mandeville, S. 1993. *Quantitative determination of the effect of pH and temperature on the keto form of D-fructose by FT IR spectroscopy*. Carbohydrate Research, 248.