

DAFTAR PUSTAKA

- Abdi, H., Williams, L.J., and Valentin, D. 2013. *Multiple Factor Analysis: Principal Component Analysis for Multitable and Multiblock Data Sets*. WIREs Comput Stat. Willey Periodicals, Inc.
- Adnan, M. 1982, *Aktivitas Air dan Kerusakan Bahan Makanan*. Agritech: Yogyakarta.
- Alves, L. A., Silva, J. B. A., and Giulietti, M. 2007. *Solubility of D-glucose in water and ethanol/water mixtures*. Journal of Chemical and Engineering Data 52(6): 2166-2170.
- AOAC., 1995. *Official Methods of Analysis 9th edition*. Association of Official Analytical Chemist. Washington D.C.
- ASTM. 1996. *Sensory testing methods*. In ASTM Manual 26, 2nd Ed. E. Chambers and M. Baker Wolf, eds, West Conshohocken, PA: ASTM International.
- Badan Standarisasi Nasional. 2004. SNI 06-6989.11-2004 mengenai Air dan Limbah-Bagian11: Cara Uji Derajat Keasaman (pH) dengan Menggunakan Alat pH Meter. Badan Standarisasi Nasional. Jakarta.
- Baggenstoss, J. 2008. *Coffee roasting and quenching technology - formation and stability of aroma compounds*. ETH Zurich Research Collection.
- Baggenstoss, J., Perren, R., and Escher, F. 2008. *Water content of roasted coffee: Impact on grinding behaviuor, extraction, and aroma retention*. Europe Food Research Technology 227: 1357-1365.
- Baggenstoss, J., Poisson, L., Kaegi, R., Perren, R., and Escher, F. 2008. *Coffee roasting and aroma formation: Application of different time-temperature conditions*. Journal of Agricultural and Food Chemistry 56(14): 5836-5846.
- Barter, R. 2004. *A short introduction to the theory and practice of profile roasting*. Tea and Coffee Trade Journal 68: 34-37.
- Bedoya-ramírez, D., Cilla, A., Contreras-calderón, J., and Alegría-torán, A. 2017. *Evaluation of the antioxidant capacity, furan compounds and cytoprotective/cytotoxic effects upon Caco-2 cells of commercial Colombian coffee*. Food Chemistry. 219: 364-372.

- Bekedam, E. K., Schols, H. A., Cammerer, B., Kroh, L. W., van Boekel, M. A., and Smit, G. 2008. *Electron spin resonance (ESR) studies on the formation of roasting induced antioxidative structures in coffee brews at different degrees of roast.* Journal of Agricultural and Food Chemistry 56: 4597-4604.
- Belitz, H., D., Grosch, W., and Schieberle, P. 2009. 5. *Aroma Compounds.* Food Chemistry 714: 340-402.
- Bhumiratana, N., Adhikari, K., and Chambers, E. 2011. *Evolution of sensory aroma attributes from coffee beans to brewed coffee.* LWT - Food Science and Technology 44: 2185-2192.
- Bradbury, A. G. W. 2001. *Carbohydrates.* In : J., C. R., Vitzthum, O.G. (eds.), Coffee: Recent Developments. Blackwell Science, Oxford 246.
- Budavari, S. Ed. 1996. *Angelica. Caffeic Acid. Chlorogenic Acid. Coffee, Green. Crataegus. Maté.* In: The Merck Index. 12th ed., Merck & Co., Inc., Whitehall, NJ.
- Buffo, R. A. and Cardelli-Freire, C. 2004. *Coffee flavour: an overview.* Flavour and Fragrance Journal 19(2): 99-104.
- Cheong, M. W., Tong, K. H., Ong, J. J. M., Liu, S. Q., Curran, P., and Yu, B. 2013. *Volatile composition and antioxidant capacity of Arabica coffee.* Food Research International Journal 388-396.
- Clarke, R. J. and Macrae, R. 1987. *Instant coffee.* Technology. Vol. 2.
- Clifford, M. N. 2000. *Chlorogenic acids and other cinnamates nature, occurrence, dietary burden, absorption and metabolism.* Journal of Science Food Agriculture 80: 1033-1043.
- Correa, P. C., Oliveira, G. H. H., Oliveira, A. P. L. R., Vargas-Elias, G. A., Santos, F. L., and Baptestini, F. M. 2016. *Preservation of roasted and ground coffee during storage Part 1: Moisture content and repose angle.* 20(6): 581-587.
- Crestani, C. E., Bernardo, A., Costa, C. B. B., and Giulietti, M. 2013. *Fructose solubility in mixed (ethanol+water) solvent: experimental data and comparison among different thermodynamic models.* Journal of Chemical and Engineering Data 58: 3039-3045.

- Dehlholm, C., Brockhoff, P.B., Meinert, L., Aaslyng, M.D., and Bredie, W.L.P. 2012. *Rapid descriptive sensory methods – comparison of free multiple sorting, partial napping, napping, flash profiling and conventional profiling*. Journal of Food Quality and Preference 26: 267-277.
- Duarte, G. and Farah, A. 2008. *Chlorogenic acids and lactones on Brazilian commercial coffees*. Proceedings 22nd International Conference on Coffee Science (ASIC) 224-227. Campinas, Brazil.
- Eggers, R. and Pietsch, A. 2001. *Technology I: Roasting*. In R. J. Clarke and O.G. Vitzhum (ed.), *Coffee: Recent Developments*. Oxford: Blackwell Science 90–107.
- Esbensen, K., Schonkopf, S., and Midtgård, T. 1994. *Multivariate Analysis in Practice*. Camo AS, Trondheim.
- Estiasih, T. dan Ahmadi, Kgs. 2009. *Teknologi Pengolahan Pangan*. Bumi Aksara. Malang.
- Farah, A., De Paulis, T., Trugo, L. C., and Martin, P. R. 2005. *Effect of roasting on the formation of chlorogenic acid lactones in coffee*. Journal of Agricultural and Food Chemistry 53: 1505-1513.
- Farah, A. and Donangelo, C. M. 2006. *Phenolic Compounds in Coffee*. Brazilian Journal of Plant Physiology.
- Figueiredo, L.P., Borém, F. M., Ribeiro, F. C., Giomo, G. S., Rios, P. A., and Tosta, M. F.. 2012. *Quality coffee (*Coffea Arabica L.*) subjected to two processing types*. Proceedings 24th International Conference on Coffee Science (ASIC) 502-506. Costarica.
- Flament, I. 2002. *The individual constituents: structure, nomenclature, origin, chemical and organoleptic properties*. Coffee Flavor Chemistry. Chichester, U.K.: Wiley.
- Franca, A. S., Oliveira, L. S., Mendonça, J. C. F., and Silva, X. A. 2005. *Physical and chemical attributes of defective crude and roasted coffee beans*. Food Chemistry 90: 89-94.
- Franca, A. S., Oliveira, L. S., Oliveira, R. C. S., Agresti, P. C. M., and Augusti, R. 2009. *A preliminary evaluation of the effect of processing temperature of*

- coffee roasting degree assessment.* Journal of Food Engineering 92: 345-352.
- Fuller, M. and Rao, N. Z. 2017. *The effect of time, roasting temperature, and grind size on caffeine and chlorogenic acid concentrations in cold brew coffee.* Scientific Report 7: 17979.
- Ginz, M., Balzer, H. H., Bradbury, A. G. W., and Maier, H. G. 2000. *Formation of aliphatic acids by carbohydrate degradation during roasting of coffee.* European Food Research Technology 211: 404-410.
- Ginz, M., and Engelhardt, U. H. 2001. *Analysis of bitter fractions of roasted coffee by LCESI-MS-new chlorogenic acid derivatives.* In: 19ème Colloque Scientifique International sur le Café, Trieste, Italy. Association Scientifique Internationale du Café (ASIC) 1-5.
- Gloess, A. N., Vietri, A., Wieland, F., Smrke, S., Schonbochler, B., Lopez, J. A. S., Petrozzi, S., Bongers, S., Koziorowski T., and Yeretzian, C. 2014. *Evidence of different flavour formation dynamics by roasting coffee from different origins: On-line analysis with PTR-ToF-MS.* International Journal of Mass Spectrometry 324-337.
- Gloss, A. N., Schonbachler, B., Rast, M., Deuber, L., and Yeretzian, C. 2014. *Freshness indices of roasted coffee: Monitoring the loss of freshness for single serve capsules and roasted whole beans in different packaging.* Chimia (Aarau) 68: 179-182.
- Henao, J. D., Queiroz, M. R., and Haj-Isa, N. M. A. 2009. *Moisture equilibrium of peeled cherry coffee based on static and dynamic methods.* Brazilian Journal of Agricultural and Environmental Engineering 13(4): 470-476.
- Hidayanto, E. 2010. Aplikasi portable brix meter untuk pengukuran indeks bias. Jurnal Berkala Fisika 13(4).
- Husson, F., Josse, J., Le, S., dan Mazet, J. 2017. FactoMineR: Multivariate Exploratory Data Analysis and Data Mining with R. R package version 1.35. <http://www.CRAN.R-project.org/package=FactoMineR>. Diakses pada tanggal 15 Februari 2018.
- Husson, F., Lê, S., dan Cadoret, M. 2014. SensoMineR: Sensory Data Analysis with R. R package version 1.20.

<http://www.CRAN.Rproject.org/package=SensoMineR>. Diakses pada tanggal 15 Februari 2018.

- Ibrahim, A. M., Yunianta, dan Sriherfyna, F. H. 2015. Pengaruh suhu dan lama waktu ekstraksi terhadap sifat kimia dan fisik pada pembuatan minuman sari jahe merah (*Zingiber officinale var. Rubrum*) dengan kombinasi penambahan madu sebagai pemanis. *Jurnal Pangan dan Agroindustri* 3(2): 530-541.
- Illy, A. and Viani, R. 1995. *Espresso Coffee: The Chemistry of Quality. Chapter 9: The Cup*. San Diego: Academic Press. 187.
- Illy, A. and Viani, R. 2005. *Espresso Coffee: The Science of Quality, 2nd edition*. London-Sandiego: Elsevier Academic Press Limited.
- International Coffee Organization. 2017. *Coffee market report*. <http://www.ico.org>. Diakses pada tanggal 28 Desember 2017
- Keast, R. S. J. 2008. *Modification of the bitterness of caffeine*. *Food Quality*. 19: 465-472.
- Kreuml, M. T. L., Majchrzak, D., Ploederl, B., and Koenig, J. 2013. *Changes in sensory quality characteristics of coffee during storage*. *Food Science and Nutrition Journal* 1(4): 267-272.
- Koshiro, Y., Jackson, M. C., Nagai, C., and Ashihara, H. 2015. *Changes in the content of sugar and organic acid during ripening of Coffea arabica and coffea canephora fruits*. *Europe Chemistry Bulletin* 4(8): 378-383.
- Labuza, T. P., Cardelli, C., Andersen, B., and Shimoni, E. 2001. *Physical chemistry of carbon dioxide equilibrium and diffusion in tempering and effect on shelf life of fresh roasted ground coffee*. Proceeding 19th ASIC.
- Le, S. and Worch, T. 2014. *The R Series: Analyzing Sensory Data with R*. Taylor and Francis Group. New York: CRC Press.
- Le, S., Josse, J., and Husson, F. 2008. *FactoMineR: an R package for multivariate analysis*. *Journal Statistic Software* 24: 1-18.
- Leloup, V. and Liardon, R. 1993. *Analytical characterisation of coffee carbohydrates*. In ASIC 15e Colloque, Montpellier 861-863.

- Liardon, R., Ott, U., and Daget, N. 1984. *Analysis of coffee headspace profiles by multivariate statistics*. In *Analysis Volatiles: Methods and Applications*, ed. P. Schreier. Berlin, New York: Walter de Gruyter & Co. 447-459.
- Ludwig, I. A., Sanchez, L., Caemmerer, B., Kroh, L. W., Peña, M. P. De, and Cid, C. 2012. *Extraction of coffee antioxidants : Impact of brewing time and method*. FRIN, 48(1): 57-64.
- Makri, E., Tsimogiannis, D., Dermesonluoglu, E. K., and Taoukis, P. S. 2011. *Modeling of Greek coffee aroma loss during storage at different temperatures and water activities*. Procedia Food Science 1:1111-1117.
- Masdakaty, Y. 2016. Apa Beda *Cold Brew*, *Cold Drip*, dan *Iced Coffee*. <https://majalah.ottencoffee.co.id/apa-beda-cold-brew-cold-drip-dan-iced-coffee/>. Diakses pada tanggal 15 Januari 2018.
- Montavon, P., Duruz, E., Rumo, G., and Pratz, G. 2003. *Evolution of green coffee protein profiles with maturation and relationship to coffee cup quality*. Journal of Agricultural and Food Chemistry 51(8): 2328-2334.
- Mulato, S. 2002. Mewujudkan perkopian Nasional Yang Tangguh melalui Diversifikasi Usaha Berwawasan Lingkungan dalam Pengembangan Industri Kopi Bubuk Skala Kecil Untuk Meningkatkan Nilai Tambah Usaha Tani Kopi Rakyat. Denpasar . Pusat Penelitian Kopi dan Kakao Indonesia.
- Nadya, S. 2011. *1001 Fakta Tentang Kopi*. Yogyakarta: Penerbit Cahaya. Atma Pustaka 11-30.
- Nazar, M. dan Mustofa, A. D. 2014. Isolasi dan identifikasi kadar kafein beberapa varietas kopi Arabika (*Coffea arabica*) yang tumbuh di Aceh Tengah. Prosiding Seminar Nasional Pendidikan Kimia dan Sains Program Studi Pendidikan Kimia. FKIP Unsyiah. 115-119.
- NCAS. 2017. *U.S. specialty coffee consumption on the rise*. <http://www.convenience.org/Media/Daily/Pages/ND1205174.aspx#.WoAZ6YExU0M>. Diakses pada tanggal 2 Februari 2018.
- Nestrud, M. A. and Lawless, H. T. 2010. *Perceptual mapping of apples and cheeses using projective mapping and sorting*. Journal of Sensory Studies 25: 309-324.

- Nopitasari, I. 2010. Proses pengolahan kopi bubuk (campuran Arabika dan Robusta) serta perubahan mutunya selama penyimpanan. Skripsi. Institut Pertanian Bogor. Bogor.
- Nugroho, J., Julianty L., dan Sri R., 2009. Makalah bidang teknik produk pertanian: Pengaruh suhu dan lama penyangraian terhadap sifat fisik-mekanis biji kopi Robusta. Seminar Nasional dan Gelar Teknologi Perteta. Mataram.
- Oliveira, G. H. H., Corrêa, P. C., Santos, F. L., Vasconcelos, W. L., Calil Júnior, C., Baptestini, F. M., & Vargas-Elías, G. A. (2014). *Physical characterization of coffee after being roasted and ground*. Seminar Agrarian Science 35(4): 1813-1828.
- Oestreich-Janzen, S. 2010. *Chemistry of coffee*. In M. Lew and L. Hung-Wen (Eds.), Comprehensive natural products II. Oxford: Elsevier 3: 1085-1117.
- Oestreich-Janzen, S. 2013. *Chemistry of coffee*. Reference Module in Chemistry, Molecular Sciences and Chemical Engineering. 1-28.
- Pabari, S. 2014. *How to brew cold brew coffee!*. <https://theroasterspack.com/blogs/news/15383769-how-to-brew-cold-brew-coffee>. Diakses pada tanggal 23 Februari 2018.
- Panggabean E. 2011. *Buku Pintar Kopi*. Jakarta: AgroMedia Pustaka.
- Partelli, F. L., Partelli, O., Partelli, A. S., Borém, F. M., Taveira, J. H. S., Pinto, R. S. R., and Siqueira, V. C. 2012. *Quality of conilon coffee dried on a concrete terrace in a greenhouse with early hulling*. Proceedings 24th International Conference on Coffee Science (ASIC) 465-468. Costarica.
- Pereira, M. C., Chalfoun, S. M., de Carvalho, G. R., and Savian, T. V. 2010. *Multivariate analysis of sensory characteristics of coffee grains (Coffea Arabica L.) in the region of upper Paranaíba*. Maringá 32(4): 635- 641.
- Perrone, D., Farah, A., and Donangelo, C. M. 2012. *Influence of coffee roasting on the incorporation of phenolic compounds into melanoidins and their relationship with antioxidant activity of the brew*. Journal of Agricultural and Food Chemistry 60: 4265-4275.

- Pittia, P., Nicoli, M.C., and Sacchetti, G., 2007. *Effect of moisture and water activity on textural properties of raw and roasted coffee beans.* Journal of Texture Study 38: 116-134.
- Poltronieri, P., and Rossi, F. 2016. *Challenges in specialty coffee processing and quality assurance.* Challenges 7(19).
- Preedy, V. R. (Ed.). 2015. *Coffee in health and disease prevention.* London: Academic Press.
- Purnamayanti, N. P. A., Gunadnya, I. B. P., dan Arda, G. 2017. Pengaruh suhu dan lama penyajian terhadap karakteristik fisik dan mutu sensori kopi Arabika. Jurnal Biosistem dan Teknik Pertanian 5(2).
- Qiang, H. and Yaguang, L. 2008. *Elucidation of the mechanism of enzymatic browning inhibition by sodium chlorite.* Food Chemistry 110: 847-885.
- Rahardjo, P. 2012. *Panduan Budidaya dan Pengolahan Kopi Arabika dan Robusta.* Jakarta: Penebar Swadaya.
- Redgwell, R. J., Curti, D., Fischer, M., Nicolas, P., and Fay, L. B. 2002. *Coffee bean arabinogalactans: Acidic polymers covalently linked to protein.* Carbohydrate Research 337: 239-253.
- Rendon, M. Y., Gratão, P. L., Salva, T. J. G., Azevedo, R. A., and Bragagnolo, N. 2013. *Antioxidant enzyme activity and hydrogen peroxide content during the drying of Arabica coffee beans.* European Food Research and Technology 236: 753-758.
- Ribeiro, J. S., Teófilo, R. F., Augusto, F., Salva, T. J. G., Ferreira, M.M.C. 2009. *Prediction of sensory properties of Brazilian Arabica roasted coffees by headspace solid phase microextraction-gas chromatography and partial least squares.* Analytica Chimica Acta 634: 172-179.
- Ridwansyah. 2003. *Pengolahan Kopi.* Departemen Teknologi Pertanian. Fakultas Pertanian. Universitas Sumatera Utara. Medan.
- Rodrigues, N. P., Benassi, M. T., and Bragagnolo, N. 2013. *Scavenging capacity of coffee brews against oxygen and nitrogen reactive species and the correlation with bioactive compounds by multivariate analysis.* Food Research International.

- Rohdiana, D., Wisnu, C., dan Trisna, R. 2008. Aktivitas penangkapan radikal bebas DPPH (*1,1-Diphenyl-2-Picrylhidrazyl*) beberapa jenis minuman teh. *Jurnal Teknologi Pertanian* 3(2): 79-81.
- Sari, L. I. 2001. Mempelajari proses pengolahan kopi bubuk (*Coffea canephora*) alternatif dengan menggunakan suhu dan tekanan rendah. Skripsi. Tidak Dipublikasikan. Fakultas Teknologi Pertanian Institut Pertanian Bogor, Bogor.
- Savitri, N. P.T., Hastuti, E. D., dan Suedi, S. W. A. 2017. Kualitas madu lokal dari beberapa wilayah di kabupaten Temanggung. *Buletin Anatomi dan Fisiologi* 2(1).
- Schenker, S., Handschin, S., Frey, B., Perren, R., and Escher, F., 2000. *Pore structure of coffee beans affected by roasting conditions*. *Journal of Food Science* 65: 452-457.
- Setyanti, C. A. 2015. Kopi Dingin vs Kopi Panas, Mana Lebih Sehat?. <https://www.cnnindonesia.com/gaya-hidup/20150826095232-262-74523/kopi-dingin-vs-kopi-panas-mana-lebih-sehat>. Diakses pada tanggal 5 Februari 2018.
- Sigalingging, R., Herak, D., Kabutey, A., and Sigalingging, C. 2018. *Mechanical behavior of Arabica coffee (*Coffea Arabica*) beans under loading compression*. IOP Conf. Series: Earth and Environmental Science 122: 1-4.
- Sivetz, M. 1979. *Coffee Technology*. The AVI Publishing Company, Inc., Westport, Connecticut.
- Sukiman, S. 2015. *What roasting dates can & can't tell you about coffee*. <https://www.perfectdailygrind.com/2015/09/what-roasting-dates-can-cant-tell-you-about-coffee/>. Diakses pada tanggal 10 Maret 2018.
- Toci, A. T., Neto, V. J. F. M., Torres, A. G., Calado, V., and Farah, A. 2008. *Triacylglycerols changes during the storage of roasted coffee*. Proc. 22nd International Conference on Coffee Science (ASIC) 504–507. Campinas, SP, Brazil.

- Toci, A. T., Neto, V. J. M. F., Torres, A. G., and Farah, A. 2013. *Changes in triacylglycerols and free fatty acids composition during storage of roasted coffee.* LWT-Food Science. Technology. 50: 581-590.
- Varnam, A. H. and Sutherland, J. P. 1994. *Beverages Technology, Chemistry and Microbiology.* London: Chapman and Hall.
- Venturi, L., Rocculi, P., Cavani, C., Placucci, G., Dalla Rosa, M., and Cremonini, M.A., 2007. *Water absorption of freeze-dried meat at different water activities: a multianalytical approach using sorption isotherm, differential scanning calorimetry, and nuclear magnetic resonance.* Journal of Agricultural and Food Chemistry 55: 10572-10578.
- Velmourougane, K. 2011. *Effects of wet processing methods and subsequent soaking of coffee under different organic acids on cup quality.* World Journal of Science and Technology 1: 32-38.
- Wang, N. 2012. *Physicochemical changes of coffee beans during roasting.* Thesis. Ontario (CA): The University of Guelph.
- Wang, X. 2014. *Understanding the formation of CO₂ and its degassing behavior in coffee.* Thesis. Canada: University of Guelph.
- Wei, F., Furihata, K., Koda, M., Hu, F., Miyakawa, T., and Tanokura, M. 2012. *Roasting process of coffee beans as studied by nuclear magnetic resonance: time course of changes in composition.* Journal of Agricultural Food Chemistry 60: 1005-1012.
- Wei, F. and Tanokura, M. 2015. *Chemical changes in the components of coffee beans during roasting.* Coffee in Health and Disease Prevention 83-91.
- Wei, L., Wai, M., Curran, P., Yu, B., and Quan, S. 2015. *Coffee fermentation and flavor – An intricate and delicate relationship.* Food Chemistry 185: 182-191.
- Widyotomo, S. S. Mulato, H. K. Purwadaria, dan Syarieff, A. M. 2009. Karakteristik Proses Dekafeinasi Kopi Robusta dan Reaktor Kolom Tunggal Dengan Pelarut Etil Asetat. <http://www.isjd.pdii.lipi.go.id>. Diakses pada 13 Januari 2018.
- Winarno, F. G. dan Aman, M. 1991. *Fisiologi Lepas Panen.* Jakarta: Sastra Hudaya.

- Winarno, F.G. 1992. *Kimia Pangan dan Gizi*. Jakarta: PT. Gramedia Pustaka Utama.
- Woo, K. S., Kim, H. Y., Hwang, I. G., Lee, S. H., and Jeong, H. S. 2015. *Characteristics of the thermal degradation of glucose and maltose solutions*. Prevention Nutrition Food Science 20(2): 102-109.
- Worditout.com. 2018. <https://worditout.com/>. Diakses pada tanggal 10 Juli 2018.
- Yeretzian, C., Pascual, E. C., and Goodman, B. A. 2012. *Effect of roasting condition and grinding on free radical contents of coffee beans stored in air*. Food Chemistry 131: 811-816.
- Yusdiali, W. 2008. Pengaruh suhu dan lama penyangraian terhadap tingkat kadar air dan keasaman kopi Robusta (*coffea robusta*). Skripsi. Makasar: Universitas Hasanuddin.
- Yusianto, Hulupi, R., Sulistyowati, Mawardi, S., dan Ismayadi, C. 2007. Mutu fisik dan cita rasa beberapa varietas kopi Arabika harapan pada beberapa periode penyimpanan. Pelita Perkebunan 23(3): 205-230.