DAFTAR PUSTAKA

Ashok, V. dan Vinod, D. S. (2014) "Using K-Means Cluster and Fuzzy C Means for Defect Segmentation in Fruits," dalam *Proceedings of the 2nd International Conference on Current Trends in Engineering and Management*, hal. 1213–1219.

Baietto, M. dan Wilson, A. D. (2015) "Electronic-nose applications for fruit identification, ripeness and quality grading," *Sensors (Switzerland)*, 15(1), hal. 899–931. doi: 10.3390/s150100899.

Baldwin, E. A., Bai, J., Plotto, A. dan Dea, S. (2011) "Electronic noses and tongues: Applications for the food and pharmaceutical industries," *Sensors*, 11(5), hal. 4744–4766. doi: 10.3390/s110504744.

Belitz, H. D., Grosch, W. dan Schieberle, P. (2009) *Food chemistry*, *Food Chemistry*. Leipzig, Germany: Springer-Verlag Berlin Heidelberg. doi: 10.1007/978-3-540-69934-7.

Bermak, A., Hassan, M. dan Pan, X. (2015) "Artificial Olfactory Systems," dalam Sawan, M. (ed.) *Handbook of Biochips*. New York, USA: Springer Science+Business Media, hal. 1–20. doi: 10.1007/978-1-4614-6623-9_8-1.

Bezdek, J. C. (1981) *Pattern Recognition with Fuzzy Objective Function Algorithms*, *Pattern Recognition with Fuzzy Objective Function Algorithms*. New York, USA: Plenum Press. doi: 10.1007/978-1-4757-0450-1.

Bishop, C. M. (2006) *Pattern Recognition and Machine Learning*. Singapore: Springer Science+Business Media.

Bochenkov, V. E. dan Sergeev, G. B. (2010) "Sensitivity, Selectivity, and Stability of Gas-Sensitive Metal-Oxide Nanostructures," dalam Umar, A. dan Hahn, Y.-B. (ed.) *Metal Oxide Nanostructures and Their Applications*. Valencia, California, USA: American Scientific Publishers, hal. 31–52.

BPOM RI (2020) *PERATURAN BADAN PENGAWAS OBAT DAN MAKANAN NOMOR 13 TAHUN 2020 TENTANG BAHAN TAMBAHAN PANGAN PERISA*. Jakarta, Negara Kesatuan Republik Indonesia: Badan Pengawas Obat dan Makanan.

Bushdid, C., Magnasco, M. O., Vosshall, L. B. dan Keller, A. (2014) "Humans can discriminate more than 1 trillion olfactory stimuli," *Science*, 343(6177), hal. 1370–1372. doi: 10.1126/science.1249168.

El-Naggar, A. Y. (2013) "Factors affecting selection of mobile phase in gas Chromatography," *American Journal of Research Communication*, 1(3), hal. 219–228.

Elmore, J. S. (2015) "Chapter 3 - Aroma extract analysis," dalam Parker, J. K., Elmore, J. S., dan Methven, L. (ed.) *Flavour Development, Analysis and Perception in Food and Beverages*. Cambridge, England: Woodhead Publishing, hal. 47–61.

77

Engewald, W. dan Dettmer-Wilde, K. (2014a) "Chapter 1 - Introduction," dalam Dettmer-Wilde, K. dan Engewald, W. (ed.) *Practical Gas Chromatography A Comprehensive Reference*. Heidelberg, Germany: Springer-Verlag Berlin Heidelberg, hal. 3–21.

Engewald, W. dan Dettmer-Wilde, K. (2014b) "Chapter 2 - Theory of Gas Chromatography," dalam Dettmer-Wilde, K. dan Engewald, W. (ed.) *Practical Gas Chromatography A Comprehensive Reference*. Heidelberg, Germany: Springer-Verlag Berlin Heidelberg, hal. 22–59.

Engewald, W., Dettmer-Wilde, K. dan Rotzsche, H. (2014) "Chapter 3 - Columns and Stationary Phases," dalam Dettmer-Wilde, K. dan Engewald, W. (ed.) *Practical Gas Chromatography A Comprehensive Reference*. Heidelberg, Germany: Springer-Verlag Berlin Heidelberg, hal. 61–116.

Ettre, L. S. (1979) "The nomenclature of chromatography. I. Gas chromatography," *Journal of Chromatography A*, 165(3), hal. 235–256. doi: 10.1016/S0021-9673(00)88184-4.

Faricha, A., Suwito, Rivai, M., Nanda, M. A., Purwanto, D. dan Anhar, R. P. R. (2018) "Design of electronic nose system using gas chromatography principle and Surface Acoustic Wave sensor," *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, 16(4), hal. 1458–1467. doi: 10.12928/TELKOMNIKA.v16i4.7127.

Fígaro USA INC (2014) "TGS 2620 for the detection of Solvent Vapors," *Product Information*.

Huang, P.-C. dan Rabaey, J. M. (2017) *Bio-Inspired Artificial Olfactory System*. University of California, Berkeley.

Hübschmann, H.-J. (2009) *Handbook of GC/MS: Fundamentals and Applications*. 2 ed. Weinheim: WILEY-VCH Verlag GmbH & Co. KGaA.

Itoh, T., Akamatsu, T., Tsuruta, A. dan Shin, W. (2017) "Selective detection of target volatile organic compounds in contaminated humid air using a sensor array with principal component analysis," *Sensors*, 17(7), hal. 1–14. doi: 10.3390/s17071662.

Jolliffe, I. T. (2002) *Principal Component Analysis*. New York, USA: Springer-Verlag New York. doi: 10.2307/1270093.

Kadosaki, M., Sakai, Y., Tamura, I., Matsubara, I. dan Itoh, T. (2010) "Development of an oxide semiconductor thick film gas sensor for the detection of total volatile organic compounds," *Electronics and Communications in Japan*, 93(10), hal. 34–41. doi: 10.1002/ecj.10190.

Kim, D. G., Burks, T. F., Qin, J. dan Bulanon, D. M. (2009) "Classification of grapefruit peel diseases using color texture feature analysis," *International Journal of Agricultural and Biological Engineering*, 2(3), hal. 41–50. doi: 10.3965/j.issn.1934-6344.2009.03.041-050.

Micheli-Tzanakou, E. (2000) *Supervised and Unsupervised Pattern Recognition :*

Feature Extraction and Computational. Boca Raton, Florida: CRC Press.

Miyamoto, S., Ichihashi, H. dan Honda, K. (2008) *Algorithms for Fuzzy Clustering.* Heidelberg, Germany: Springer-Verlag Berlin Heidelberg.

Nanto, H. dan Stetter, J. R. (2003) "Introduction to Chemosensors," dalam Pearce, T. C., Schiffman, S. S., Nagle, H. T., dan Gardner, J. W. (ed.) *Handbook of Machine Olfaction.* Weinheim, Germany, hal. 79–103.

Padiyar, V. R., N, N. H. dan Shetty, S. G. (2021) "Automatic Fruit Detection and Couting System Using Neural Network," *International Journal of Scientific Research in Science and Technology*, 7(4), hal. 164–169. doi: 10.32628/cseit217442.

Panigrahi, S., Kizil, U., Valasuvramanyan, S., Curt, D., Catherine, L., Marty, M., Huanzhong, G., Aleksander, K., Lisa, N., Joe, S. dan Richard, W. (2002) "Electronic Nose System for Meat Quality Evaluation," dalam *2002 ASAE Annual Meeting.* doi: 10.13031/2013.24118.

Parker, J. K. (2015) "Chapter 1 - Introduction to aroma compounds in foods," dalam Parker, J. K., Elmore, J. S., dan Methven, L. (ed.) *Flavour Development, Analysis and Perception in Food and Beverages.* Cambridge, England: Woodhead Publishing, hal. 3–30.

Perry, D. (2009) "14 . Sensory Measurement of Meat Quality," dalam *Meat Technology.* North Melbourne: Woolwise Australian Wool Education Trust, hal. 1–8.

Putra, O. A., Firdaus dan Heryansyah, M. H. (2016) "Identifikasi Aroma Teh dengan E-nose Menggunakan Metode Backpropagation," dalam *Seminar Nasional Sains dan Teknologi 2016 Fakultas Teknik Universitas Muhammadiyah Jakarta , 8 November 2016.* Jakarta, hal. 1–8.

Radi, Barokah, Rohmah, D. N., Wahyudi, E., Adhityamurti, M. D. dan Yuroto Putro, J. P. L. (2021) "Implementation of an electronic nose for classification of synthetic flavors," *Bulletin of Electrical Engineering and Informatics*, 10(3), hal. 1283–1290. doi: 10.11591/eei.v10i3.3018.

Radi, Ciptohadijoyo, S., Litananda, W. S., Rivai, M. dan Purnomo, M. H. (2016) "Electronic nose based on partition column integrated with gas sensor for fruit identification and classification," *Computers and Electronics in Agriculture.* Elsevier B.V., 121, hal. 429–435. doi: 10.1016/j.compag.2015.11.013.

Radi, Wahyudi, E., Adhityamurti, M. D., Yuroto Putro, J. P. L., Barokah dan Rohmah, D. N. (2021) "Freshness assessment of tilapia fish in traditional market based on an electronic nose," *Bulletin of Electrical Engineering and Informatics*, 10(5), hal. 2466–2476. doi: 10.11591/eei.v10i5.3111.

Reineccius, G. (2010) "9 Instrumental methods of analysis," dalam Taylor, A. J. dan Linforth, R. S. T. (ed.) *Food Flavour Technology.* 2nd ed. Singapore: Wiley-Blackwell, hal. 229–262.

Ridgway, K. (2015) "Chapter 4 - Analysis of taints and off-flavours," dalam Parker,

J. K., Elmore, J. S., dan Methven, L. (ed.) *Flavour Development, Analysis and Perception in Food and Beverages*. Cambridge, England: Woodhead Publishing, hal. 62–81.

Riedmiller, M. dan Braun, H. (1993) "Direct adaptive method for faster backpropagation learning: The RPROP algorithm," dalam *1993 IEEE International Conference on Neural Networks*, hal. 586–591. doi: 10.1109/icnn.1993.298623.

Rivai, M. (2007) "Pengaruh Principle Component Analysis Terhadap Tingkat Identifikasi Neural Network Pada Sistem Sensor Gas," *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, 5(3), hal. 159–166. doi: 10.12928/telkomnika.v5i3.1360.

Rivai, M., Purwanto, D., Juwono, H. dan Sujono, H. A. (2011) "Electronic nose using gas chromatography column and quartz crystal microbalance," *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, 9(2), hal. 319–326. doi: 10.12928/telkomnika.v9i2.703.

Rocha, A., Hauagge, D. C., Wainer, J. dan Goldenstein, S. (2010) "Automatic fruit and vegetable classification from images," *Computers and Electronics in Agriculture*, 70(1), hal. 96–104. doi: 10.1016/j.compag.2009.09.002.

SÁ, A. G. A., Meneses, A. C. de, Araújo, P. H. H. de dan Oliveira, D. de (2017) "A review on enzymatic synthesis of aromatic esters used as flavor ingredients for food, cosmetics and pharmaceuticals industries," *Trends in Food Science and Technology*, hal. 95–105. doi: 10.1016/j.tifs.2017.09.004.

Sanguansat, P. (2012) *Principal Component Analysis - Multidisciplinary Applications*. Rijeka, Croatia: InTech. doi: 10.5772/2694.

Schiffman, S. S. dan Pearce, T. C. (2003) "Introduction to Olfaction: Perception, Anatomy, Physiology, and Molecular Biology," dalam Pearce, T. C., Schiffman, S. S., Nagle, H. T., dan Gardner, J. W. (ed.) *Handbook of Machine Olfaction*. Weinheim, Germany: Wiley-VCH, hal. 1–31.

Shamim Reza, M. (2015) "Study of Multivariate Data Clustering Based on K-Means and Independent Component Analysis," *American Journal of Theoretical and Applied Statistics*, 4(5), hal. 317–321. doi: 10.11648/j.ajtas.20150405.11.

Shanmuganathan, S. (2016) "Artificial neural network modelling: An introduction," dalam Shanmuganathan, S. dan Samarasingh, S. (ed.) *Artificial Neural Network Modelling*. Zug, Switzerland: Springer International Publishing, hal. 1–14. doi: 10.1007/978-3-319-28495-8_1.

Tan, J. dan Xu, J. (2020) "Applications of electronic nose (e-nose) and electronic tongue (e-tongue) in food quality-related properties determination: A review," *Artificial Intelligence in Agriculture*. Elsevier B.V., 4, hal. 104–115. doi: 10.1016/j.aiia.2020.06.003.

The MathWorks Inc (2016a) *Choose a Multilayer Neural Network Training*

Function, *MathWorks R2016b Documentation*. Tersedia pada: https://www.mathworks.com/help/deeplearning/ug/choose-a-multilayer-neural-network-training-function.html (Diakses: 16 September 2021).

The MathWorks Inc (2016b) *fcm - Fuzzy c-means clustering*, *MathWorks R2016b Documentation*. Tersedia pada: https://www.mathworks.com/help/fuzzy/fcm.html (Diakses: 10 Desember 2021).

Wiśniewska, P., Śliwińska, M., Dymerski, T., Wardencki, W. dan Namieśnik, J. (2017) "Comparison of an Electronic Nose Based on Ultrafast Gas Chromatography, Comprehensive Two-Dimensional Gas Chromatography, and Sensory Evaluation for an Analysis of Type of Whisky," *Journal of Chemistry*, 2017, hal. 1–13. doi: 10.1155/2017/2710104.

Wyszynski, B. dan Nakamoto, T. (2015) "Chapter 5 - Chemical sensors," dalam Parker, J. K., Elmore, J. S., dan Methven, L. (ed.) *Flavour Development, Analysis and Perception in Food and Beverages*. Cambridge, England: Woodhead Publishing, hal. 83–104.

Zuas, O. (2017) "Effect of Carrier Gas Flow Rate and Column Temperature on the Suitability Parameters of GC-ECD for SF6 Measurement," *PERIÓDICO TCHÊ QUÍMICA*, 14(28), hal. 120–129. doi: 10.52571/ptq.v14.n28.2017.120_periodico28_pgs_120_129.pdf.