DAFTAR PUSTAKA

Agustika, D., 2012, The Prepocessing Technique Optimization of Sensor's Output Response for Increasing The Classification Rate of Portable Electronic Nose: Herbal Drinks Discrimination Testing, *Tesis*, Jurusan Fisika FMIPA Universitas Gadjah Mada, Yogyakarta.

Arshak, K.,Moore, E., Lyons, G.M., Harris, J., dan Clifford, S., 2004, A review of gas sensors employed in electronic nose applications, *Sensor Review*, 24, 181–198.

Ashenafi, M., dan Busse, M., 1991a, Growth of Bacillus cereus in fermenting tempeh made from various beans and its inhibition by LactobacMus plantarum, *Journal of Applied Bacteriology*, 70, 329-333.

Ashenafi, M., dan Busse, M., 1991b, Microbial development during tempeh fermentation from various beans and effect of Lactobacillus plantarurn on the natural microflora, *International Journal of Food Science and Technology*, 26, 501-506.

Babu, P.D., Bhakyaraj, R., dan Vidhyalakshmi, R., 2009, A Low Cost Nutritious Food "Tempeh"- A Review, *World Journal of Dairy & Food Sciences*, 1, 22-27.

BSN, 2008, *SNI 2897:2008 Metode pengujian cemaran mikroba dalam daging, telur, dan susu, serta hasil olahannya*, Badan Standardisasi Nasional, Indonesia.

BSN, 2009, *SNI 3144:2009 Tempe Kedelai*, Badan Standardisasi Nasional, Indonesia.

Chen, Q., Liu, A., Zhao, J., dan Ouyang, Q., 2013, Classification of tea category using a portable electronic nose based on an odor imaging sensor array, *Journal of Pharmaceutical and Biomedical Analysis*, 84, 77-83.

Concina, I., Falasconi, M., Gobbi, E., Bianchi, F., Musci,M., Mattarozzi, M., Pardo, M., Mangia, A., Careri, M., dan Sberveglieri, G., 2009, Early detection of microbial contamination in processed tomatoes by electronic nose, *Food Control*, 20, 873-880.

Cuevas-Rodriguez, E.O., MiIan-Carrillo, J., Mora-Escobedo, R., Cardenas-Valenzuela, O.G., dan Reyes-Moreno, C., 2004, Quality protein maize (Zea mays L.) tempeh flour through solid state fermentation process, *Lebensm.-Wiss. u.-Technol.*, 37, 59–67.

Falasconi, M., Concina, I., Gobbi, E., Sberveglieri, V., Pulvirenti, A., dan Sberveglieri, G., 2012, Review Article : Electronic Nose for Microbiological Quality Control of Food Products, *Hindawi Publishing Corporation*, 2012, 1-12.

Farnworth, E.R., 2008, *Handbook of Fermented Functional Foods*, CRC Press Taylor & Francis Group, Boca Raton.

Feng , X.M., Eriksson, A.R.B., dan Schnurer, J., 2005, Growth of lactic acid bacteria and Rhizopus oligosporus during barley tempeh fermentation, *International Journal of Food Microbiology*, 104, 249–256.

Feng, X.M., Larsen, T.O., dan Schnürer, J., 2007, Production of volatile compounds by Rhizopus oligosporus during soybean and barley tempeh fermentation, *International Journal of Food Microbiology*, 113, 133-141.

Figaro, 2013, *Datasheet sensor tgs813, tgs822, tgs2600, tgs826, tgs2611, tgs2620, tgs2612, tgs2602*, http://www.figarosensor.com/gaslist.html, diakses tanggal 21 Januari 2015.

Figaro, 2005, *Technical Information on Usage of TGS Sensors for Toxic and Explosive Gas Leak Detectors*, http://www.figarosensor.com/products/common(1104).pdf, diakses 15 Januari 2015.

Firmawati, N., 2013, Differentiation Between Urine Samples with Positive and Negatif Contaminated Methadone by Using Electronic Nose Based on Metal Oxide Gas Sensor Array, *Tesis*, Jurusan Fisika FMIPA Universitas Gadjah Mada, Yogyakarta.

Green, G.C., Chan, A.D.C., dan Lin, M., 2014, Robust identification of bacteria based on repeated odor measurements from individual bacteria colonies, *Sensors and Actuators B*, 160, 16-24.

Griffin, M., 2003, *ELECTRONIC NOSES : MULTI - SENSOR ARRAYS*, Davidson College NC, 28036, http://www.coffeeresearch.org/science/nose.pdf, diakses pada tanggal 22 Mei 2015.

Gufron, 2013, Pengembangan Electronic Nose Berbasis Larik Sensor Gas yang Dikombinasikan dengan Principle Component Analysis untuk Klasifikasi Ikan Berformalin, *Skripsi*, Jurusan Fisika FMIPA Universitas Gadjah Mada, Yogyakarta.

Handoyo, T., dan Morita, N., 2006, Structural and Functional Properties of Fermented Soybean (Tempeh) by Using Rhizopus Oligosporus, *International Journal of Food Properties*, 9, 347–355.

Haugen, J.E., Rudi, K., Langsrud, S., dan Bredholt, S., 2006, Application of gas-sensor array technology for detection and monitoring of growth of spoilage bacteria in milk: A model study, *Analytica Chimica Acta*, 565, 10-16.

Jelen, H., Majcher, M., Ginja, A., dan Kuligowski, M., 2013, Determination of compounds responsible for tempeh aroma, *Food Chemistry*, 141, 459–465.

Jeong, D.H., Ziemkiewicz, C., Ribarsky, W., dan Chang, R., 2009, *Understanding Principal Component Analysis Using a Visual Analytics Tool*, Charlotte Visualization Center, UNC Charlotte.

Jiang, H., Chen, Q., dan Liu, G., 2014, Monitoring of solid-state fermentation of protein feed by electronic nose and chemometric analysis, *Process Biochemistry*, 49, 583–588.

Jolliffe, I.T., 2002, *Principal Component Analysis*, Springer, New York.

Kuligowski, M., Jasinska-Kuligowska, I., dan Nowak, J., 2013, Evaluation of

Bean and Soy Tempeh Infuence on Intestinal Bacteria and Estimation of Antibacterial Properties of Bean Tempeh, *Polish Journal of Microbiology*, 62, 189–194.

Loutfi, A., Coradeschi, S., Mani, G.K., Shankar, P., dan Rayappan, J.B.B., 2015, Electronic noses for food quality: A review, *Journal of Food Engineering*, 144, 103-111.

Mulyowidarso, R.K., Fleet, G.H., dan Buckle, K.A., 1989, The microbial ecology of soybean soaking for tempe production, *International Journal of Food Microbiology*, 8, 35-46.

Mulyowidarso, R.K., Fleet, G.H., dan Buckle, K.A., 1990, Association of bacteria with the fungal fermentation of soybean tempe, *Journal of Applied Bacteriology*, 68, 43-47.

Natale, C.D., Davide, F., dan D'Amico, A., 1995, Pattern recognition in gas sensing: well-stated techniques and advances, *Sensors and Actuators B*, 23, 111-118.

Natale, C.D., Macagnano, A., Davide, F., D'Amico, A., Paolesse, R., Boschi, T., Faccio, M., dan Ferri, G., 1997, An electronic nose for food analysis, *Sensors and Actuators B*, 44, 521-526.

Nout, M.J.R., Beernik, G., dan Bonants-van Laarhoven, T.M.G., 1987, Growth of Bacillus cereus in soyabean tempeh, *International Journal of Food Microbiology*, 4, 293-301.

Pan, L., Zhang, W., Zhu, N., Mao, S., dan Tu, K., 2014, Early detection and classification of pathogenic fungal disease in post-harvest strawberry fruit by electronic nose and gas chromatography–mass spectrometry, *Food Research International*, 62, 162–168.

Panigrahi, S., Balasubramanian, S., Gu, H., Logue, C.M., dan Marchello, M., 2006, Design and development of a metal oxide based electronic nose for spoilage classification of beef, *Sensors and Actuators B*, 119, 2-14.

Paolesse, R., Alimelli, A., Martinelli, E., Natale, S.D., D'Amico, A., D'Egidio, M.G., Aureli, G., Ricelli, A., dan Fanelli, C., 2006, Detection of fungal contamination of cereal grain samples by an electronic nose, *Sensors and Actuators B*, 119, 425-430.

Pearce, T.C., Schiffman, S.S., Nagle, H.T., dan Gardner, J.W., 2003, *Handbook of Machine Olfaction*, WILEY-VCH, Jerman.

Peris, M., dan Escuder-Gilabert, L., 2009, A 21st century technique for food control: Electronic noses, *Analytica Chimica Acta*, 638, 1-15.

PUSIDO, 2012, *Tempe: Persembahan Indonesia untuk Dunia* , Badan Standardisasi Nasional, Indonesia.

Puteri, M.D.P.T.G., Hassanein, T.R., Prabawati, E.K., Wijaya, C.H., dan Mutukumira, A.N., 2015, Sensory Characteristics of Seasoning Powders from Overripe Tempeh, a Solid State Fermented Soybean, *Procedia Chemistry*, 14, 263 – 269.

Qiu, S., Gao, L., dan Wang, J., 2015, Classification and regression of ELM, LVQ and SVM for E-nose data of strawberry juice, *Journal of Food Engineering*,

, 77-85.

Smith, L.I., 2002, *A tutorial on Principal Components Analysis*, http://www.sccg.sk/~haladova/principal_components.pdf, diakses pada tanggal 1 Januari 2015.

Syarief, R., 1999, *Wacana Tempe Indonesia*, Universitas Katolik Widya Mandala, Surabaya, Indonesia.

Tan, E.T., dan Halim, A.H., 2012, Data Acquisition System Development of an Electronic Nose for Sulphate-reducing Bacter, *2012 4th International Conference on Intelligent and Advanced Systems (ICIAS2012)*, 2, 567 - 571.

Triyana, K., Subekti, M.T., Aji, P., Hidayat, S.H., dan Rohman, A., 2015, Development of Electronic Nose with Low-Cost Dynamic Headspace for Classifying Vegetable Oils and Animal Fats, *Applied Mechanics and Materials*, 771, 50-54.

Wang, D., Wang, X., Liu, T., dan Liu, Y., 2012, Prediction of total viable counts on chilled pork using an electronic nose combined with support vector machine, *Meat Science*, 90, 373-377.

Wilson, A.D., dan Baietto, M., 2009, Applications and Advances in Electronic-Nose Technologies, *Sensors*, 9, 5099-5148.

www.ni.com, 2015, *What Is Data Acquisition*, http://www.ni.com/data-acquisition/what-is/, diakses 16 Maret 2015.

Yan, J., Tian, F., He, Q., Shen, Y., Xu, S., Feng, J., dan Chaibou, K., 2012, Feature Extraction from Sensor Data for Detection of Wound Pathogen Based on Elektronic Nose, *MYU Tokyo*, 24, 57-73.

Zhang, Z., Tong, J., Chen, D., dan Lan, Y., 2008, Electronic Nose with an Air Sensor Matrix for Detecting Beef Freshness, *Journal of Bionic Engineering*, 5, 67-73.