UNIVERSITAS
GADJAH MADA
PENGEMBANGAN SENSOR RASA ASIN IMPEDIMETRIK MENGGUNAKAN INTERDIGITATED ELECTRODE TERMODIFIKASI MEMBRAN LIPID 1-HEXADECANOL
Annisa Wachida Qurrata A'Yun, Prof. Dr. Eng. Kuwat Triyana, M.Si.
Universitas Gadjah Mada, 2023 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Ahmed, F. E., Lalia, B. S. dan Hashaikeh, R., 2015, A Review on Electrospinning for Membrane Fabrication: Challenges and Applications, *Desalination*, 356, pp. 15–30.

Akiyama, H., Tsuzaki, T., Toko, K. dan Yamafuji. K., 1997, Taste Sensor Using Membrane Impedance Change, *T. IEE Japan*, Vol. 117-E, No. 2.

Almario, Á. A. A. dan Cáceres, R. L. T., 2014, Electronic Tongue and Neural Networks, Biologically Inspired Systems Applied to Classifying Coffee Samples, *American Journal of Analytical Chemistry*, 05(04), pp. 266–274.

Bagirov, A. M., Aliguliyev, R. M. dan Sultanova, N., 2022, Finding Compact and Well-Separated Clusters: Clustering using Silhouette Coefficients, *Pattern Recognition*, 135, p. 109144.

Burgos-Flórez, F., Rodrıguez, A., Cervera, E., Zucolotto, V., Sanjuán, M. dan Villalba, P. J., 2022, TBISTAT: An Open-Source, Wireless Portable, Electrochemical Impedance Spectroscopy Capable Potentiostat for The Point-of-Care Detection of S100B in Plasma Samples, *PLoS ONE*, 17(2 February), pp. 1–25.

Caballero, B., Trugo, L. C. dan Finglas, P. M., 2003, "Encyclopedia of Food Sciences and Nutrition", 2nd Edition, Academic Press, London.

Chen, R., Hidekazu, I. dan Toko, K., 2010, Development of Sensor with High Selectivity for Saltiness and Its Application in Taste Evaluation of Table Salt', *Sensors and Materials*, 22(6), pp. 313–325.

Chulkin, P. dan Data, P., 2018, Electrochemical Impedance Spectroscopy as a Tool for Electrochemical Rate Constant Estimation, *Journal of visualized experiments : JoVE*, (140), pp. 1–8.

Colomer-Farrarons, J., Miribel-Català, P. L., Rodríguez-Villarreal, A. I. dan Samitier, J., 2011, Portable Bio-Devices: Design of Electrochemical Instruments from Miniaturized to Implantable Devices, *New Perspectives in Biosensors Technology and Applications*, July.

Daikuzono, C. M., Delaney, C., Morrin, A., Diamond, D., Florea, L. dan Oliveira Jr, O, N., 2019, Paper Based Electronic Tongue-A Low-Cost Solution for The Distinction of Sugar Type and Apple Juice Brand, *Analyst*, 144(8), pp. 2827–2832.

Dias, L. G., Fernandes, A., Veloso, A. C. A., Machado, A. A. S. C., Pereira, J. A. dan Peres, A. M., 2014, Single-Cultivar Extra Virgin Olive Oil Classification Using A Potentiometric Electronic Tongue, *Food Chemistry*, 160, pp. 321–329.

Dizon, A. dan Orazem, M. E., 2019, Electrochimica Acta on The Impedance

UNIVERSITAS
GADJAH MADA
PENGEMBANGAN SENSOR RASA ASIN IMPEDIMETRIK MENGGUNAKAN INTERDIGITATED ELECTRODE TERMODIFIKASI MEMBRAN LIPID 1-HEXADECANOL
Annisa Wachida Qurrata A'Yun, Prof. Dr. Eng. Kuwat Triyana, M.Si.
Universitas Gadjah Mada, 2023 | Diunduh dari http://etd.repository.ugm.ac.id/

Response of Interdigitated Electrodes, *Electrochimica Acta*, 327, p. 135000.

Elamine, Y., Inácio, P. M. C., Lyoussi, B., Anjos, O., Estevinho, L. M., Miguel, M, D, G. dan Gomes, H. L., 2019, Insight into The Sensing Mechanism of An Impedance Based Electronic Tongue for Honey Botanic Origin Discrimination, *Sensors and Actuators, B: Chemical*, 285(January), pp. 24–33.

Faria D. A. R., Heneine, G. D. L. Matencio, T. dan Messaddeq, Y., 2019, Faradaic and Non-Faradaic Electrochemical Impedance Spectroscopy As Transduction Techniques for Sensing Applications, 5(1), pp. 29–31.

Garcia-Hernandez, C., Comino, C. S., Martín-Pedrosa, F., Rodriguez-Mendez, M. L. dan Garcia-Cabezon, C., 2018, Impedimetric Electronic Tongue Based on Nanocomposites for The Analysis of Red Wines. Improving The Variable Selection Method, *Sensors and Actuators, B: Chemical*, 277(April), pp. 365–372.

Ghrissi, H., Veloso, A. C. A., Marx, I. M. G., Dias, T. dan Peres, A. M., 2021, A Potentiometric Electronic Tongue as A Discrimination Tool of Water-Food Indicator/Contamination Bacteria, *Chemosensors*, 9(6), pp. 1–15.

Herlambang, M. B., 2019, Apa itu Principle Component Analysis (PCA)?, *https://www.megabagus.id/apa-itu-principal-component-analysis-pca/*, diakses pada tanggal 20 Oktober 2022.

Khan, M. R. R., Khalilian, A. dan Kang, S. W., 2016, A High Sensitivity IDC-Electronic Tongue Using Dielectric/Sensing Membranes with Solvatochromic Dyes, *Sensors (Switzerland)*, 16(5).

Khan, R. R. dan Kang, S. W., 2015, Highly Sensitive Multi-Channel IDC Sensor Array for Low Concentration Taste Detection, *Sensors (Switzerland)*, 15(6), pp. 13201–13221.

Kobayashi, Y., Habara, M., Ikezazki, H., Chen, R., Naito, Y. dan Toko, K., 2010, Advanced Taste Sensors Based on Artificial Lipids with Global Selectivity to Basic Taste Qualities and High Correlation to Sensory Scores, *Sensors*, 10(4), pp. 3411–3443.

Koç, Y., Morali, U., Erol, S. dan Avci, H., 2021, Investigation of Electrochemical Behavior of Potassium Ferricyanide/Ferrocyanide Redox Probes on Screen Printed Carbon Electrode through Cyclic Voltammetry and Electrochemical Impedance Spectroscopy, *Turkish Journal of Chemistry*, 45(6), pp. 1895–1915.

Kulkarni, M. B., Ayachit, N. H. dan Aminabhavi, T. M., 2022, Biosensors and Microfluidic Biosensors: From Fabrication to Application, *Biosensors*, 12(7).

Kurniawan, D., 2020, "Pengenalan Machine Learning dengan Python", Elex Media Komputindo, Gramedia, Jakarta.

Labrador, R. H., Masot, R., Alcañiz, M., Baigts, D., Soto, J., Martínez-mañez, R., García-breijo, E., Gil, L. dan Barat, J. M., 2010, Prediction of NaCl , Nitrate

UNIVERSITAS
GADJAH MADA
PENGEMBANGAN SENSOR RASA ASIN IMPEDIMETRIK MENGGUNAKAN INTERDIGITATED ELECTRODE TERMODIFIKASI MEMBRAN LIPID 1-HEXADECANOL
Annisa Wachida Qurrata A'Yun, Prof. Dr. Eng. Kuwat Triyana, M.Si.
Universitas Gadjah Mada, 2023 | Diunduh dari http://etd.repository.ugm.ac.id/

and Nitrite Contents in Minced Meat by Using A Voltammetric Electronic Tongue and An Impedimetric Sensor, *Food Chemistry*, 122(3), pp. 864–870.

Lai, C., Liu, S., Zhang, C., Zeng, G., Huang, D., Qin, L., Liu, X., Yi, H., Wang, R., Huang, F., Li, B. dan Hu, T., 2018, Electrochemical Aptasensor Based on Sulfur−Nitrogen Codoped Ordered Mesoporous Carbon and Thymine−$Hg2^{+}$−Thymine Mismatch Structure for $Hg2^{+}$ Detection, *ACS Sensors*, 3, 2566−2573.

Latha, R. S. dan Lakshmi, P. K., 2012, Electronic tongue: An Analytical Gustatory Tool, *Journal of Advanced Pharmaceutical Technology and Research*, 3(1), pp. 3–8.

Lu, L., Hu, X. dan Zhu, Z., 2017, Biomimetic Sensors and Biosensors for Qualitative and Quantitative Analyses of Five Basic Tastes, *Trends in Analytical Chemistry*, 87, pp. 58–70.

Magar, H. S., Hassan, R. Y. A. dan Mulchandani, A., 2021, Electrochemical Impedance Spectroscopy (EIS): Principles, Construction, and Biosensing Applications, *Sensors*, 21(19).

Marx, Í. M. G., Rodrigues, N., Dias, L. G., Veloso, A. C. A., Pereira, J. A., Drunkler, D. A. dan Peres, A. M., 2017, Quantification of Table Olives' Acid, Bitter and Salty Tastes Using Potentiometric Electronic Tongue Fingerprints, *Lwt*, 79, pp. 394–401.

Mathur, A., Roy, S., Nagabooshanam, S., Wadhwa, S. dan Dubey, S., 2022, Effect of Gap Size of Gold Interdigitated Electrodes on The Electrochemical Immunosensing of Cardiac Troponin-I for Point-of-Care Applications, *Sensors and Actuators Reports*, 4(March), p. 100114.

MicruX Technologies Catalogue (2021)

Medeiros, E. S., Gregório, R., Martinez, R. A. dan Mattoso, L. H. C., 2009, A Taste Sensor Array Based on Polyaniline Nanofibers for Orange Juice Quality Assessment, *Sensor Letters*, 7(1), pp. 24–30.

Morais, T. C. B., Rodrigues, D. R., De Carvalho Polari Souto, U. T. dan Lemos, S. G., 2019, A Simple Voltammetric Electronic Tongue for The Analysis of Coffee Adulterations, *Food Chemistry*, 273(October 2017), pp. 31–38.

Nag, A. dan Mukhopadhyay, S. C., 2018, Fabrication and Implementation of Printed Sensors for Taste Sensing Applications, *Sensors and Actuators, A: Physical*, 269, pp. 53–61.

National Center for Biotechnology Information., 2022, PubChem Compound Summary for CID 2682, 1-Hexadecanol, *PubChem*, *https://pubchem.ncbi.nlm.nih.gov/compound/1-Hexadecanol*, diakses pada tanggal 23 Desember, 2022.

Poghossian, A., Geissler, H. dan Schöning, M. J., 2019, Rapid Methods and Sensors for Milk Quality Monitoring and Spoilage Detection, *Biosensors and Bioelectronics*, 140(January), p. 111272.

UNIVERSITAS
GADJAH MADA
PENGEMBANGAN SENSOR RASA ASIN IMPEDIMETRIK MENGGUNAKAN INTERDIGITATED ELECTRODE TERMODIFIKASI MEMBRAN LIPID 1-HEXADECANOL
Annisa Wachida Qurrata A'Yun, Prof. Dr. Eng. Kuwat Triyana, M.Si.
Universitas Gadjah Mada, 2023 | Diunduh dari http://etd.repository.ugm.ac.id/

Pozo-Ayuso, D. F., Castaño-Álvarez, M. dan Fernández-la-Villa, A., 2020, Enhancing Electrochemical Performance by Using Redox Cycling with Interdigitated Electrodes, *Laboratory Methods in Dynamic Electroanalysis*. Elsevier Inc.

Queiroz, D. P., Florentino, A. D. O., Bruno, J. C., Da Silva, J. H. D., Riul, A. dan Giacometti, J. A., 2016, The Use of An E-Tongue for Discriminating Ethanol/Water Mixtures and Determination of Their Water Content, *Sensors and Actuators, B: Chemical*, 230, pp. 566–570.

Riul, A., Malmegrim, R. R., Fonseca, F. J. dan Mattoso, L. H. C., 2003, An Artificial Taste Sensor Based on Conducting Polymers, *Biosensors and Bioelectronics*, 18(11), pp. 1365–1369.

Riul, A., De Sousa, H. C., Malmegrim, R. R., Dos Santos, D. S., Carvalho, A. C. P. L. F., Fonseca, F. J., Oliveira, O. N. dan Mattoso, L. H. C., 2004, Wine Classification by Taste Sensors Made From Ultra-Thin Films and Using Neural Networks, *Sensors and Actuators, B: Chemical*, 98(1), pp. 77–82.

Rodrigues, D. R., Fragoso, W. D. dan Lemos, S. G., 2021, Electronic Tongue Based on A Single Impedimetric Sensor and Complex Numbers-Supervised Pattern Recognition, *Electrochimica Acta*, 397, p. 139312.

Ross, C. F., 2021, Considerations of The Use of The Electronic Tongue in Sensory Science, *Current Opinion in Food Science*, 40, pp. 87–93.

Sharma, G., Kumar, S., Kumar, A., Sharma, A., Kumar, R., Kaur, R. dan Bhondekar, A. P., 2015, Development of Lipid Membrane Based Taste Sensors for Electronic Tongue, *Procedia Computer Science*, 70, pp. 146–152.

Szwacki, J., Lisowska-Oleksiak, A. dan Szpakowska, M., 2006, Polymer Membranes Loaded with Lipids for Taste Sensing: Electrochemical Impedance Spectroscopy Studies, *Desalination*, 198(1–3), pp. 1–7.

Tahara, Y. dan Toko, K., 2013, Electronic Tongues-A Review, *IEEE Sensors Journal*, 13(8), pp. 3001–3011.

Toko, K.,1996, Taste Sensor with Global Selectivity, *Materials Science and Engineering C 4*, pp. 69-82.

Toko, K., Akiyama, H., Chishaki, K., Ezaki, S., Iyota, T. dan Yamafuji, K., 1997, Detection of Taste Substances Using Impedance Change in Lipid/Polymer Membranes, *Sensors and Materials*, 9(5), pp. 321–329.

Toko, K., 2000a, Biomimetic Sensor Technology, *Measurement Science and Technology*, 12(2), pp. 10-19.

Toko, K., 2000b, Taste Sensor, *Sensors and Actuators B 64*, pp. 205–215.

Toko, K., Tahara, Y., Habara, M., Kobayashi, Y. dan Ikezaki, H., 2016, Taste Sensor: Electronic Tongue with Global Selectivity, *Essentials of Machine Olfaction and Taste*, (February 2017), pp. 87–174.

Varshney, M. dan Li, Y., 2009, Biosensors and Bioelectronics Interdigitated Array

UNIVERSITAS
GADJAH MADA
PENGEMBANGAN SENSOR RASA ASIN IMPEDIMETRIK MENGGUNAKAN INTERDIGITATED ELECTRODE TERMODIFIKASI MEMBRAN LIPID 1-HEXADECANOL
Annisa Wachida Qurrata A'Yun, Prof. Dr. Eng. Kuwat Triyana, M.Si.
Universitas Gadjah Mada, 2023 | Diunduh dari http://etd.repository.ugm.ac.id/

Microelectrodes Based Impedance Biosensors for Detection of Bacterial Cells, 24, pp. 2951–2960.

Vlasov, Y., Legin, A., Rudnitskaya, A., Di Natale, C. dan D'Amico, A., 2005, Nonspecific Sensor Arrays ("Electronic Tongue") for Chemical Analysis of Liquids: (IUPAC Technical Report), *Pure and Applied Chemistry*, 77(11), pp. 1965–1983.

Wahyono, T., 2021, "Fundamental of Python for Machine Learning", Gava Media, Yogyakarta.

Wang, J., Zhu, L., Zhang, W. dan Wei, Z., 2019, Application of The Voltammetric Electronic Tongue Based on Nanocomposite Modified Electrodes for Identifying Rice Wines of Different Geographical Origins, *Analytica Chimica Acta*, 1050, pp. 60–70.

Wei, Z. dan Wang, J., 2013, The Evaluation of Sugar Content and Firmness of Non-Climacteric Pears Based on Voltammetric Electronic Tongue, *Journal of Food Engineering*, 117(1), pp. 158–164.

Wu, X., Tahara, Y., Yatabe, R. dan Toko, K., 2020, Taste Sensor: Electronic Tongue with Lipid Membranes, *Analytical Sciences*, 36(2), pp. 147–159.

Zhu, L., Wang, X., Han, Y., Cai, Y., Jin, J., Wang, H., Xu, L. dan Wu, R., 2018, A PVC/Polypyrrole Sensor Designed for Beef Taste Detection using Electrochemical Methods and Sensory Evaluation, *Meat Science*, 137 (November 2017), pp. 1–8.