

DAFTAR PUSTAKA

- Aalim, H., Belwal, T., Jiang, L., Huang, H., Meng, X., & Luo, Z. (2019). *Extraction optimization, antidiabetic and antiglycation potentials of aqueous glycerol extract from rice (*Oryza sativa L.*) bran. LWT*, 103, 147–154. <https://doi.org/10.1016/j.lwt.2019.01.006>
- Abiodun Oa, A. R. (2014). *Physical and Functional Properties of Trifoliolate Yam Flours as Affected by Harvesting Periods and Pre-treatment Methods. Journal of Food Processing & Technology*, 05(02). <https://doi.org/10.4172/2157-7110.1000302>
- Afidin, M. N., Hendrawan, Y., & Yulianingsih, R. (2014). Analisis Sifat Fisik dan Kimia pada Pembuatan Tepung Umbi Uwi Ungu (*Discorea alata*), Uwi Kuning (*Discorea alata*) dan Uwi Putih (*Discorea alata*). *Jurnal Keteknikian Pertanian Tropis dan Biosistem*. 2(3).
- Ajiid, M. D. S. A., Wulandari, S., Apriliyanti, F., & Alamsyah, F. (2022). Profil Umbi Uwi (*Dioscorea Spp.*) Dan Potensi Aplikasi Pada Beragam Produk Pangan: Review. *Jurnal Agrosains: Karya Kreatif dan Inovatif*, 7(1).
- Algofar, M. A. A., Rosmansyah, H. F., Rum, I. A., Muhsinin, S., & Fatmawati, F. (2021). Artikel Review: Study a-amilase dari Mikroba Serta Pemanfaatannya dalam Pembuatan Maltodekstrin. *Indonesian Natural Research Pharmaceutical Journal*, 6(1), 102–117.
- Al-Shaheen, S. J. A., Kaskoos, R. A., Hamad, K. J., & Ahamad, J. (2013). *In-vitro antioxidant and α -amylase inhibition activity of *Cucurbita maxima**. 2(2), 121–124.
- Andriani, D., & Murtisiwi, L. (2018). Penetapan Kadar Fenolik Total Ekstrak Etanol Bunga Telang (*Clitoria Ternatea L.*) Dengan Spektrofotometri UV Vis. *Cendekia Journal of Pharmacy*, 2(1), 32–91.

- Anggraeni, N., Darmanto, Y. S., & Riyadi, P. H. (2016). Pemanfaatan Nanokalsium Tulang Ikan Nila (*Oreochromis niloticus*) pada Beras Analog dari Berbagai Macam Ubi Jalar (*Ipomoea batatas L.*). *Jurnal Aplikasi Teknologi Pangan*, 5(4), Article 4. <https://doi.org/10.17728/jatp.187>
- Anwar, F., Latif, S., Przybylski, R., Sultana, B., & Ashraf, M. (2007). *Chemical Composition and Antioxidant Activity of Seeds of Different Cultivars of Mungbean*. *Journal of Food Science*, 72(7), S503–S510. <https://doi.org/10.1111/j.1750-3841.2007.00462.x>
- Astuti, R. (2022). Analisis komposisi zat gizi dan antioksidan beberapa varietas labu kuning (*Cucurbita moschata* Durh). *Jurnal Agrotek*, 16(4), 544–552.
- Banerjee, A., & Singh, J. (2020). *Remodeling adipose tissue inflammasome for type 2 diabetes mellitus treatment: Current perspective and translational strategies*. *Bioengineering & Translational Medicine*, 5(2), e10150. <https://doi.org/10.1002/btm2.10150>
- Bendri, P. D., Antarini, A. A. N., & Dewi, N. N. A. (2020). Pengaruh Komposisi Tepung Mocaf dan Labu Kuning Terhadap Karakteristik Nugget Mocaf Labu Kuning. *Jurnal Ilmu Gizi: Journal of Nutrition Science*, 9(1), 52–58.
- Budi, F. S., Hariyadi, P., Budijanto, S., & Syah, D. (2017). Kristalinitas Dan Kekerasan Beras Analog Yang Dihasilkan Dari Proses Ekstrusi Panas Tepung Jagung. *Jurnal Teknologi dan Industri Pangan*, 28(1), 46–54. <https://doi.org/10.6066/jtip.2017.28.1.46>
- Chen, M.-X., Zheng, S.-X., Yang, Y.-N., Xu, C., Liu, J.-S., Yang, W.-D., Chye, M.-L., & Li, H.-Y. (2014). *Strong seed-specific protein expression from the Vigna radiata storage protein 8SGa promoter in transgenic Arabidopsis seeds*. *Journal of Biotechnology*, 174, 49–56. <https://doi.org/10.1016/j.jbiotec.2014.01.027>

- Damat, D., Tain, A., Siskawardani, D. D., Winarsih, S., & Rastikasari, A. (2020). *Teknologi Proses Pembuatan Beras Analog Fungsional*. Universitas Muhammadiyah Malang.
- DeGarmo, E. P., Sullivan, W. G., & Canada, J. (1984). *Engineering Economics*. Mc Milan Publishing Company.
- Deneen, Karen M. von, and Malgorzata A. Garstka. 2022. "Neuroimaging Perspective in Targeted Treatment for Type 2 Diabetes Melitus and Sleep Disorders." *Intelligent Medicine*, May. <https://doi.org/10.1016/j.imed.2022.05.003>.
- Dhiman, A. K., Kd, S., & Attri, S. (2009). *Functional constituents and processing of pumpkin: A review. J Food Sci Technol*.1(1): 1-10
- Dunna, V., & Roy, B. (2013). Rice (*Oryza sativa L.*). *Journal In Rice (Oryza sativa L.)* 1(1): 71–118.
- Efendy, I., & Syamsul, D. (2019). Faktor Yang Berhubungan Tingkat Konsumsi Air Bersih Pada Rumah Tangga di Kecamatan Peudada Kabupaten Bireun. *Jurnal Biology Education*. 7(2): 110-126.
- Fathonah, R., Indriyanti, A., & Kharisma, Y. (2014). Labu Kuning (*Cucurbita moschata* Durch.) untuk Penurunan Kadar Glukosa Darah Puasa pada Tikus Model Diabetik. *Global Medical and Health Communication*. 2(1), 27–33.
- Fatimah, Restyana Noor. 2015. Diabetes Melitus Tipe 2. *Jurnal Majority*. 4(5): 93-101.
- Handayani, D., Pramono, Y. B., & Nurwantoro. (2020). Karakteristik Kadar Air, Kadar Serat Dan Rasa Beras Analog Ubi Jalar Putih Dengan Penambahan Tepung Labu Kuning. *Jurnal Teknologi Pangan*. 6(2), 14-18.
- Hermala Anindita, T., Kusnandar, F., Budijanto, S., (2020). Sifat Fisikokimia Dan Sensoris Beras Analog Jagung Dengan Penambahan Tepung Kedelai.

Jurnal Teknologi dan Industri Pangan, 31(1), 29–37.

<https://doi.org/10.6066/jtip.2020.31.1.29>

- Hernawan, E., & Meylani, V. (2016). Analisis Karakteristik Fisikokimia Beras Putih, Beras Merah, Dan Beras Hitam (*Oryza sativa* L., *Oryza nivara* dan *Oryza sativa* L. *indica*). *Jurnal Kesehatan Bakti Tunas Husada: Jurnal Ilmu-ilmu Keperawatan, Analisis Kesehatan dan Farmasi*, 15(1), 79. <https://doi.org/10.36465/jkbth.v15i1.154>
- Jideani, A. I. O., Silungwe, H., Takalani, T., Omolola, A. O., Udeh, H. O., & Anyasi, T. A. (2021). Antioxidant-rich natural fruit and vegetable products and human health. *International Journal of Food Properties*, 24(1), 41–67. <https://doi.org/10.1080/10942912.2020.1866597>
- Kanetro, B., Pujimulyani, D., Luwihana, S., & Sahrah, A. (2018). Karakteristik Beras Analog Berindeks Glisemik Rendah dari Oyek dengan Penambahan Berbagai Jenis Kacang-Kacangan. *AgriTech*, 37(3), 256. <https://doi.org/10.22146/agritech.31538>
- Kartika B, Hastuti, P dan Supatono, W. 1988. *Pedoman Uji Inderawi Bahan Pangan*. Universitas Gadjah Mada: Yogyakarta
- Kaur, N., Kumar, V., Nayak, S. K., Wadhwa, P., Kaur, P., & Sahu, S. K. (2021). *Alpha-amylase as molecular target for treatment of diabetes mellitus: A comprehensive review*. *Chemical Biology & Drug Design*, 98(4), 539–560. <https://doi.org/10.1111/cbdd.13909>
- Kemenkes RI. (2020). Infodatin (Pusat Data dan Informasi Kementerian Kesehatan RI).
- Kinasih, N. A., & Saptadi, D. (2017). Variasi Karakter Morfologi Tanaman Uwi (*Dioscorea Alata* L.) Di Kabupaten Tuban dan Malang. 5(1), 971– 980.
- Kulczyński, B., Sidor, A., & Gramza-Michałowska, A. (2020). *Antioxidant potential of phytochemicals in pumpkin varieties belonging to*

- Cucurbita moschata* and *Cucurbita pepo* species. *CyTA - Journal of Food*, 18(1), 472–484. <https://doi.org/10.1080/19476337.2020.1778092>
- Kulaitien, J., Hamulka, J., & Juknevi, E. (2014). *Chemical composition of pumpkin (*Cucurbita maxima* D.) flesh flours used for food*.
- Kurniasari, I., Kusnandar, F., & Budijanto, S. (2020). Karakteristik Fisik Beras Analog Instan Berbasis Tepung Jagung dengan Penambahan k-Karagenan dan Konjak. *agriTECH*, 40(1), 64. <https://doi.org/10.22146/agritech.47491>
- Kusumayanti, H., Sumardiono, S., & Jos, B. (2022). *The combined effect of three raw materials composition on the production of analog rice: Characteristics properties Materials Today: Proceedings*, 63, S418–S423. <https://doi.org/10.1016/j.matpr.2022.04.087>
- Kwon, Y.-I., Apostolidis, E., Kim, Y.-C., & Shetty, K. (2007). *Health Benefits of Traditional Corn, Beans, and Pumpkin: In Vitro Studies for Hyperglycemia and Hypertension Management*. *Journal of Medicinal Food*, 10(2), 266– 275. <https://doi.org/10.1089/jmf.2006.234>
- Lebot, V., Lawac, F., & Legendre, L. (2023). *The greater yam (*Dioscorea alata* L.): A review of its phytochemical content and potential for processed products and biofortification*. *Journal of Food Composition and Analysis*, 115, 104987. <https://doi.org/10.1016/j.jfca.2022.104987>
- Liem, J. L., Sugiarti, S., Faisalma, M. W., & Handoko, Y. A. (2020). Karakteristik Dan Uji Organoleptik Selai Labu Kuning. 22(1), 22–29.
- Lim, T. K. (2013). *Oryza sativa*. In T. K. Lim, *Edible Medicinal and Non-Medicinal Plants* (301–349). Springer Netherlands. https://doi.org/10.1007/978-94-007-5653-3_17
- Liu, G., Liang, L., Yu, G., & Li, Q. (2018). *Pumpkin polysaccharide modifies the gut microbiota during alleviation of type 2 diabetes in rats*. *International Journal of Biological Macromolecules*, 115, 711–717. <https://doi.org/10.1016/j.ijbiomac.2018.04.127>

- Mahmood, N. (2016). *A review of α -amylase inhibitors on weight loss and glycemic control in pathological state such as obesity and diabetes. Comparative Clinical Pathology*, 25(6), 1253–1264. <https://doi.org/10.1007/s00580-014-1967-x>
- Mathias, D. (2016). *Staying Healthy From 1 to 100*. Springer Berlin Heidelberg. <https://doi.org/10.1007/978-3-662-49195-9>
- Mishra, A., Mishra, H. N., & Srinivasa Rao, P. (2012). *Preparation of rice analogues using extrusion technology. International Journal of Food Science & Technology*, 47(9), 1789–1797. <https://doi.org/10.1111/j.1365-2621.2012.03035.x>
- Mohanty, S., Wassmann, R., Nelson, A., Moya, P., & Jagadish, S. V. K. (2012). *Significance for food security and vulnerability. In Rice and climate change: Significance for food security and vulnerability (pp. 1–11)*. International Rice Research Institute (IRRI).
- Mohtar, R. H., & Fares, A. (2022). *The Future of Water for Food. Frontiers in Sustainable Food Systems*, 6, 880767. <https://doi.org/10.3389/fsufs.2022.880767>
- Necas, J., & Bartosikova, L. (2013). *Carrageenan: A review. Veterinární Medicina, VETMED*. 58(4), 187–205. <https://doi.org/10.17221/6758>
- Noviasari, S., Kusnandar, F., Setiyono, A., & Budijanto, S. (2022). *Antioxidant activity and inhibition of α -amylase and α -glucosidase in fermented black rice bran-based analog rice. AIMS Agriculture and Food*, 7(1), 61–72. <https://doi.org/10.3934/agrfood.2022004>
- Noviasari, S., Kusnandar, F., & Setiyono, A. (2017). Karakteristik Fisik, Kimia, dan Sensori Beras Analog Berbasis Bahan Pangan Non Beras. *Jurnal Teknologi Industri Pertanian*. 26(1). 1-11

- Ozougwu, Ozougwu. 2013. "The pathogenesis and pathophysiology of type 1 and type 2 diabetes mellitus." *Journal of Physiology and Pathophysiology* 4 (4): 46–57. <https://doi.org/10.5897/JPAP2013.0001>
- Prawiranegara, D. (1996). *Daftar Komposisi Bahan Makanan*. Direktorat Gizi Departemen Kesehatan RI.
- Provesi, J. G., & Amante, E. R. (2015). *Carotenoids in Pumpkin and Impact of Processing Treatments and Storage*. In *Processing and Impact on Active Components in Food* (pp. 71–80). Elsevier. <https://doi.org/10.1016/B978-0-12-404699-3.00009-3>
- Pudjihastuti, I., Sumardiono, S., Supriyo, E., & Kusumayanti, H. (2019). *Analog rice characteristics made from sago flour and arrowroot flour in supporting food diversification*. *AIP Conference Proceedings*. 1-5 <https://doi.org/10.1063/1.5112408>
- Purnamasari, I. W., & Putri, W. D. R. (2015). Pengaruh Penambahan Tepung Labu Kuning Dan Natrium Bikarbonat Terhadap Karakteristik Flake Talas. *Jurnal Pangan dan Agroindustri*. 3(4): 1375-1385
- Rahman, Md. S., Hasan, Md. S., Nitai, A. S., Nam, S., Karmakar, A. K., Ahsan, Md. S., Shiddiky, M. J. A., & Ahmed, M. B. (2021). *Recent Developments of Carboxymethyl Cellulose*. *Polymers*, 13(8), 1345. <https://doi.org/10.3390/polym13081345>
- Ratnasari, D., Tulaini, S., Setyawan, H., & Suari, N. M. I. P. (2019). Studi Pemilihan Proses Pabrik Gliserol Monostearat. *Jurnal Teknik ITS*, 8(1), F7–F11. <https://doi.org/10.12962/j23373539.v8i1.41477>
- Saeroji, S. Agus, S, & Kanetro, B. (2023). Pengaruh Variasi Rasio Labu Kuning (*Cucurbita moschata*), Tapioka Dan Tempe Serta Suhu Pengeringan Terhadap Sifat Fisik, Kimia, Dan Tingkat Kesukaan Bubur Instan. *Prosiding Seminar Nasional Mini Riset Mahasiswa*, 2(1), 99–112.

- Rao, R. R., Tiwari, A. K., Reddy, P. P., Babu, K. S., Ali, A. Z., Madhusudana, K., & Rao, J. M. (2009). *New furano flavonoids, intestinal α -glucosidase inhibitory, and free radical (DPPH) scavenging, activity from antihyperglycemic root extract of *Derris indica* (Lam). *Journal Bioorganic Medical Chemistry*, 17(14), 5170-5175.*
- Rice | *Description, History, Cultivation, & Uses* | Britannica. (2023). Retrieved March 10, 2023, from <https://www.britannica.com/plant/rice>
- Sari, I. P., Lukitaningsih, E., & Setiawan, I. M. (2013). *Glycaemic Index Of Uwi, Gadung, And Talas Which Were Given On Rat*. 18(3), 127– 131.
- Sekhon-Loodu, S., & Rupasinghe, H. P. V. (2019). Evaluation of Antioxidant, *Antidiabetic and Antiobesity Potential of Selected Traditional Medicinal Plants. *Frontiers in Nutrition*, 6, 53.*
<https://doi.org/10.3389/fnut.2019.00053>
- Seong, H.-Y., & Kim, M. (2021). *Enhanced protein quality and antioxidant activity of fermented Brown rice with *Gryllus bimaculatus**. *LWT*, 150, 111948. <https://doi.org/10.1016/j.lwt.2021.111948>
- Serventi, L., Sachleben, J., & Vodovotz, Y. (2011). *Soy addition improves the texture of microwavable par-baked pocket-type flat doughs. *Journal of Thermal Analysis and Calorimetry*, 106(1), 117–121.*
<https://doi.org/10.1007/s10973-011-1415-y>
- Shahidi, F. (2015). *Antioxidants. In Handbook of Antioxidants for Food Preservation*. 1–14. Elsevier. <https://doi.org/10.1016/B978-1-78242-089-7.00001-4>
- Slamet, A., Kanetro, B., & Setiyoko, A. (2021). *The Study of Physic Chemical Properties and Preference Level of Instant Porridge Made of Pumpkin and Brown Rice. *International Journal on Food, Agriculture and Natural Resources*, 2(2), 20–26.* <https://doi.org/10.46676/ij-fanres.v2i2.29>

- Soviana, E & Maenasari, D. (2019). Asupan Serat, Beban Glikemik dan Kadar Glukosa Darah pada Pasien Diabetes Melitus Tipe 2. *Jurnal Kesehatan*. 12(1): 19-29
- Teixeira-Lemos, Edite, Sara Nunes, Frederico Teixeira, and Flávio Reis. 2011. "Regular Physical Exercise Training Assists in Preventing Type 2 Diabetes Development: Focus on Its Antioxidant and Anti-Inflammatory Properties." *Cardiovascular Diabetology* 10 (1): 12. <https://doi.org/10.1186/1475-2840-10-12>
- Theafelicia, Z., & Narsito Wulan, S. (2023). Perbandingan Berbagai Metode Pengujian Aktivitas Antioksidan (DPPH, ABTS dan FRAP) pada Teh Hitam (*Camellia sinensis*). *Jurnal Teknologi Pertanian*, 24(1), 35–44. <https://doi.org/10.21776/ub.jtp.2023.024.01.4>
- Umanailo, M. C. B. (2018). Ketahanan Pangan Lokal dan Diversifikasi Konsumsi Masyarakat. *Jurnal Sosial-Ekonomi Pertanian dan Agribisnis* 12(1), 63–74.
- van Dam, R. M. (2020). *A Global Perspective on White Rice Consumption and Risk of Type 2 Diabetes*. *Diabetes Care*, 43(11), 2625–2627. <https://doi.org/10.2337/dci20-0042>
- von Deneen, K. M., & Garstka, M. A. (2022). *Neuroimaging perspective in targeted treatment for type 2 diabetes melitus and sleep disorders*. *Intelligent Medicine*. <https://doi.org/10.1016/j.imed.2022.05.003>
- Wahjuningsih, S. B., & Susanti, S. (2018). *Chemical, physical, and sensory characteristics of analog rice developed from the mocaf, arrowroot, and red bean flour*. *IOP Conference Series: Earth and Environmental Science*, 102, 012015. <https://doi.org/10.1088/1755-1315/102/1/012015>
- Wang, T., Jonsdottir, R., dan Olafsdottir, G. (2009). *Total phenolics compounds, radical scavenging and metal chelation of extracts from Icelandic seaweeds*. *Food Chemistry*. 116: 240-248.

- Werdhasari, A. (2014). *Peran Antioksidan Bagi Kesehatan*. 3(2), 59–68.
- Winarti, S., Djajati, S., Hidayat, R., & Jilian, L. (2018). Karakteristik Dan Aktivitas Antioksidan Beras Analog Dari Tepung Komposit (Gadung, Jagung, Mocaf) Dengan Penambahan Pewarna Angkak. *Jurnal Teknologi Pangan*, 12(1). <https://doi.org/10.33005/jtp.v12i1.1098>
- Winarti, S., & Saputro, E. A. (2013). Karakteristik Tepung Prebiotik Umbi Uwi (*Dioscorea spp*). *Jurnal Teknologi Pangan*. 8(1), 17–21.
- Wuryantoro, W. (2020). *The Potential of “Uwi” Plant (Dioscoreasp.) as a Non-Rice Alternative Food Material*. *Gontor AGROTECH Science Journal*, 6(3), 327. <https://doi.org/10.21111/agrotech.v6i3.4920>
- Xiao, Z., Storms, R., & Tsang, A. 2006. *A Quantitative Starchiodine Mmethod for Measuring Alpha-Amylase and Glucoamylase Activities*. *Analytical Biochemistry*, 146-148
- Yalindua, A., Manampiring, N., Waworuntu, F., & Yalindua, F. Y. (2021). *Physico-chemical exploration of Yam Flour (Dioscorea alata L.) as a raw material for processed cookies*. *Journal of Physics: Conference Series*, 1968(1), 012004. <https://doi.org/10.1088/1742-6596/1968/1/012004>
- Yuniyanti, D. N., Ismail, E., & Susilo, J. (2017). Pengaruh Penambahan Labu Kuning dan Kacang Hijau Ditinjau Dari Sifat Fisik, Organoleptik dan Kandungan Gizi Makanan Tradisional Nagasari. *Jurnal Teknologi Kesehatan (Journal of Health Technology)*, 13(2), Article 2. <https://doi.org/10.29238/jtk.v13i2.20>
- Yuwono, S. S., & Zulfiah, A. A. (2015). Formulasi Beras Analog Berbasis Tepung Mocaf Dan Maizena Dengan Penambahan Cmc Dan Tepung Ampas Tahu. *Jurnal Pangan Dan Agroindustri*,3(4) <https://jpa.ub.ac.id/index.php/jpa/article/view/270>
- Zdunic, G., Menkovic, N., Jadranin, M., Novakovic, M., Savikin, K., & Zivkovic, J. (2016). *Phenolic compounds and carotenoids in pumpkin fruit and*



UNIVERSITAS
GADJAH MADA

Karakteristik Fisikokimia dan Potensi Antidiabetes Secara In Vitro Beras Analog Tinggi Antioksidan Berbasis Umi Uwi (*Dioscorea alata*) dan Labu Kuning (*Cucurbita maxima*)

Darus Dina Imama, Dr. Ir. Priyanto Triwitono, M.P ; Wahyu Dwi Saputra, S.T.P, M.Agr.Sc., Ph.D

Universitas Gadjah Mada, 2024 | Diunduh dari <http://etd.repository.ugm.ac.id/>

related traditional products. Hemijska Industrija, 70(4), 429–433.

<https://doi.org/10.2298/HEMIND150219049Z>