UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Abrera, G. B., Diano, G., Tolentino, M. M., Gragasin, M. C. B., Cobar, M. L. C., Caraos, G., Guzman, Z. M. D., Solomon, H. M., Asaad, C. O., & Deocaris, C. C. (2025). Gamma Irradiation of Brown Rice: Effects of Dose, Variety, Paddy Age, and Packaging on Fungal Control, Shelf-Life and Post-Harvest Cost Estimate. *Journal of Food Quality and Hazards Control*, *12*(2), 127–138. https://doi.org/10.18502/jfqhc.12.2.18863

Adhamatika, A., Wijaya, R., Kurnia, E., Sari, N., Nurhayati, R., Nh, R., Susanto, A., & Khasanah, Y. (2017). Shelf Life Prediction for Canned Gudeg using Accelerated Shelf Life Testing (ASLT) Based on Arrhenius Method. *IOP Conference Series: Materials Science and Engineering*, *193*(1), 012025. https://doi.org/10.1088/1757-899X/193/1/012025

Ai, J., Witt, T., Cowin, G., Dhital, S., Turner, M. S., Stokes, J. R., & Gidley, M. J. (2025). Effect of packaging materials and temperature on water migration, thermal and textural properties of compacted rice cakes during storage. *Food Control*, *172*, 111177. https://doi.org/10.1016/j.foodhyd.2018.05.028

Albab, 17231061 Lia Ulul. (2020). *Pengujian Bahan Baku Klindamisin HCl Secara Kualitatif dan Kuantitatif di PT Ferron PAR Pharmaceuticals*. https://dspace.uii.ac.id/handle/123456789/28908

Annazhifah, N., Putri, N. N., Nafisah, A., & Rusmawati, D. A. (2024). ANALISIS PENGGUNAAN JENIS KEMASAN PLASTIK TERHADAP KARAKTERISTIK MUTU GIPANG SELAMA PENYIMPANAN. *Jurnal Teknologi Pangan Dan Gizi (Journal of Food Technology and Nutrition)*, *23*(2), 130–136. https://doi.org/10.33508/jtpg.v23i2.5444

Ardiyan, A., Febrian, S. P., Manik, R., Paratama, A., & Medan, P. N. (2025). STUDI KUALITATIF TENTANG STRATEGI MANAJEMEN GUDANG DALAM MENJAGA KUALITAS BERAS DI GUDANG 899. *Jurnal Keuangan Publik Dan Perekonomian Berkelanjutan*, *9*(4). https://journal.fexaria.com/j/index.php/jkppb/article/view/757

Aruan, N. M., Pd, S., Si, M., Maranatha Sihombing, F., Albert, D., & Panggabean, H. (2021). PREDIKSI TINGGI CURAH HUJAN DAN KECEPATAN ANGIN BERDASARKAN DATA CUACA DENGAN PENERAPAN ALGORITMA ARTIFICIAL NEURAL NETWORK (ANN). *PROSIDING SEMINASTIKA*, *3*(1), 1–7. https://doi.org/10.47002/SEMINASTIKA.V3I1.237

Asaad, M., Samrin, & Warda. (2020). Field resistant test of new superior varieties of rice in lowland irrigation agroecosystem against rice blast disease. *IOP Conference Series: Earth and Environmental Science*, *484*(1), 012103. https://doi.org/10.1088/1755-1315/484/1/012103

Assis, F. R., Morais, R. M. S. C., & Morais, A. M. M. B. (2018). Rehydration of osmotically pre-treated apple cubes dried by hot air, microwave, and freeze-drying. *Acta Alimentaria*, *47*(3), 315–323. https://doi.org/10.1556/066.2018.47.3.7

Astuti, B., Raya, N., Maxianus, K., & Sri Rahayu, E. (2023). Pengaruh suhu dan tempat penyimpanan terhadap kadar air dan mutu organoleptik biskuit subtitusi tepung belut (Monopterus albus zuieuw). *AcTion: Aceh Nutrition*

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Journal, *8*(1), 81–89. https://doi.org/10.30867/action.v8i1.811

Azad, M., Alizadeh, N., Jahromi, A. K., Torkamani, A. E., Baghaei, A., Abarghuei, S. M., & Faezeh. (2023). Effects of thermodynamic properties of rice and ambient conditions on moisture migration during storage at naturally ventilated warehouses. *Arabian Journal of Chemistry*, *16*(7), 104761. https://doi.org/10.1016/j.arabjc.2023.104761

Bapanas, B. P. N. (2026). *Badan Pangan Nasional - Surplus Beras Meningkat 243 Persen dalam 4 Tahun Terakhir, Indonesia Swasembada Beras - Blog*. https://badanpangan.go.id/blog/post/surplus-beras-meningkat-243-persen-dalam-4-tahun-terakhir-indonesia-swasembada-beras

Basunia, M. A., & Abe, T. (1998). THIN-LAYER DRYING CHARACTERISTICS OF ROUGH RICE AT LOW AND HIGH TEMPERATURES. *Drying Technology*, *16*(3–5), 579–595. https://doi.org/10.1080/07373939808917425

Belefant-Miller, H. (2009). Induced postharvest yellowing in southern U.S. rice cultivars. *Cereal Chemistry*, *86*(1), 67–69. https://doi.org/10.1094/CCHEM-86-1-0067

BSN, B. S. N. (2020). *Sni 6128 2020 Beras*. https://www.scribd.com/document/529216291/SNI-6128-2020-BERAS

Budijanto, S. (2011). Produktivitas dan proses penggilingan padi terkait dengan pengendalian faktor mutu berasnya. *JURNAL PANGAN*. http://www.jurnalpangan.com/index.php/pangan/article/view/33

Budiwati, G. A. N., Kriswiyanti, E., & Ayu Astarini, I. (2019). Biological Aspects And Family Relationship Of Local Rice (Oryza sativa L.) In Wongaya Gede Village, Penebel, Tabanan Regency, Bali. *Journal of Biological Sciences*, *6*(2), 277–292. https://doi.org/10.24843/metamorfosa.v06.i02.p20

Cahya, P. T., Ramdhan, H., Ydiastuti, O. N., Fadhil, Silvia, Karakteristik FisikoKimia dan Mutu Tanak Beras Pandan Wangi, A., dan Ketan Putih Sebagai Kandidat Pangan Fungsional, R., Tri Cahyana, P., Hisyam Ramadhan, F., Oktavia Nur Yudiastuti, S., Riset Agro Industri, P., Riset dan Inovasi Nasional, B., Rekayasa Pangan, T., Teknologi Pertanian, J., & Negeri Jember, P. (2024). Analisis Karakteristik FisikoKimia dan Mutu Tanak Beras Pandan Wangi, Ramos dan Ketan Putih Sebagai Kandidat Pangan Fungsional: Analysis of Physical-Chemistry Characteristics and Quality of Pandan Wangi, Ramos, and Glutinous Rice as a Functional Food Can…. *Journal of Food Engineering*, *3*(2), 42–54. https://doi.org/10.25047/JOFE.V3I2.4696

Chen, Z., Wang, R., Li, X., Zhu, J., Xu, Y., & Liu, J. (2019). Sorption equilibrium moisture and isosteric heat of cold plasma treated milled rice. *Innovative Food Science & Emerging Technologies*, *55*, 35–47. https://doi.org/10.1016/j.ifset.2019.05.012

Dachlan, L. D. (2016). EVALUASI MUTU BERAS DI PENGGILINGAN PADI SKALA KECIL DI KABUPATEN SENTRA PRODUKSI PADI JAWA BARAT. *Dinas Tanaman Pangan Dan Hortikultura Jawa Barat*.

Delviani, Y., Lestari, S., Lestari, S. D., & Ridhowati, S. (2021). KAJIAN MUTU DAN DAYA SIMPAN DENDENG UDANG PUTIH (Penaeus merguensis) SELAMA PENGEMASAN DAN PENYIMPANAN SUHU RUANG.

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Agrointek : Jurnal Teknologi Industri Pertanian, *15*(2), 608–616. https://doi.org/10.21107/agrointek.v15i2.9690

Dharma, M. S., Mukti, Y. P., Buschle-Diller, G., & Dewi, A. D. R. (2023). *Estimation of Shelf-life of Porang Glucomannan Analog Rice By Accelerated Shelf-life Testing (ASLT) Method*. 58–63. https://doi.org/10.2991/978-94-6463-322-1_7

Dhokne, P., Tirmanwar, Swapnil Shivani, W., Ragini, D., Akash, S., Rutuja, T. D., Pratik, T., Swapnil, W., Shivani, D., Ragini, S., Akash, T., & Rutuja. (2025). Comprehensive Review on Rice (Oryza sativa L.): Characteristics, Quality, and Applications. *International Journal of Pharmaceutical Sciences*, *03*(01), 2105–2114. https://doi.org/10.5281/zenodo.14737232

Fachruri, M., Muhidong, J., & Sapsal, M. T. (2019). Analysis of the Effect of Temperature and Humidity of Room on Rice Seed Water Content in PT. Sang Hyang Seri (Persero). *Jurnal Agritechno*, *12*(2), 131–137. https://doi.org/10.20956/at.v0i0.221

Fahroji, F., & Hendri. (2017). Evaluasi Mutu Beras Pratanak . *Prosiding Seminar Nasional Lahan Suboptimal*.

Fan, J., Siebenmorgen, T. J., & Yang, W. (2000). A STUDY OF HEAD RICE YIELD REDUCTION OF LONG- AND MEDIUM-GRAIN RICE VARIETIES IN RELATION TO VARIOUS HARVEST AND DRYING CONDITIONS. *Transactions of the ASABE*, *43*(6), 1709–1714. https://doi.org/10.13031/2013.3072

FAO, F. and A. O. of the U. N. (2021). *In Brief The State of Food and Agriculture* . https://openknowledge.fao.org/server/api/core/bitstreams/1e61f82a-618c-467a-a37f-545580094a1d/content

Fitriani, R., Muliana, R., & Nurdin, R. (2025). Analisis Proses Penyaluran Gabah hingga Distribusi Beras oleh Perum Bulog Cabang Sidrap. *Jurnal E-Bussiness Institut Teknologi Dan Bisnis Muhammadiyah Polewali Mandar*, *5*(2), 107–121. https://doi.org/10.59903/jebitbmp.v5i2.204

Gabriell, M., Kalsum, U., Ali, U., & Mahardhika, B. P. (2024). PENGARUH JENIS KEMASAN DAN UMUR SIMPAN DEDAK PADI TERHADAP SUDUT TUMPUKAN DAN AKTIVITAS AIR. *Dinamika Rekasatwa: Jurnal Ilmiah (e-Journal)*, *7*(1). https://jim.unisma.ac.id/index.php/fapet/article/view/23629

Hadiati, N., Rohmayanti, T., Studi Teknologi Pangan, P., Ilmu Pangan Halal, F., Djuanda, U., & Korespondensi, P. (2022). PENGGUNAAN KEMASAN PLASTIK POLIETILEN BIODEGRADABLE TERHADAP PENDUGAAN UMUR SIMPAN GULA KELAPA PADA SUHU RUANG. *Pro Food*, *8*(2), 83–92. https://doi.org/10.29303/profood.v8i2.265

Hasbullah, R. (Rokhani), & Dewi, A. R. (Anggitha). (2009). Kajian Pengaruh Konfigurasi Mesin Penggilingan terhadap Rendemen dan Susut Giling Beberapa Varietas Padi. *Jurnal Keteknikan Pertanian*, *23*(2), 21579. https://www.neliti.com/publications/21579/

Hawa, L. C., Setiawan, W. P., Mustofa, A., Keteknikan, A. J., Teknologi, P.-F., Brawijaya, P.-U., Veteran, J., & Korespondensi, P. (2018). APLIKASI TEKNIK PENYIMPANAN MENGGUNAKAN PENGEMAS VAKUM

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

PADA BERBAGAI JENIS BERAS. *Journal of Tropical Agricultural Engineering and Biosystems - Jurnal Keteknikan Pertanian Tropis Dan Biosistem*, *6*(2), 145–156. https://jkptb.ub.ac.id/index.php/jkptb/article/view/467

Hendrawan, H., Ahmad, Y., Ary, Djoyowasito, M., Marantika, G., & Eka. (2016). Pengkajian Beras Pecah Kulit (Brown Rice) Dalam Kemasan Vakum (Vacuum Packaging) Berdasarkan Ketebalan Plastik Kemasan Jenis Nylon. *Journal of Tropical Agricultural Engineering and Biosystems - Jurnal Keteknikan Pertanian Tropis Dan Biosistem*, *4*(3), 250–261. https://jkptb.ub.ac.id/index.php/jkptb/article/view/385

Hendrawan, Y., Ahmad, A. M., Djoyowasito, G., & Marantika, M. E. (2016). Pengkajian Beras Pecah Kulit (Brown Rice) Dalam Kemasan Vakum (Vacuum Packaging) Berdasarkan Ketebalan Plastik Kemasan Jenis Nylon. *Journal of Tropical Agricultural Engineering and Biosystems - Jurnal Keteknikan Pertanian Tropis Dan Biosistem*, *4*(3), 250–261. https://jkptb.ub.ac.id/index.php/jkptb/article/view/385

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, Analis Kesehatan Dan Farmasi*, *15*(1), 79–91. https://doi.org/10.36465/jkbth.v15i1.154

Jason, E., & Romulo, A. (2025). Estimating the shelf life of instant turmeric rice seasonings with various turmeric concentrations through Accelerated Shelf Life Testing (ASLT). *IOP Conference Series: Earth and Environmental Science*, *1445*(1), 012076. https://doi.org/10.1088/1755-1315/1445/1/012076

Jones, M., Adams, J., Harriman, C., Miller, C., & Kamp, J. W. van der. (2015). Nutritional impacts of different whole grain milling techniques : A review of milling practices and existing data. *Cereal Foods World*, *60*(310), 130–139.

Jungtheerapanich, S., Tananuwong, K., & Anuntagool, J. (2017). Aging kinetics of low amylose rice during storage at ambient and chilled temperatures. *International Journal of Food Properties*, *20*(8), 1904–1912. https://doi.org/10.1080/10942912.2016.1223127

Kang, Y., Qiu, R., Jian, M., Wang, P., Xia, Y., Motevalli, B., Zhao, W., Tian, Z., Zhe Liu, J., Wang, H., Liu, H., Zhang, X., Kang, Y., Qiu, R., Jian, M., Xia, Y., Zhao, W., Wang, H., Liu, H., … Tian, Z. (2020). The Role of Nanowrinkles in Mass Transport across Graphene-Based Membranes. *Advanced Functional Materials*, *30*(32). https://doi.org/10.1002/ADFM.202003159

Karyadi, J. N. W., Bitoro, N., Iqbal, Yumeina, D., Hutabarat, O. S., Mursalim, & Junaedi, K. A. (2017). Determination of Changes of Amylose and Amylopectin Content of Paddy during Early Storage. *International Journal of Science and Research (IJSR)*, *6*(1), 2094–2097. https://doi.org/10.21275/art20164500

Kibar, H., Öztürk, T., & Esen, B. (2010). Efecto del contenido en humedad sobre las propiedades físicas y mecánicas del arroz (Oryza sativa L.). *Spanish Journal of Agricultural Research*, *8*(3), 741–749. https://doi.org/10.5424/sjar/2010083-1273

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Killa, Y. M., & Jawang, U. P. (2024). RESPON PADI GOGO (Oryza sativa L.) TERHADAP APLIKASI BIOCHAR SEKAM PADI DAN PUPUK KANDANG SAPI. *Jurnal Agro Indragiri*, *9*(1), 25–29. https://doi.org/10.32520/jai.v10i1.3087

Kuncoro, S., Sutiarso, L., Nugroho, J., & Masithoh, R. E. (2018). Kinetika Reaksi Penurunan Kafein dan Asam Klorogenat Biji Kopi Robusta melalui Pengukusan Sistem Tertutup Kinetics Reaction of Caffeine and Chlorogenic Acids Reduction of Robusta Coffee Beans by Steaming in. *Agritech*, *38*(1), 105–111.

Kusuma, B. S. (2015). Analisa Peramalan Permintaan Air Minum Dalam Kemasan Pada PT. XYZ Dengan Metode Least Square dan Standard Error of Estimate. *Industrial Engineering Journal*, *4*(1), 39–44. https://doi.org/10.29103/IEJ.V4I1.18483

Laguee, C., & Jenkins, B. M. (1991). Modeling pre-harvest stress-cracking of rice kernels part I. Development of a finite element model. *Transactions of the American Society of Agricultural Engineers*, *34*(4), 1797–1811. https://doi.org/10.13031/2013.31803

Lee, D. S., & Robertson, G. L. (2022). Shelf-life estimation of packaged dried foods as affected by choice of moisture sorption isotherm models. *Journal of Food Processing and Preservation*, *46*(3), e16335. https://doi.org/10.1111/JFPP.16335;REQUESTEDJOURNAL:JOURNAL:17454549;ISSUE:ISSUE:DOI

Lestari, P., Saidah, A., & Zumi. (2023). Analisis Preferensi Konsumen terhadap Atribut Beras di Kecamatan Cibeunying Kidul, Kota Bandung. *Agrikultura*, *34*(1), 28–36. https://doi.org/10.24198/agrikultura.v34i1.40305

Lusi Ernawati. (2022). *KAJIAN DASAR ADSORPSI DAN DIFUSI PADA MEDIA BERPORI - Lusi Ernawati - Google Books* (A. D. Nabila (ed.); First, Vol. 1). Penerbit Deepublish. https://books.google.co.id/books?hl=en&lr=&id=qidsEQAAQBAJ&oi=fnd&pg=PA3&dq=perbedaan+kelembaban+relatif+antara+bahan+dan+udara+dapat+menyebabkan+terjadinya+proses+desorpsi+maupun+adsorpsi+air+hingga+seimbang&ots=5-lZOkCnhL&sig=4vqvfXVAQ1fnryWJHeV9BtumV8w&redir_esc=y#v=onepage&q&f=false

Maftoon Azad, N., Alizadeh, A., Kazemiyan Jahromi, A., Ehsan Torkamani, A., Baghaei, S., & Mirazimi Abarghuei, F. (2023). Effects of thermodynamic properties of rice and ambient conditions on moisture migration during storage at naturally ventilated warehouses. *Arabian Journal of Chemistry*, *16*(7), 104761. https://doi.org/10.1016/j.arabjc.2023.104761

Makrifah, L. (2022). *UJI KETAHANAN BERAS DARI TUJUH VARIETAS PADI(Oryza sativa L) TERHADAP HAMA KUMBANGMONCONG BERAS (Sitophilus oryzae L) DI LABORATORIUM*.

Malik, A. (2017). *Pengembangan Padi Gogo*. BPTP Jateng/IAARD PRESS. https://repository.pertanian.go.id/handle/123456789/8750

Marpaung, I. (Irene), & Winarto, W. (Winarto). (2018). Pengaruh Pengembangan Karir terhadap Penilaian Prestasi Kerja (Studi Kasus pada PT. Pln (Persero)

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Wilayah Sumatera Utara). *Jurnal Ilmiah Methonomi*, *4*(1), 79–86. https://www.neliti.com/publications/460588/

Masatuneko, J. L., Susanty Artiningsih, P., Tandiliku, Y., Program, S., Budidaya, T., Pangan, P., Pertanian, Y. J., Missi, K., Merauke, P., & Selatan, I. (2025). PRODUKTIVITAS TANAMAN PADI (Oryza sativa L.) VARIETAS CIGEULIS, PANDAN WANGI DAN INPARI 32 DI KELURAHAN KELAPA LIMA KABUPATEN MERAUKE. *Jurnal Pertanian Terpadu Santo Thomas Aquinas*, *4*(1), 1–13. https://doi.org/10.5281/ZENODO.15674421

Milati, T. (1994). *Pembentukan komplek amilosa-lipida dan pengaruhnya terhadap sifat-sifat fisikokimia beras selama pengusangan (aging) gabah*.

Mio, Y., & Shuso, K. (2006). Determination of Shelf Life of Milled Rice Stored at Different Temperatures. *American Society of Agricultural and Biological Engineers*, *066210*. https://doi.org/10.13031/2013.21205

Mita, A. J. K., & Rahmatiyah, R. (2025). Pengaruh Durasi Penjemuran Terhadap Kualitas Gabah Padi pada Proses Pengeringan. *Botani : Publikasi Ilmu Tanaman Dan Agribisnis*, *2*(1), 191–198. https://doi.org/10.62951/botani.v2i1.179

Muthohharoh, N., Sasongko, L. A., & Awami, S. N. (2018). *PREFERENSI PETANI TERHADAP BEBERAPA VARIETAS PADI DI KECAMATAN BLORA KABUPATEN BLORA*. *12*(2), 80–86.

Ningsih, A. P. (2025). *MODEL KINETIKA SIFAT FISIK BERAS PECAH KULIT DALAM KEMASAN DENGAN VARIASI JENIS DAN KETEBALAN SERTA KELEMBAPAN RELATIF RUANG PENYIMPANAN*.

Ninsix, R., Azima, F., Novelina, N., & Nazir, N. (2018). METODE PENETAPAN TITIK KERITIS, DAYA SIMPAN DAN KEMASAN PRODUK INSTAN FUNGSIONAL. *JURNAL TEKNOLOGI PERTANIAN*, *7*(1), 46–52. https://doi.org/10.32520/jtp.v7i1.112

Pangerang, F., & Rusyanti, N. (2018). KARAKTERISTIK DAN MUTU BERAS LOKAL KABUPATEN BULUNGAN KALIMANTAN UTARA: (Characteristics And Quality Of Local Rice In Bulungan District, North Kalimantan). *Canrea Journal: Food Technology, Nutritions, and Culinary Journal*, *1*(2), 107–117. https://doi.org/10.20956/canrea.v1i2.96

Park, C. E., Kim, Y. S., Park, K. J., & Kim, B. K. (2012). Changes in physicochemical characteristics of rice during storage at different temperatures. *Journal of Stored Products Research*, *48*(PART A), 25–29. https://doi.org/10.1016/j.jspr.2011.08.005

Pratama, R. M., Hendrival, H., Khaidir, K., Usnawiyah, U., Hafifah, H., & Putri, N. P. (2024). Klasifikasi Kerentanan Beras Asal Mutasi Radiasi Terhadap Sitophilus oryzae L. Berdasarkan Kadar Air. *Agritech: Jurnal Fakultas Pertanian Universitas Muhammadiyah Purwokerto*, *26*(2), 32–40. https://doi.org/10.30595/agritech.v26i2.18302

Purbasari, D., Yosika, I. W., Lestari, N. P., Pambudi, A. S., Isaka, E., & Ywana, W. (2025). STUDY ON DIFFERENCES IN PHYSICAL PROPERTIES OF RICE (Oryza sativa) BASED ON VARIETY TYPES AND MIXED RICE. *Jurnal Penelitian Sains Dan Teknologi Indonesia*, *4*(2), 558–564.

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

https://jpsti.jurnal.unej.ac.id/index.php/JPSTI/article/view/23

Putri, N. P., Yunaida, Y., Hendrival, H., Wirda, Z., & Munauwar, M. M. (2023). Pengaruh Kadar Air Dan Periode Penyimpanan Beras Terhadap Populasi Sitophilus zeamais Dan Kerusakan Beras | Jurnal Agrium. *Jurnal Agrium*, *20*(Vol. 20 No. 3 (2023)). https://ojs.unimal.ac.id/agrium/article/view/13183

Qu, L., Zhao, Y., Xu, X., Li, Y., & Haoxin, L. (2023). *Untargeted Lipidomics Reveal Quality Changes in*.

Rahayoe, S., Diposari, R. P., Munawwaroh, F. D., Susanti, D. Y., & Bintoro, N. (2025). Prediction of the shelf life of porang chips and flour using a mathematical model of water mass transfer. *Discover Food*, *5*(1). https://doi.org/10.1007/s44187-025-00435-1

Rahmadi, I., Nasution, S., Tio Mareta, D., Permana, L., Agna Talitha, Z., Saputri, A., Udayana Nurdin, S., Studi Teknologi Pangan, P., Teknologi Sumatera, I., Terusan Ryacudu, J., Huwi, W., Jati Agung, K., Lampung Selatan, K., Studi Teknologi Hasil Pertanian, P., Lampung, U., Sumantri Brojonegoro, J., Meneng, G., Rajabasa, K., & Bandar Lampung, K. (2021). NILAI MUTU KERIPIK BUAH HASIL PENGGORENGAN VAKUM. *Jurnal Standardisasi*, *23*(3), 303–312. https://doi.org/10.31153/JS.V23I3.942

Ratnawati, R., Djaeni, M., & Hartono, D. (2013). Perubahan Kualitas Beras Selama Penyimpanan (Change of Rice Quality During Storage). *JURNAL PANGAN*, *22*(3), 17–27. https://garuda.kemdiktisaintek.go.id/documents/detail/954664

redaksi, merdeka. (2026). *Panen Perdana Padi Gogo*. Merdeka.Com. https://l1nq.com/panenperdanapadigogo

Rohmah, N., Yushardi, Y., & Sudarti, S. (2023). UJI DENSITAS DAN POROSITAS SERTA KARAKTERISASI BATU ANDESIT LETUSAN GUNUNG SEMERU DI DESA SUMBERULUH KECAMATAN CANDIPURO KABUPATEN LUMAJANG. *SILAMPARI JURNAL PENDIDIKAN ILMU FISIKA*, *5*(2), 226–237. https://doi.org/10.31540/sjpif.v5i2.2434

Romdon, A. S., Arianti, F. D., & Komalawati. (2021). The agronomic performance and feasibility study of new high yield rice varieties in Tegal district. *IOP Conference Series: Earth and Environmental Science*, *653*(1), 012085. https://doi.org/10.1088/1755-1315/653/1/012085

Ruhaeni, Zainuri, & Utama, Q. D. (2025). Jurnal Teknologi dan Mutu Pangan. *Jurnal Teknologi Dan Mutu Pangan*, *1*(1), 37–48. https://journal.universitasbumigora.ac.id/index.php/jtmp

Sadhu, S., & Kole, P. C. (2024). Revolutionizing Rice Grain Quality: A Holistic Review Integrating Conventional and Molecular Approaches. *International Journal of Bio-Resource and Stress Management*, *15*(Aug, 8), 01–12. https://doi.org/10.23910/1.2024.5489

Salsabila, L., Purwaningsih, S., & Ramadhan, W. (2025a). *Evaluasi Perubahan Mutu dan Estimasi Umur Simpan Beras Analog Berbasis Rumput Laut Menggunakan Model Kinetik Terakselerasi*.

Salsabila, L., Purwaningsih, S., & Ramadhan, W. (2025b). KINETIC STUDY OF QUALITY CHANGES AND SHELF-LIFE PREDICTION OF Gracilaria sp. SEAWEED-BASED ANALOG RICE USING THE ARRHENIUS MODEL.

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Jurnal Pengolahan Hasil Perikanan Indonesia, *28*(4), 392–405. https://doi.org/10.17844/jphpi.v28i4.62203

Sasmitaloka, K. S., Sri, W., & Ermi, S. (2020). KaraKterisasi sifat fisiKoKimia, sensori, Dan fungsional nasi instan Dari Beras amilosa renDaH. *Jurnal Penelitian Pascapanen Pertanian*, *17*, 1–14. https://d1wqtxts1xzle7.cloudfront.net/67172207/9178-libre.pdf?1620239096=&response-content-disposition=inline%3B+filename%3DKarakterisasi_Sifat_Fisikokimia_Sensori.pdf&Expires=1775196469&Signature=LbtA9hSIEDzryQ1NxwrKDlPaUbaTrq90PF6Eni0gL2l5zfKtnV9-v7bwzMZcjjf87b-z1us2CjSRzNj3fRkVvN0Zcfsl5V-YWqCUjFB6PSIg7IzN7jtwRkPvLDV95jitBsVCpbwv34aOAZFhRD40qlXIzBTebCl2qNESAxZMzEMVYX3TTeVs2vDPzQy8nYZu~HQs8pyXj5Dwijrja2rBDktfKTUWQHHPV3KE1TvX5TfTmGdMHqJmITSW890~aAv~xBXVk2Ol8O7zjl4WgAVqmm6OVkgsdH3eRQPSK0h6Wrnoi7VxhxBGrmFR4chIwDd~jKvrQ45l9hiO767tTJicsQ__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Schluterman, D. A., & Siebenmorgen, T. J. (2007). Relating Rough Rice Moisture Content Reduction and Tempering Duration to Head Rice Yield Reduction. *Transactions of the ASABE*, *50*(1), 137–142. https://doi.org/10.13031/2013.22385

Sebastian, M., Surjoseputro, S., Setijawaty, E., Teknologi Pertanian, F., Katolik Widya Mandala Surabaya, U., Dosen Fakultas Teknologi Pertanian, I., & korespondensi, P. (2023). PENGARUH KONSENTRASI MALTODEKSTRIN TERHADAP SIFAT FISIKOKIMIA TEPUNG PERICARP MANGGIS (Garcinia mangostana L.). *Jurnal Teknologi Pangan Dan Gizi (Journal of Food Technology and Nutrition)*, *22*(1), 91–96. https://doi.org/10.33508/jtpg.v22i1.4552

Shafiekhani, S., Lee, J. A., & Atungulu, G. G. (2019). Prediction of Rice Milling Yield and Quality Attributes during Storage Using Regression Analyses. *Transactions of the ASABE*, *62*(5), 1259–1268. https://doi.org/10.13031/trans.13441

Shafiekhani, S., Wilson, S. A., & Atungulu, G. G. (2018). Impacts of storage temperature and rice moisture content on color characteristics of rice from fields with different disease management practices. *Journal of Stored Products Research*, *78*, 89–97. https://doi.org/10.1016/J.JSPR.2018.07.001

Soerjandoko, R. N. E. (2010). Teknik Pengujian Mutu Beras Skala Laboratorium. *Buletin Teknik Pertanian*, *15*(2), 44–46. https://www.scribd.com/document/96395405/Pengujian-Mutu-Beras-Di-Lab

Sokra, I., Touch, P., Rin, C., Horn, M., Horn, L., & Horn, S. (2025). Effect of Moisture Content of Paddy (Phka Rumduol) on the Quality of White Rice (Oryza sativa L.). *Journal of Agriculture and Technology*, 61–70. https://www.researchgate.net/profile/In-Sokra/publication/392405677_Effect_of_Moisture_Content_of_Paddy_Phka_Rumduol_on_the_Quality_of_White_Rice_Oryza_sativa_L/links/684bf13d25c35b5fb5e08cf1/Effect-of-Moisture-Content-of-Paddy-Phka-Rumduol-on-

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

the-Quality-of-White-Rice-Oryza-sativa-L.pdf

Susanti, S., Hendrival, H., Usnawiyah, U., Hafifah, H., & Nazaruddin, M. (2022). Kerentanan Relatif Jenis Beras Terhadap Sitophilus oryzae L. (Coleoptera: Curculionidae) Pada Keadaan Kadar Air Rendah. *Jurnal Ilmiah Mahasiswa Agroekoteknologi*, *1*(1), 10–17. https://doi.org/10.29103/jimatek.v1i1.8458

Syafutri, M. I., Syaiful, F., Lidiasari, E., & Pusvita, D. (2020). Pengaruh Lama dan Suhu Pengeringan Terhadap Karakteristik Fisikokimia Tepung Beras Merah (Oryza nivara): Pengaruh Lama dan Suhu Pengeringan Terhadap Karakteristik Fisikokimia Tepung Beras Merah (Oryza nivara). *AGROSAINSTEK: Jurnal Ilmu Dan Teknologi Pertanian*, *4*(2), 103–111. https://doi.org/10.33019/agrosainstek.v4i2.120

Syakrani, N., Naufal, R., & Athaya, S. (2025). Konsistensi Model Regresi Empat Variabel Pada Populasi dan Sampel untuk Prediksi Temperatur. *Journal of Applied Computer Science and Technology*, *6*(1), 9–16. https://doi.org/10.52158/jacost.v6i1.971

Tabatabaeefar, A. (2003). Moisture-dependent physical properties of wheat. *International Agrophysics*, *17*(4), 207–211. https://doi.org/10.52151/jae2016531.1597

Tahad, A., & Sanjaya, A. S. (2017). ISOTHERM FREUNDLICH, KINETICS MODEL AND DEFINITION RATE ADSORPTION OF Fe WITH ACTIVATED CARBON FROM COFFEE WASTE. *Jurnal Chemurgy*, *01*(2), 13–21.

Tani Makmur Nusantara, J. T. di B. P. (2021). *Inpari 32 HDB Label Putih... - PT Tani Makmur Nusantara Abadi | Facebook*. https://www.facebook.com/wwwtanimakmurnusantaracom/posts/inpari-32-hdb-label-putih-5kgkomoditas-padi-sawah-irigasitahun-2013asal-seleksi-/701838103788165/

Tanwirul, M., Alhakim, H. M., & Febriana, F. (2021). MUTU GILING DAN WARNA BEBERAPA VARIETAS BERAS DI BANJARBARU. *Prosiding Seminar Nasional Lingkungan Lahan Basah*, *6*(1), 1–6.

Tanwirul, M., Yudi, P., Nursigit, B., & Tyas, U. (2017). Pengaruh Suhu Penyimpanan pada Gabah Basah yang Baru Dipanen terhadap Perubahan Mutu Fisik Beras Giling. *AGRITECH*, *37*(4), 477–485. https://d1wqtxts1xzle7.cloudfront.net/58061250/227756-pengaruh-suhu-penyimpanan-pada-gabah-bas-09105880-libre.pdf?1545752744=&response-content-disposition=inline%3B+filename%3D227756_pengaruh_suhu_penyimpanan_pada_ga.pdf&Expires=1771173856&Signature=AQMcT6TzNurZ~wtXeVjD~~jxJhcgV6gJaSE7oOlW2IOHL89b~ihIRO94GbjLYtt3~NgYm5aEK~nPA~RaKShf5Ksn3yrwEjSq0L-EjVoaSXMxSpDABCgWM-D-fVX2r2QoNktBeT8AqDznhGY29g0V36xYhW7m~4UEvlkx5GfyoT8lREWEs4Hd49sEciBZ2t6lEpF4cj9EH60gbqoWNx8vexMLjWouXt~P6FbtUTZKaJR-vAWqXjRmopT~jjZHMGP6cFwdDywS9b8bWK0bCSvMsR4aARRKKb3K4MW620To7D9yvv2J0WgAdbkDykqTurIv42j-xOLpECPdFYfnzSf0hw__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

UNIVERSITAS
GADJAH MADA
Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Taveesuvun, C., Tirawanichakul, S., & Tirawanichakul, Y. (2022). Equilibrium Moisture Content Modeling and Study of Circulating-Bed Drying Kinetics of Non-Fragrant and Fragrant Paddy Varieties. *Trends in Sciences*, *19*(14), 4950. https://doi.org/10.48048/tis.2022.4950

Trubus. (2019). *Padi Gogo Panen Naik 300% - Trubus*. https://trubus.id/padi-gogo-panen-naik-300/

Tse, M. I., Arsa, I. B. A., Ndiwa, A. S. S., Polo, R., Iburuni, Y. U., & Hali, A. S. S. (2022). THE EVALUATION OF GROWTH COMPONENTS, YIELD COMPONENTS, AND AROMA QUALITY OF THREE LOCAL VARIETIES OF AROMATIC UPLAND RICE AS RESPONSE TO SALINITY LEVELS. *JURNAL AGRISA*, *11*(2), 97–110. https://doi.org/10.35508/AGRISA.V11I2.9292

Wariyah, C. (Chatarina), & Supriyadi, S. (Supriyadi). (2010). Isoterm Sorpsi Lembab Beras Berkalsium. *Agritech: Jurnal Fakultas Teknologi Pertanian UGM*, *30*(4), 99469. https://doi.org/10.22146/AGRITECH.9708

Wibawa, Ip. M. P., Gunadnya, I. B. P., & Wijaya, I. M. A. S. (2019). Estimation shelf life of rice seeds (Oryza sativa L)using the ASLT(Accelerated Shelf Life Testing) method with a critical moisture content approach. *Jurnal BETA (Biosistem Dan Teknik Pertanian)*, *7*(2), 1–8. https://doi.org/10.24843/JBETA.2019.V07.I12

Wijaya, A., Wijaya, A., Prasetyatama, B. T., Anugrah, M. R., Saputra, D., Daniar, R., Kholidah, N., Effendy, S., Febriana, I., & Manggala, A. (2025). Studi Optimasi Kinerja Sistem Pengeringan Berbasis Panel Surya Ditinjau dari Laju Pengeringan dan Efisiensi Termal. *Jurnal Penelitian Sains*, *27*(3), 1–5. https://doi.org/10.56064/jps.v27i3.1249

Wulandari, A., Waluyo, S., & Dwi Dian Novita, D. (2013). PREDIKSI UMUR SIMPAN KERUPUK KEMPLANG DALAM KEMASAN PLASTIK POLIPROPILEN BEBERAPA KETEBALAN (Prediction of Self Life of Kemplang Crackers Packaged in Polypropylene Plastick with Thickneses). *Jurnal Teknik Pertanian Lampung*, *2*(2), 105–114.

Yessica, Setijawatya, E., Radix, I., & Jati, A. P. (2025). INVESTIGASI KARAKTERISTIK SMART BIODEGRADABLE FILM PACKAGING BERBASIS KITOSAN. *Jurnal Teknologi Pangan Dan Gizi (Journal of Food Technology and Nutrition)*, *24*(1), 38–55. https://doi.org/10.33508/jtpg.v24i1.7343

Yulianto, W. A. (2023). *Pati Tahan Cerna: Retrogradasi, Pembentukan, dan Manfaatnya Bagi Kesehatan - Wisnu Adi Yulianto - Google Books* (1st ed.). Deepublish digital. https://books.google.co.id/books?hl=en&lr=&id=7lg7EQAAQBAJ&oi=fnd&pg=PP1&dq=proses+penuaan+(aging)+dapat+menyebabkan+perubahan+struktur+pati+yang+berdampak+pada+peningkatan+kekerasan+&ots=w3RcRORKX5&sig=j4gHQVc6OnakKVP4oZjFAortNPE&redir_esc=y#v=onepage&q&f=false

Zareiforoush, H., Hosseinzadeh, B., M., E. A., & A, M. (2011). Moisture-dependent physical properties of paddy grains. *Journal of American Science*, *7*(7), 175–183. https://www.researchgate.net/publication/267766180_Moisture-

UNIVERSITAS
GADJAH MADA
**Analisis Komparatif Penentuan Umur Simpan Berbagai Varietas Beras dalam Kemasan Menggunakan Model
Keseimbangan Massa Air, Kadar Air Kritis, dan Kinetika Mutu Fisik**
Arwa Mahmudah, Dr. Sri Rahayoe, S.T.P., M.P.; Bayu Nugraha, S.T.P., M.Sc., Ph.D., IPM.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

dependent_physical_properties_of_paddy_grains

Zhang, S., Ou, L., Yi, C., Xie, Q., & Shan, Y. (2025). Identification, evaluation, control of yellow-causing bacteria and their influence on the quality of high moisture rice-based food. *Food Control*, *168*, 110887. https://doi.org/10.1016/J.FOODCONT.2024.110887

Zhu, D., Wang, T., Liu, X., Bi, J., Zhang, W., Zeng, X., Wang, P., & Shu, Z. (2024). Quality changes in Chinese high-quality indica rice under different storage temperatures with varying initial moisture contents. *Frontiers in Nutrition*, *11*(March), 1–9. https://doi.org/10.3389/fnut.2024.1334809