



DAFTAR PUSTAKA

- Abdullah, M., Ch'ng, P., & Lim, T. (2011). Some physical properties of parkia speciosa seeds. *International conference on food engineering and biotechnology IPCBEE Vol.9*. Singapore.
- Adebawale, K. O., & Lawal, O. (2004). Comparative study of the functional properties of bambara groundnut (*Voandzeia subterranean*), jack bean (*Canavalia ensiformis*) and mucuna bean (*Mucuna pruriens*) flours. *Food Research International*, 37 : 355-365.
- Agustin, N. D., Saragih, B., & Prabowo, S. (2019). Pengaruh lama blansir terhadap karakteristik fisikokimia dan sensoris tepung kentang udara (*Discorea bulbifera L.*). *Journal of Tropical Agrifood*, 1(1): 29-35.
- Aisyah, Y., Rasiansyah, & Muhammin. (2014). Pengaruh pemanasan terhadap aktivitas antioksidan pada beberapa jenis sayuran. *Jurnal Teknologi dan Industri Pertanian Indonesia*, 6(2) : 1-5.
- Akiyama, H., Fuji, K., Yamasaki, O., Oono, T., & Iwatsuki, K. (2001). Antibacterial action of several tannins against *Staphylococcus aureus*. *The Journal of Antimicrobial Chemotherapy*, 487-491.
- Akoy, E., Von Horsten, D., & Ismail, M. (2013). Moisture adsorption characteristics of solar-dried mango slices. *International Food Research Journal*, 883-890.
- Almatsier, S. (2009). *Prinsip dasar ilmu gizi*. Jakarta: PT. Gramedia Pustaka Utama.
- Anandito, R., Siswanti, Purnamayati, L., & Sodiq, H. (2017). Shelf-life determination of fish koya using critical moisture content approach. *Proceedings of the Pakistan Academy of Sciences: B. Life and Environmental Science*, 54 (3) : 201-206.
- Andrade, Lemus, & Perez. (2011). Models of sorption isotherms for food: Use and limitations. *Vitae, revista de la facultad de química farmaceutica*, 325-334.
- Apriliyanti, M. W., Nurdihati, A., & Ardiyansyah, M. (2020). Pendugaan umur simpan jelly kelor instan dengan metode accelerated shelf life test (ASLT) model pendekatan kadar air kritis. *Journal of Food Technology and Agroindustry*, 54-63.
- Astrid, W., Sri, W., & Dian, N. (2013). Prediction of self life of kemplang crackers packaged in polypropilene plastic with tickneses. *Journal of Agricultural Engineering*, 2(2) : 105-114.



- Augustyn, G. H., Moniharapon, E., & Resimere, S. (2017). Analisa kandungan gizi tepung kacang gude hitam (*Cajanus cajan*) dengan beberapa perlakuan pendahuluan. *Agritekno*, 6(1): 27-32.
- Ayala-Aponte, A. (2015). Thermodynamic properties of moisture sorption in cassava flour. *DYNA*, 83(197) : 138-144.
- Barceloux, D. G. (2009). Djengkol Bean (*Archidendron jiringa* (Jack) I. C. Nielsen). *Dis. Mon.* 55, 361-364.
- Budjianto, S., Sitanggang, A. B., & Murdiah, B. E. (2010). Penentuan umur simpan seasoning menggunakan metode accelerated shelf-life testing (ASLT) dengan pendekatan kadar air kritis. *Jurnal Teknologi Pertanian*, 11(2): 71-77.
- Cahyadi, W. (2006). *Analisis dan aspek kesehatan bahan tambahan pangan*. Jakarta: PT. Bumi Aksara.
- Carpin, M., Bertelsen, H., Bech, J., Jeantet, R., Risbo, J., & Schuck, P. (2016). Caking of lactose: A critical review. *Trends Food Science Technology*, 53(2).
- Chauhan, A., Saxena, D., & Singh, S. (2015). Total dietary fibre and antioxidant activity of gluten free cookies made from raw and germinated amaranth (*Amaranthus Spp.*) flour. *Lebensmittel-Wissenschaft und -Technologie-Food Science and Technology*, 63(2) : 939-945.
- Chiste, R., Silva, P., Lopes, A., & Silva, P. (2012). Sorption isotherms of tapioca flour. *International Journal of Food Science & Technology*, 47(4) : 870-874.
- Cushine, T., & Lamb, A. (2005). Antimicrobial Activity of Flavonoids. *International Journal of Antimicrobial Agent*, 26 : 343-356.
- Dalgi, A., Pekmez, H., & Belibagh, K. (2012). Effect of drying methods on the moisture sorption isotherms and thermodynamic properties of mint leaves. *Journal of Food Science and Technology*. 49(4), 439-449.
- Daniardi, S., Ho, P., & Murray, B. (2018). Comparison of blueberry powder produced via foam-mat freeze-drying versus spray-drying: Evaluation of foam and powder properties. *Journal of the Science of Food and Agriculture*, 98 (5) : 2002-2010.
- Destriani, L., Tamrin, & Kadir, M. Z. (2014). Pengaruh umur simpan air tebu terhadap tingkat kemanisan tebu (*Saccharum officinarum*). *Jurnal Teknik Pertanian Lampung*, 3(2): 119-126.



- Devi, V., Ariharan, V., & Nagendra, P. (2013). Nutritive Value and Potential Uses of Leucaena Leucophala as Biofuel- A mini Review. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 4(1) : 515-521.
- Diniz, F. M., & Martin, A. M. (1997). Effects of the extent of enzymatic hydrolysis on functional properties of shark protein hydrolysate. *LWT-Food Science and Technology*, 30(3) : 266-272.
- Fagbemi, T. N., Oshodi, A., & Ipinmoroti, K. O. (2005). Processing effect on some antinutritional factor and in vitro multienzyme protein digestibility (IVPD) of three tropical seeds; Breadnut (*Artocarpus altilis*), Cashewnut (*Anacardium occidentale*), and Fluted pumpkin (*Telfairia occidentalis*). *Journal Nutrition*, 4(4): 250-256.
- Fellows, P. J. (2009). Blanching. *Food Processing Technology*, 369-380.
- Fitriani, A., Santoso, U., & Supriyadi. (2021). Conventional processing affects nutritional and antinutritional components and in vitro protein digestibility in kabau (*Archidendron bubalinum*). *Hindawi International Journal of Food Science*, 1-8.
- Fitriani, P., Wijaya, I., & Gunam, I. (2015). Pendugaan masa kadaluarsa ubii kayu (*Manihot esculenta* Crantz) instan pada beberapa bahan kemasan. *Media Ilmiah Teknologi Pangan (Scientific Journal of Food Technology)*, 2(1) : 058-068.
- Foster, K., Bronlund, J., & Peterson, A. (2005). The prediction of moisture sorption isotherms for dairy powder. *International Dairy Journal Vol.15*, 411-418.
- Gilang, R., Affandi, D. R., & Ishartani, D. (2013). Karakteristik Fisik dan Kimia Tepung Koro Pedang (*Canavalia ansiformis*) Dengan Variasi PErlakuan Pendahuluan. *Jurnal Teknosains Pangan Vol 2 No 3*, 34-42.
- Gmelin, R., Susilo, R., & Fenwick, G. R. (1981). Cyclic polysulphides from Parkia speciosa. *Phytochemistry*, 20(11): 2521-2523.
- Handayani, S. (1994). *Pasca Panen Hasil Pertanian*. Surakarta: Sebelas Maret University Press.
- Harifah, C. S. (2017). *Perubahan zat gizi serta nilai cerna protein secara in vitro serta profil asam amino biji lamtoro gung (Leucaena leucocephala) kukus dan rebus*. UGM.
- Herawati, H. (2008). Penentuan Umur Simpan Pada Produk Pangan. *Jurnal Litbang Pertanian*, 27(4) : 124-130.



- Herlina, Wahyuni, S., & Endang, P. (2017). *Analisis umur simpan tepung termodifikasi hasil fermentasi ubi kayu menggunakan bakteri asam laktat wikau maombo*. Universitas Halu Oleo.
- Idayanti, D., Darmawati, E., & Sutrisno. (2018). Pembuatan dan pendugaan lama simpan bubuk asam sunti dalam kemasan dengan metode sorpsi. *Jurnal Keteknikan Pertanian*, 151-158.
- Indah, H. D. (2011). *Pendugaan umur simpan produk cone es krim dengan metode akselerasi model kadar air kritis*. Bogor: IPB.
- Jamaludin, F., & Mohamed, S. (1993). Hypoglycemic Effect of Extracts of Petai Papan (*Parkia speciosa*, Hassk). *Pertanika J Trap. Agric. Sci.* 16(3), 161-165.
- Jena, S., & Das, H. (2012). Shelf life prediction of aluminium foil laminated polyethylene packed vacuum dried coconut milk powder. *Journal of Food Engineering*, 108: 135-142.
- Jinapong, N., Suphantharika, m., & Jamnong, P. (2008). Production of instant soymilk powders by ultrafiltration, spray drying and fluidized bed agglomeration. *Journal Food Engineering*, 194-205.
- Kamau, E., Mutungi, C., Kinyuru, J., Imathi, S., Tanga, C., Affognon, H., . . . Fiaboe, K. (2018). Moisture adsorption properties and shelf-life estimation of dried and pulverised edible house cricket *Acheta domesticus* (L.) and black soldier fly larvae *Hermetia illucens* (L.). *Food Research International*, 420-427.
- Kamisah, Y., Othman, F., Qodriyah, M., & Jaarin, K. (2012). *Parkia speciosa hassk: a potential phytomedicine. Review article: Evidence-Based Complementary and Alternative Medicine*, 1-9.
- Kim, S., Kim, B., Kim, J., Shanmugavelan, P., Kim, H., Kim, S., . . . Paark, K. (2014). Effect of steaming, blanching, and high temperature/high pressure processing on the amino acid contents of commonly consumed korean vegetables and pulses. *Prev. Nutr. Food Sci.*, 19(03): 220-226.
- Komariah, D., & Hartana, A. (2016). Variasi Morfologi Kabau (*Archidendron bubalinum*) Dan Pemanfaatannya Di Sumatera. *Floribunda*.
- Kusnandar, F. (2019). *Kimia Pangan Komponen Mikro*. Jakarta: PT. Bumi Aksara.
- Kusumaningrum, I., & Asikin, A. N. (2017). Pengaruh lama pemrestoan dan frekuensi perebusan terhadap komposisi kimia tepung ikan Belida (Chitala sp.). *Peranan Riset Dan Inovasi Teknologi Dalam Rangka Meningkatkan Daya Saing Industri Berbasis Sumber Daya Alam Berwawasan Lingkungan* (pp. 180-187). Samarinda: Balai Riset dan Standardisasi Industri .



- Labuza, T. P. (1982). Shelf Life Dating of Foods. *Food and Nutrition Press*.
- Lim, T. (2012). Edible medicinal and non-medicinal plants volume 2, fruits. *Springer Science and Business Media B.V.*
- Loredo, R., Hernandez, A., Sanchez, E., Aldapa, C., & Velazquez, G. (2016). Effect of equilibrium moisture content on barrier, mechanical and thermal properties of chitosan films. *Food Chemistry*, 560-566.
- Mahmud, M., Hermana, Zulfianto, N., Rozanna, R., Apriyantono, Ngadiarto, I., Tinexcell. (2009). *Tabel Komposisi Pangan Indonesia (TKPI)*. Jakarta: PT. Elex Media Komputindo.
- Mareta, D. T., & Nur, S. (2011). Pengemasan produk sayuran dengan bahan kemas plastik pada penyimpanan suhu ruang dan suhu dingin. *Mediagro*, 7(1): 26-40.
- Matsuo, Y., Miura, L., Araki, T., & Yoshie-Stark, Y. (2019). Proximate composition and profiles of free amino acids, fatty acids, minerals and aroma compounds in Citrus natsudaidai peel. *Food Chemistry*, 356-363.
- Mendoza, F., Dejmek, P., & Aguilera, J. (2007). Colour and image texture analysis classification of commercial potato chips. *Food Rest International*, 40 : 1146-1154.
- Miglio, C., Chiavaro, E., Visconti, A., Fogliano, V., & Pellegrini, N. (2008). Effects of different cooking methods on nutritional and physicochemical characteristics of selected vegetables. *Journal of Agricultural and Food Chemistry*, 56: 139-147.
- Mobiharpon, E., Nendissa, S. J., & Laiyan, D. (2017). Karakterisasi sifat kimia tepung kacang lawa merah (*Phaseolus vulgaris* L.) dengan beberapa perlakuan pendahuluan. *Agritekno, Jurnal Teknologi Pangan*, 21-26.
- Mohamed, S., Abd. Rahman, M. S., Sulaiman, S., & Abdullah, F. (1987). Some Nutritional and Anti-nutritional Components in Jering (*Pithecellobium jeringa*), Keredas (*Pithecellobium microcarpum*) and Petai (*Parkia speciosa*). *Pertanika 10(1)*.
- Mosquera, L., Moraga, G., & Navarreta, N. (2012). Critical water activity and critical water content of freeze-dried strawberry powder as affected by maltodextrin and arabic gum. *Journal Food Research International*, 47 : 201-206.
- Mulyati, A., Widiastuti, D., & Oktaviani, L. (2018). Characterization of Durian Seed Flour (*Durio zibethinuss* L.) and Estimation of its Self Life with Accelerated Self Life Testing (ASLT) Moisture Critical Method . *Journal of Physics : Conference Series*.



Mulyatiningsih. (2007). *Teknik-teknik dasar memasak*. Yogyakarta: Universitas Negeri Yogyakarta.

Murtiwulandari, Archery, D. T., Haloho, M., Kinashih, R., Tanggara, L. H., Hulu, Y. H., . . . Anarki, G. (2020). Pengaruh suhu penyimpanan terhadap kualitas hasil panen komoditas Brassicaceae. *Media Informasi dan Komunikasi Ilmiah Teknologi Pangan*, 11(2): 135-143.

Mustafidah, C., & Widjanarko, S. B. (2015). Umur Simpan Minuman Serbuk Berserat Dari Tepung Porang (*Amorphophallus oncophillus*) Dan Karagenan Melalui Pendekatan Kadar Air Kritis. *Jurnal Pangan dan Agroindustri Vol. 3 No. 2*, 650-660.

Muzaffar, K., & Kumar, P. (2016). Moisture sorption isotherms and storage study of spray dried tamarind pulp powder. *Powder Technology*, 322-327.

Nursiwi, A., D, I., A. M, S., & Nisyah, K. (2018). Study on Leucaena leucocephala seed during fermentation: sensory characteristic and changes on anti nutritional compounds and mimosine level. In *IOP Conference Series: Earth and Environmental Science* (Vol. 102, No. 1, p. 012093). IOP Publishing.

Nurtama, B., & Lin, J. (2010). Mositure sorption isotherm characteristics of taro flour. *World Journal of Dairy & Food Sciences*, 5(1): 01-06.

Oladele, A. K., & Aina, J. O. (2007). Chemical composition and functional properties of flour produced from two varieties of tigernut (*Cyperus esculentus*). *African Journal of Biotechnology*, 6(21) : 2473-2476.

Oyelade, O., Akintinde, T., Igbeka, J., Oke, M., & Raji, O. (2007). Modelling moisture sorption isotherms for maize flour. *Journal of Stored Product Research*, 44 : 179-185.

Pangastuti, H., Affandi, D., & Ishartani, D. (2013). Karakterisasi sifat fisik dan kimia tepung kacang merah (*Phaseolus vulgaris L.*) dengan beberapa perlakuan pendahuluan. *Jurnal Teknologi Sains Pangan*, 2 (1) : 20-29.

Petzold, G., Caro, M., & Moreno, J. (2014). Influence of banching, freezing and frozen storage on physicochemical properties of broad beans (*Vicia faba L.*). *International Journal of Refrigeration*, 40: 429-434.

Priyanto, G., Sari, G., & Hamzah, B. (2005). Profil dan laju perubahan mutu tepung kecambah kacang hijau selama penyimpanan. *Jurnal Agribisnis dan Industri Pertanian*, 7(3): 347-359.

Putrasamedja, S. (2005). Eksplorasi dan Koleksi Sayuran Indigenous di Kabupaten Karawang, Purwakarta dan Subang. *Bulletin Plasma Nutfah* , 16-20 : Vol.11 No.1.



- Putri, J. C., Haryanti, S., & Izzati, M. (2017). Pengaruh lama penyimpanan terhadap perubahan morfologi dan kandungan gizi pada umbi talas bogor (*Colocasia esculenta* (L.) Schott). *Jurnal Biologi*, 6(1): 49-58.
- Rahayu, M., Susiarti, S., & Purwanto, Y. (2007). Kajian pemanfaatan tumbuhan hutan non kayu oleh masyarakat lokal di kawasan konservasi PT. Wira Karya Sakti sungai tapan jambi. *Biodiversitas*, 8(1) : 73-78.
- Rahmawati, F., Kurniaty, L., & Bintang, M. (2019). Skrining Golongan Senyawa Aktif Dan Analisis Toksisitas Ekstrak Biji Kabau (*Archidendron bubalinum*). *Jurnal Ilmiah WIDYA Kesehatan dan Lingkungan*.
- Rinda, R., Ansharullah, & Asyik, N. (2018). Pengaruh Komposisi Snack Bar Berbasis Tepung Tempe dan Biji Lamtoro (*Leucaena leucocephala* (Lam) de Wit) Terhadap Penilaian Organoleptik, Proksimat dan Kontribusi Angka Kecukupan Gizi. *Jurnal Sains dan Teknologi Pangan*. 3(3), 1328-1340.
- Riyanti, M., Ishartani, D., & Her, R. N. (2013). Pengaruh penambahan tulang ikan tuna (*Thunus albacores*) dan kacang merah (*Phaseolus vulgaris* L>) terhadap kandungan kalsium dan protein pada susu jagung manis (*Zea mays saccharata*). *Jurnal Teknosains Pangan* , 2(1).
- Robertson, G., & Lee, D. (2021). Comparison of linear and GAB isotherms for estimating the shelf life of low moisture foods packaged in plastic film. *Journal of Food Engineering*.
- Roswaty, A. (2010). *Sedap nikmat sajian jengkol dan petai*. Jakarta: Gramedia Pustaka Utama.
- Rukmawati, Y., Hartini, S., & Cahyanti, M. (2017). Isoterm sorpsi air pada tepung ubi jalar terfermentasi dengan angkak. *Jurnal Kimia VALENSI: Jurnal Penelitian dan Pengembangan Ilmu Kimia*, 3(1) : 71-78.
- Slamet, A. (2010). Pengaruh perlakuan pendahuluan pada pembuatan tepung ganyong (*Canna edulis*) terhadap sifat fisik dan amilografi tepung yang dihasilkan. *Agrointek*, 4(2) : 100-103.
- Sonaye, S., & Baxi, R. (2012). Particle size measurement and analysis of flour. *International Journal of Engineering Research and Applications (IJERA)*, 2(3) : 1839-1842.
- Sormoli, M., & Langrish, T. (2015). Moisture sorption and net isosteric heat of sorption for spray-dried pure orange juice powder. *LWT-Food Science and Technology*, 62(1) : 875-882.
- Sugiyono, S., Satyagraha, H., Joelijani, W., & E, S. (2012). Empirical modeling of moisture sorption characteristics and mechanical and barrier properties of



cassava flour film and their relation to plasticizing-antiplasticizing effects.
LWT - Food Science and Technology, 50(1) : 290-297.

Suppakul, P., Satyagraha, H., Joelijani, W., & Syamsir, E. (2012). Pendugaan umur simpan produk granula ubi kayu menggunakan model isoterm sorpsi air .
Jurnal Pangan, 21(3) : 233-244.

Suyitno. (1990). *Bahan-bahan pengemas*. Yogyakarta: PAU Pangan dan Gizi UGM.

Syarief, R., & Halid, H. (1993). *Teknologi Penyimpanan Pangan*. Jakarta: ARCAN.

Syarief, Rizal, & Irawati, I. (1988). *Pengetahuan bahan untuk industri pertanian*. Jakarta: Mediyatama Sarana Prakarsa.

Tamaroh, S., Raharjo, S., Murdiati, A., & Anggraagini, S. (2018). Perubahan Antosianin dan Aktivitas Antioksidan Tepung Uwi Ungu Selama Penyimpanan. *Jurnal Aplikasi Teknologi Pangan* 7 (1), 31-36.

Triyanto, E., Prasetyono, B., & Mukodiningsih, S. (2013). Pengaruh bahan pengemas dan lama simpan terhadap kualitas fisik dan kimia wafer pakan komplit berbasis limbah agroindustri. *Animal Agriculture Journal*, 2(1): 400-409.

Udomkun, P., Tirawattananawich, C., Ilukor, J., Sridonpai, P., Njukwe, E., Nimbona, P., & Vanlauwe, B. (2019). Promoting the use of locally produced crops in making cereal-legume-based composite flours: An assessment of nutrient, antinutrient, mineral molar ratios, and aflatoxin content. *Food Chemistry*, 651-658.

Vina, S. Z., Olivera, D. F., Marani, C. M., Fereyyra, C. M., & Rumpunen, K. (2012). An optimized method for analysis of phenolic compounds in buds, leaves, and fruit black currant (*Ribes ningrum L.*). *Journal Agricultural and Food Chemistry*, 60: 10501-10510.

Wahyudi, A., & Dewi, R. (2017). Upaya perbaikan kualitas dan produksi buah menggunakan teknologi budidaya sistem ToPAS pada 12 varietas semangka hibrida. *Jurnal Penelitian Pertanian*, 17(1) : 17-25.

Wani, S., & Kumar, P. (2016). Moisture sorption isotherms and evaluation of quality changes in extruded snacks during storage. *LWT - Food Sci. Technol.* , 448-455.

Weil, M., Sing, A. S., Meot, J. M., Boulanger, R., & Bohouon, P. (2017). Impact of blanching, sweating and drying operations on pungency, aroma and color of *Piper borbonese*. *Food Chemistry*, 219: 274-281.



KARAKTERISTIK FISIKA DAN KIMIA SERTA PENDUGAAN UMUR SIMPAN BERDASARKAN
PENDEKATAN KADAR AIR KRITIS

TEPUNG POLONG-POLONGAN INDIGENOUS INDONESIA

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Wijaya, I. M., Suter, I. K., & Yusa, N. M. (2014). Karakteristik Isotermis Sorpsi Air dan Umur Simpan Ledok Instan. *Agritech Vol. 34 No. 1*, 29-35.

Xu, M., Jin, Z., Simsek, S., Hall, C., Rao, J., & Chen, B. (2019). Effect of germination on the chemical composition, thermal, pasting, and moisture sorption properties of flours from chickpea, lentil and yellow pea. *Food Chemistry*, 580-587.

Zahra, R., & Handayani, D. (2020). Uji Organoleptik Biji Jengkol Kabau (*Archidendron bubalinum* (Jack) I. C Nielsen.) Hasil Fermentasi. *Serambi Biologi*.