REFERENCES

Abadi, W &Sugiharto, A., N. (2019). Uji keunggulan beberapa calon varietas hibrida jagung manis (*Zea mays L. var. saccharata*). *Jurnal Produksi Tanaman*, *7*(5).

Ahmed, S., Ning, J., Peng, D., Chen, T., Ahmad, I., Ali, A., Lei, Z., Abu bakr Shabbir, M., Cheng, G., & Yuan, Z. (2020). Current advances in immunoassays for the detection of antibiotics residues: A review. *Food and Agricultural Immunology*, *31*(1), 268–290. https://doi.org/10.1080/09540105.2019.1707171

Ahnan-Winarno, A. D., Cordeiro, L., Winarno, F. G., Gibbons, J., & Xiao, H. (2021). Tempeh: A semicentennial review on its health benefits, fermentation, safety, processing, sustainability, and affordability. *Comprehensive Reviews in Food Science and Food Safety*, *20*(2), 1717–1767. https://doi.org/10.1111/1541-4337.12710

Allen, L. H. (2008). Causes of vitamin B 12 and folate deficiency. *Food and Nutrition Bulletin*, *29*(2).

AOAC. (2005). *Official methods of analysis*. Association of Official Analytical Chemist.

Arendt, E. K., & Zannini, E. (2013). Maizes. In E. Zannini & E. K. Arendt (Eds.), *Cereal grains for the food and beverage industry* (pp. 67–113). essay, Woodhead Publishing.

Asmoro, N. W. (2016). Pengaruh jenis inokulum terhadap kandungan asam folat pada fermentasi tempe kedelai hitam varietas Malika. *Jurnal Ilmiah Teknosains*, *2*(1).

Aspiyanto, A. & Susilowati. (2010). Penerapan membran mikrofiltrasi pada pemurnian ekstrak kaldu kacang hijau (*Phaseolus radiatus L.*) sebagai fortifikan produk makanan. *Jurnal Kimia Terapan Indonesia*, *12*(2).

Aspiyanto, A., Susilowati, A., & Maryati, Y. (2018). Separating target components in corn (Zea mays var. indentata) hydrolyzed by Rhizopus oligosporus strain C1 through ultrafiltration membrane for fortificant of natural folic acid. *AIP Conference Proceedings*. https://doi.org/10.1063/1.5065019

Aspiyanto, Susilowati, A., Lotulung, P. D., Melanie, H., & Maryati, Y. (2019). Potency of stirred microfiltration cell in separation of fermented beans as protein isolate for natural folic acid. *Indonesian Journal of Chemistry*, 19(1).

Berk, Z. (2013). Extrusion. In Z. Berk (Ed.), *Food process engineering and technology* (2nd ed., pp. 373–393). essay, Academic Press.

Bernfeld, P. (1955). Amylases, α and β. *Methods in Enzymology.*

Bourgeois, W., Burgess, J. E., & Stuetz, R. M. (2001). On-line monitoring of wastewater quality: a review. *Journal of Chemical Technology and Biotechnology*, *76*(4).

Crater, J. S., & Lievense, J. C. (2018). Scale-up of Industrial Microbial Processes. *FEMS Microbiology Letters*, *365*(13). https://doi.org/10.1093/femsle/fny138

Deshavath, N. N., Mukherjee, G., Goud, V. V., Veeranki, V. D., & Sastri, C. V. (2020). Pitfalls in the 3, 5-dinitrosalicylic acid (DNS) assay for the reducing sugars: Interference of furfural and 5-hydroxymethylfurfural. *International Journal of Biological Macromolecules*, *156*, 180–185. https://doi.org/10.1016/j.ijbiomac.2020.04.045

Dewi, R. S., & Aziz, S. (2011). Isolasi Rhizopus oligosporus pada beberapa inokulum tempe di kabupaten Banyumas. *Molekul*, *6*(2).

Eichhom, P. & Knepper, T. P. 2001. Electrospray ionizationmass spectrometric studies on amphoteric surfactants cocamidopropylbetaine. *Journal of Mass Spectrum*, *36*(6).

Farnworth, E. R. (2008). *Handbook of Fermented Functional Foods*. CRC Press.

Fellows, P., J. (1992). *Food Processing Technology: Principles and Practices*. Ellis Horwood.

Haliza, W., Purwani, E. Y., & Thahir, R. (2007). Pemanfaatan kacang-kacangan lokal sebagai substitusi bahan baku tempe dan tahu. *Buletin Teknologi Pascapanen Pertanian*, *3*.

Harsono, A., Harnowo, D., Ginting, E., & Adi Anggraeni Elisabeth, D. (2021). Soybean in Indonesia: Current status, challenges and opportunities to achieve self-sufficiency. *Legumes*. https://doi.org/10.5772/intechopen.101264

Hatanaka, C., &; Kobara, Y. (1980). Determination of glucose by a modification of Somogyi-Nelson Method. *Agricultural and Biological Chemistry*, *44*(12), 2943–2949. https://doi.org/10.1080/00021369.1980.10864408

Hu, R., Lin, L., Liu, T., Ouyang, P., He, B., & Liu, S. (2008). Reducing sugar content in hemicellulose hydrolysate by DNS method: a revisit. *Journal of Biobased Materials and Bioenergy*, *2*(2), 156-161.

Iyer, R., & Tomar, S. K. (2009). Folate: A functional food constituent. *Journal of Food Science*, 74(9). https://doi.org/10.1111/j.1750-3841.2009.01359.x

Jägerstad, M., Piironen, V., Walker, C., Ros, G., Carnovale, E., Holasova, M., & Nau, H. (2005). Increasing natural food folates through bioprocessing and Biotechnology. *Trends in Food Science & Technology*, *16*(6-7), 298–306. https://doi.org/10.1016/j.tifs.2005.03.005

Jayanti, E. T. (2019). Kandungan protein biji dan tempe berbahan dasar kacang-kacangan lokal (Fabaceae) non kedelai. *Jurnal Ilmiah Biologi*, *7*(1).

Johnson, M. (2012). Protein quantitation. *Materials and Methods*, *2*. https://doi.org/10.13070/mm.en.2.115

Kementerian Kesehatan Republik Indonesia. (2019). *Peraturan Menteri Kesehatan Republik Indonesia no. 28 tahun 2019 tentang angka kecukupan gizi yang dianjurkan untuk masyarakat Indonesia.*

Koswara, S. (2009). *Teknologi pengolahan pangan*. eBookPangan.com.

Kunitz, M. (1950). Crystalline desoxyribonuclease: Isolation and properties: A spectrophotometric method for the measurement of desoxyribonuclease activity. *J. Gen Physiol*, *33*.

Kusbardini, A. (2018). *Hidrolisis jagung gigi kuda (Zea mays indentata) kuning dan putih menggunakan Rhizopus oligosporus strain C1 sebagai konsentrat sumber asam folat alami* (thesis). Fakultas Sains dan Teknologi UIN Syarif Hidayatullah, Jakarta.

Kusnandar, F., Karisma, V. W., Firlieyanti, A. S., & Hari, E. (2020). Perubahan komposisi kimia tempe kacang merah (Phaseolus vulgaris L.) selama pengolahan. *Jurnal Teknologi Pangan*, *14*(1).

Lestari, O. A. & Mayasari, E. (2016). Potensi gizi tempe berbahan dasar jagung. *Jurnal Ilmiah Teknosains*, *2*(2).

Li, J.-X., Zhang, F., Jiang, D.-D., Li, J., Wang, F.-L., Zhang, Z., Wang, W., & Zhao, X.-Q. (2020). Diversity of cellulase-producing filamentous fungi from Tibet and transcriptomic analysis of a superior cellulase producer Trichoderma Harzianum LZ117. *Frontiers in Microbiology*, *11*. https://doi.org/10.3389/fmicb.2020.01617

Lowry, O. H., Rosebrough, N. J., Farr, A. L., & Randall R. J. (1951). Protein measurement with Folin phenol reagent. *J. Biol. Chem.*, *193*(1).

Mahler, H. C., Friess, W., Grauschopf, U., & Kiese, S. (2009). Protein aggregation: pathways, induction factors and analysis. *Journal of pharmaceutical sciences*, *98*(9), 2909–2934. https://doi.org/10.1002/jps.21566

Mann, J., & Truswell, A. S. (2012). *Essentials of human nutrition* (4th ed.). Oxford University Press.

Marson, G. V., Belleville, M. P., Lacour, S., & Hubinger, M. D.(2020). Membrane fractionation of protein hydrolysates from by-products: recovery of valuable compounds from spent yeasts. *Membranes*, *11*(1), 23.

Maryam, S. (2015). Potensi tempe kacang hijau (Vigna radiata L.) hasil fermentasi menggunakan inokulum tradisional sebagai pangan fungsional. *Jurnal Sains dan Teknologi*, *4*(2).

Maryati, Y., Susilowati, A., Melanie, H., & Lotulung, P. D. (2017). Effect of hydrolysis enzymatic process of corn using protease crude (Rhizopus Oligosporus-C1) to

produce corn hydrolisate rich folic acid. *AIP Conference Proceedings*. https://doi.org/10.1063/1.5011892

Maryati, Y., Susilowati, A., Melanie, H., & Lotulung, P. D. (2019). Fermentation of soybean (*Glycine max* (*l*.) *merr*) using mix inocula of *Rhizopus sp*. and *Saccharomyces cerevisiae* for alternative source of folic acid. In *IOP Conference Series: Materials Science and Engineering* (Vol. 536, No. 1, p. 012124). IOP Publishing.

Masuko, T., Minami, A., Iwasaki, N., Majima, T., Nishimura, S.-I., & Lee, Y. C. (2005). Carbohydrate analysis by a phenol–sulfuric acid method in microplate format. *Analytical Biochemistry*, *339*(1), 69–72. https://doi.org/10.1016/j.ab.2004.12.001

Matias, R., Ribeiro, P. R. S., Saraguça, M. C., & Lopes, J. A. (2014). A UV spetrophotometric method for the determination of folic acid in pharmaceutical tablets and dissolutio tests. *Anal. Methods*, *6*.

Miftakhussolikhah, Kurniadi, M., Poeloengasih, C. D., Frediansyah, A., Susanto, A. (2015). Folate content of mung bean flour prepared by various heat treatments. *International Symposim of Food and Agro-biodiversity (ISFA2014)*.

Milo, R., Jorgensen, P., Moran, U., Weber, G., & Springer, M. (2010). BioNumbers--the database of key numbers in molecular and cell biology. *Nucleic acids research*, *38*(Database issue), D750–D753. https://doi.org/10.1093/nar/gkp889

Murphy, M. E., & Westmark, C. J. (2020). Folic acid fortification and neural tube defect risk: Analysis of the Food Fortification Initiative Dataset. *Nutrients*, *12*(1), 247. https://doi.org/10.3390/nu12010247

Naderi, N., & House, J. D. (2018). Recent developments in Folate Nutrition. *Advances in Food and Nutrition Research*, 195–213. https://doi.org/10.1016/bs.afnr.2017.12.006

National Center for Biotechnology Information (2022). PubChem Compound Summary for CID 135398658, Folic acid. Retrieved March 6, 2022 from https://pubchem.ncbi.nlm.nih.gov/compound/Folic-acid.

Nelson, D. L., & Cox, M. M. (2013). *Lehninger Principles of biochemistry*. W.H. Freeman and Company.

Nielsen, S. S. (2017). *Food analysis*. Springer.

Nielsen, S. S. (2017). *Food analysis laboratory manual* (3rd ed.). Springer.

Nygren-Babol, L., & Jägerstad, M. (2012). Folate-binding protein in milk: A review of Biochemistry, physiology, and analytical methods. *Critical Reviews in Food Science and Nutrition*, *52*(5), 410–425. https://doi.org/10.1080/10408398.2010.500499

Pavas, J. C. A., & Ruiz-Colorado, Á. A. (2020). Approximation of scale-up of enzymatic hydrolysis process from phenomenological-based semiphysical model and control theory tools. *Industrial & Engineering Chemistry Research*, *59*(16), 8046–8065. https://doi.org/10.1021/acs.iecr.9b06912

Pfeiffer, C. M., Fazili, Z., McCoy, L., Zhang, M., & Gunter, E. W. (2004). Determination of folate vitamers in human serum by stable-isotope dilution tandem mass spectrometry and comparison with radioassay and microbiologic assay. *Clinical Chemistry*, *50*(2).

Purkait, M. K., & Singh, R. (2018). *Membrane technology in separation science*. Taylor & Francis.

Rajbhar, K., Dawda, H., & Mukundan, U. (2016). Quantitative spectrophotometric estimation of specific monosaccharides by DNSA method. *Journal of Biological Sciences*, *2*(1).

Reyes, F.G.R., Varseveld, G.W. and Kuhn, M.C. (2006) Sugar composition and flavor quality of high sugar (Shrunken) and normal sweet corn. J. Food Sci. 47, 753–755.

Ross, A. C., Caballero, B., Cousins, R. J., Tucker, K. L., & Ziegler, T. R. (2014). *Modern Nutrition in health and disease*. Wolters Kluwer/Lippincott Williams & Wilkins.

Rowe, L. (2012). Overview of folic acid/folate. *Project Healthy Children*. Accessed on March 4, 2022.

Santos, T. C., Filho, G., Brito, A. R., Pires, A. J., Bonomo, R. C., & Franco, M. (2016). Production and characterization of cellulolytic enzymes by aspergillus niger and Rhizopus sp.. by solid state fermentation of prickly pear. *Revista Caatinga*, *29*(1), 222–233. https://doi.org/10.1590/1983-21252016v29n126rc

Saqib, A. A., & Whitney, P. J. (2011). Differential behaviour of the dinitrosalicylic acid (DNS) reagent towards mono- and di-saccharide sugars. *Biomass and Bioenergy*, *35*(11), 4748–4750. https://doi.org/10.1016/j.biombioe.2011.09.013

Serna-Saldivar, S. O. (2010). *Cereal grains: Properties, processing, and nutritional attributes*. CRC Press.

Setiarto, R. H. B. (2020). *Teknologi fermentasi pangan tradisional dan produk olahannya*. Guepedia.

Shan, Q.-J., Liu, J.-H., Li, W., Wang, H., Hu, X.-D., Li, T., Hu, J.-G., Guo, X.-B., & Liu, R. H. (2019). Comprehensive evaluation of biosynthesis, accumulation, regulation of folate and vitamin C in waxy maize (Zea mays L. var. Ceratina) with kernel development. *Journal of Cereal Science*, *87*, 215–224. https://doi.org/10.1016/j.jcs.2019.04.003

Shen, C.-H. (2019). Quantification and analysis of proteins. *Diagnostic Molecular Biology*, 187–214. https://doi.org/10.1016/b978-0-12-802823-0.00008-0

Shuler, M., L. & Kargi, F. (2002). *Bioprocess engineering: Basic concepts (2nd Ed)*. Prentice-Hall.

Solaimalai, A., Anantharaju, P., Irulandi, S., & Theradimani, M. (2021). *Maize crop: Improvement, production, protection and Post Harvest Technology*. CRC Press.

Susilowati, A., Melanie, H., Maryati, Y. (2009). Pemisahan fraksi gurih dari kacang - kacangan terfermentasi sebagai flavor savory analog daging melalui membran bertahap. *Laporan Hasil Penelitian, Program Tematik, Kediputian IPT, Tahun Anggaran 2009, Pusat Penelitian Kimia - LIPI*

Susilowati, A., Iskandar, Y. M., Aspiyanto, & Maryati, Y. (2011). Ekstraksi serat pangan (dietary fiber) secara hidrolisis enzimatik bertahap pada tepung sorgum (Sorgum bicolor L. Moench) menggunakan Rhizopus C1 untuk pangan fungsional. *PANGAN*, *20*(4).

Susilowati, A., Aspiyanto, Lotulung, P. D., & Maryati, Y. (2016). Difference in membrane performance on separation of folic acid and its identification on dent corn (Zea mays var. indentata) hydrolyzed. *Laporan Hasil Penelitian, Program Tematik, Kediputian IPT, Tahun Anggaran 2009, Pusat Penelitian Kimia - LIPI*

Susilowati, A., Aspiyanto, Ghozali, M., & Maryati, Y. (2018). Mikrofiltrasi isolat tempe kedelai (*Glicyn soja L.*) dan distribusi partikelnya sebagai sumber asam folat. *BIOPROPAL INDUSTRI*, *9*(2).

Susilowati, A., Maryati, Y., Lotulung, P., & Aspiyanto, A. (2018). Formulasi Nikstamal Jagung, Tempe, Dan Sayuran terfermentasi dalam perolehan pasta Fortifikan Sebagai sumber asam Folat Alami. *Jurnal Aplikasi Teknologi Pangan*, *7*(2), 68–77. https://doi.org/10.17728/jatp.2517

Swiss Institute of Bioinformatics (SIB). (2022). *Enzyme*. Expasy. Retrieved March 5, 2022, from https://enzyme.expasy.org/cgi-bin/enzyme/enzyme-search-cl?3

U.S. Department of Agriculture. (2020). Food Data Central, fdc.nal.usda.gov

Varela-Moreiras, G., Murphy, M. M., & Scott, J. M. (2009). Cobalamin, folic acid, and homocysteine. *Nutrition Reviews*, *67*(1). https://doi.org/10.1111/nure.2009.67.issue-s2

World Health Organization. (2018). *Arsenic*. Retrieved, April 22, 2022, from https://www.who.int/news-room/fact-sheets/detail/arsenic

Wusigale, & Liang, L. (2020). Folates: Stability and interaction with biological molecules. *Journal of Agriculture and Food Research*, *2*, 100039. https://doi.org/10.1016/j.jafr.2020.100039

Yarlina, V. P. & Astuti, D. I. (2021). Karakterisasi kandungan vitamin B12, folat dan isoflavon tempe kedelai dengan isolat murni Rhizopus oryzae, Rhizopus oligosporus, dan Rhizopus stolonifer sebagai bahan pangan fungsional. *Teknologi Pangan*, *12*(1).

Yasin, M., Sumarmo, Amin, N. (2014). *Perakitan varietas unggul jagung fungsional*. IAARD Press (Badan Penelitian dan Pengembangan Pertanian).