

DAFTAR PUSTAKA

- Adhikari, K., Gruw, I.U., Mustapha, A., Fernando, L.N., Stringer, W.C., Hall, W.E., 2002. Changes in the profile of organic acids in plain set and stirred yogurts during manufacture and refrigerated storage.
- Adhikari, K., Mustapha, A., Grün, I.U., Fernando, L., 2000. Viability of microencapsulated bifidobacteria in set yogurt during refrigerated storage. *J Dairy Sci* 83, 1946–1951. [https://doi.org/10.3168/jds.S0022-0302\(00\)75070-3](https://doi.org/10.3168/jds.S0022-0302(00)75070-3)
- Arepally, D., Reddy, R.S., Goswami, T.K., 2020. Studies on survivability, storage stability of encapsulated spray dried probiotic powder. *Curr Res Food Sci.* <https://doi.org/10.1016/j.crfs.2020.09.001>
- Arıkan, M., Mitchell, A.L., Finn, R.D., Gürel, F., 2020. Microbial composition of Kombucha determined using amplicon sequencing and shotgun metagenomics. *J Food Sci* 85, 455–464. <https://doi.org/10.1111/1750-3841.14992>
- Azfaralariff, A., Vohra, B., Fazry, S., Law, D., Sairi, F., Othman, B.A., 2022. Effects of Starter Culture and Sweetener on Biochemical Compounds and Microbial Diversity of Kombucha Tea. *Sains Malays* 51, 3715–3729. <https://doi.org/10.17576/jsm-2022-5111-16>
- Babaloo, F., Jamei, R., 2018. Anthocyanin pigment stability of Cornus mas–Macrocarpa under treatment with pH and some organic acids. *Food Sci Nutr* 6, 168–173. <https://doi.org/10.1002/fsn3.542>
- Balestra, G.M., Misaghi, I., 1997. Increasing the efficiency of the plate counting method for estimating bacteria diversity. *J Microbiol Methods* 30, 111–117.
- Banin, M.M., Utami, T., Cahyanto, M.N., Widada, J., Rahayu, Endang Sutriswati, Rahayu, E S, 2019a. Effects of Consumption of Probiotic Powder Containing *Lactobacillus Plantarum* Dad-13 on Fecal Bacterial Population in School-Age Children in Indonesia. *Article 1 international journal of probiotics and prebiotics* 1, 1–8.
- Banin, M.M., Utami, T., Cahyanto, M.N., Widada, J., Rahayu, E.S., 2019b. Effects of Consumption of Probiotic Powder Containing *Lactobacillus Plantarum* Dad-13 on Fecal Bacterial Population in School-Age Children in Indonesia. *Int J Probiotics Prebiotics* 14, 1–8.
- Battikh, H., Chaieb, K., Bakhrouf, A., Ammar, E., 2013. Antibacterial and antifungal activities of black and green kombucha teas. *J Food Biochem* 37, 231–236. <https://doi.org/10.1111/j.1745-4514.2011.00629.x>
- Blandon, J., Cranfield, J., Henson, S., 2007. *Functional Food and Natural Health Product Issues: The Canadian and International Context*.
- Bogdan, M., Justine, S., Camelia Filofteia, D., Călina Petruța, C., Gabriela, L., Elena Roxana, U., Florentina, M., 2018a. Lactic acid bacteria strains isolated from Kombucha with potential probiotic effect, *Romanian Biotechnological Letters*.

- Bogdan, M., Justine, S., Camelia Filofteia, D., Călina Petruța, C., Gabriela, L., Elena Roxana, U., Florentina, M., 2018b. Lactic acid bacteria strains isolated from Kombucha with potential probiotic effect, Romanian Biotechnological Letters.
- Bogdan, M., Justine, S., Camelia Filofteia, D., Călina Petruța, C., Gabriela, L., Elena Roxana, U., Florentina, M., 2018c. Lactic acid bacteria strains isolated from Kombucha with potential probiotic effect. Rom Biotechnol Lett 23.
- Brian A. Nummer, 2013. Kombucha Brewing Under the Food and Drug Administration Model Food Code: Risk Analysis and Processing Guidance. Advancement of The Science 76.
- Bueno, F., Chouljenko, A., Sathivel, S., 2021a. Development of coffee kombucha containing *Lactobacillus rhamnosus* and *Lactobacillus casei*: Gastrointestinal simulations and DNA microbial analysis. LWT 142. <https://doi.org/10.1016/j.lwt.2021.110980>
- Bueno, F., Chouljenko, A., Sathivel, S., 2021b. Development of coffee kombucha containing *Lactobacillus rhamnosus* and *Lactobacillus casei*: Gastrointestinal simulations and DNA microbial analysis. LWT 142. <https://doi.org/10.1016/j.lwt.2021.110980>
- Bujalance, C., Jiménez-Valera, M., Moreno, E., Ruiz-Bravo, A., 2006. A selective differential medium for *Lactobacillus plantarum*. J Microbiol Methods 66, 572–575. <https://doi.org/10.1016/j.mimet.2006.02.005>
- Caporaso, J.G., Kuczynski, J., Stombaugh, J., Bittinger, K., Bushman, F.D., Costello, E.K., Fierer, N., Pěňa, A.G., Goodrich, J.K., Gordon, J.I., Huttley, G.A., Kelley, S.T., Knights, D., Koenig, J.E., Ley, R.E., Lozupone, C.A., McDonald, D., Muegge, B.D., Pirrung, M., Reeder, J., Sevinsky, J.R., Turnbaugh, P.J., Walters, W.A., Widmann, J., Yatsunencko, T., Zaneveld, J., Knight, R., 2010. QIIME allows analysis of high-throughput community sequencing data. Nat Methods. <https://doi.org/10.1038/nmeth.f.303>
- Castañeda-Ovando, A., Pacheco-Hernández, M. de L., Páez-Hernández, M.E., Rodríguez, J.A., Galán-Vidal, C.A., 2009. Chemical studies of anthocyanins: A review. Food Chem 113, 859–871. <https://doi.org/10.1016/j.foodchem.2008.09.001>
- Chakravorty, S., Bhattacharya, S., Chatzinotas, A., Chakraborty, W., Bhattacharya, D., Gachhui, R., 2016. Kombucha tea fermentation: Microbial and biochemical dynamics. Int J Food Microbiol 220, 63–72. <https://doi.org/10.1016/j.ijfoodmicro.2015.12.015>
- Chen, C., Liu, B.Y., 2000. Changes in major components of tea fungus metabolites during prolonged fermentation. J Appl Microbiol 89, 834–839.
- Chen, C., Zhao, S., Hao, G., Yu, H., Tian, H., Zhao, G., 2017. Role of lactic acid bacteria on the yogurt flavour: A review. Int J Food Prop 20, S316–S330. <https://doi.org/10.1080/10942912.2017.1295988>

- Chu, S.C., Chen, C., 2006. Effects of origins and fermentation time on the antioxidant activities of kombucha. *Food Chem* 98, 502–507. <https://doi.org/10.1016/j.foodchem.2005.05.080>
- Cielecka, I., Ryngajłło, M., Maniukiewicz, W., Bielecki, S., 2021. Response surface methodology-based improvement of the yield and differentiation of properties of bacterial cellulose by metabolic enhancers. *Int J Biol Macromol* 187, 584–593. <https://doi.org/10.1016/j.ijbiomac.2021.07.147>
- Cui, Y., Wang, M., Zheng, Y., Miao, K., Qu, X., 2021. The carbohydrate metabolism of *lactiplantibacillus plantarum*. *Int J Mol Sci* 22. <https://doi.org/10.3390/ijms222413452>
- De Filippis, F., Parente, E., Ercolini, D., 2017. Metagenomics insights into food fermentations. *Microb Biotechnol*. <https://doi.org/10.1111/1751-7915.12421>
- De Filippis, F., Troise, A.D., Vitaglione, P., Ercolini, D., 2018. Different temperatures select distinctive acetic acid bacteria species and promotes organic acids production during Kombucha tea fermentation. *Food Microbiol* 73, 11–16. <https://doi.org/10.1016/j.fm.2018.01.008>
- de Souza Oliveira, R.P., Perego, P., de Oliveira, M.N., Converti, A., 2011. Effect of inulin as a prebiotic to improve growth and counts of a probiotic cocktail in fermented skim milk. *LWT - Food Science and Technology* 44, 520–523. <https://doi.org/10.1016/j.lwt.2010.08.024>
- Denny, L., Coles, S., Blitz, R., 2017. Fetal Alcohol Syndrome and Fetal Alcohol Spectrum Disorders.
- Edgar, R.C., 2013. UPARSE: Highly accurate OTU sequences from microbial amplicon reads. *Nat Methods* 10, 996–998. <https://doi.org/10.1038/nmeth.2604>
- Emiljanowicz, K.E., Malinowska-Pańczyk, E., 2020. Kombucha from alternative raw materials—The review. *Crit Rev Food Sci Nutr* 60, 3185–3194. <https://doi.org/10.1080/10408398.2019.1679714>
- Enaru, B., Drețcanu, G., Pop, T.D., Stănilă, A., Diaconeasa, Z., 2021. Anthocyanins: Factors affecting their stability and degradation. *Antioxidants*. <https://doi.org/10.3390/antiox10121967>
- Ettayebi, K., Errachidi, F., Jamai, L., Tahri-Jouti, M.A., Sendide, K., Ettayebi, M., 2003. Biodegradation of polyphenols with immobilized *Candida tropicalis* under metabolic induction. *FEMS Microbiol Lett* 223, 215–219. [https://doi.org/10.1016/S0378-1097\(03\)00380-X](https://doi.org/10.1016/S0378-1097(03)00380-X)
- Freitas, A., Sousa, P., Wurlitzer, N., 2022. Alternative raw materials in kombucha production. *Int J Gastron Food Sci* 30, 100594. <https://doi.org/10.1016/j.ijgfs.2022.100594>
- Fujimoto, J., Matsuki, T., Sasamoto, M., Tomii, Y., Watanabe, K., 2008a. Identification and quantification of *Lactobacillus casei* strain Shirota in human feces with strain-specific primers derived from randomly amplified polymorphic DNA. *Int J Food Microbiol* 126, 210–215. <https://doi.org/10.1016/j.ijfoodmicro.2008.05.022>

- Fujimoto, J., Matsuki, T., Sasamoto, M., Tomii, Y., Watanabe, K., 2008b. Identification and quantification of *Lactobacillus casei* strain Shirota in human feces with strain-specific primers derived from randomly amplified polymorphic DNA. *Int J Food Microbiol* 126, 210–215. <https://doi.org/10.1016/j.ijfoodmicro.2008.05.022>
- Gareau, M.G., Sherman, P.M., Walker, W.A., 2010. Probiotics and the gut microbiota in intestinal health and disease. *Nat Rev Gastroenterol Hepatol* 7, 503–514. <https://doi.org/10.1038/nrgastro.2010.117>
- Geng, P., Zhang, L., Shi, G.Y., 2017. Omics analysis of acetic acid tolerance in *Saccharomyces cerevisiae*. *World J Microbiol Biotechnol* 33. <https://doi.org/10.1007/s11274-017-2259-9>
- Ghosh, A., Mehta, A., Khan, A.M., 2018. Metagenomic analysis and its applications, in: *Encyclopedia of Bioinformatics and Computational Biology: ABC of Bioinformatics*. Elsevier, pp. 184–193. <https://doi.org/10.1016/B978-0-12-809633-8.20178-7>
- Gopal, P.K., 2022. Bacteria, Beneficial: Probiotic Lactic Acid Bacteria: An Overview, in: *Encyclopedia of Dairy Sciences*. Elsevier, pp. 32–33. <https://doi.org/10.1016/b978-0-12-818766-1.00018-0>
- Gopu, G., Govindan, S., 2018. Production of bacterial cellulose from *Komagataeibacter saccharivorans* strain BC1 isolated from rotten green grapes. *Prep Biochem Biotechnol* 48, 842–852. <https://doi.org/10.1080/10826068.2018.1513032>
- Greenwalt, C.J., Ledford, R.A., Steinkraus, K.H., 1998. Determination and Characterization of the Antimicrobial Activity of the Fermented Tea Kombucha.
- Guan, N., Liu, L., 2020. Microbial response to acid stress: mechanisms and applications. *Appl Microbiol Biotechnol* 104, 51–65. <https://doi.org/10.1007/s00253-019-10226-1>
- Gyllang, H., Martinson, E., 1976. *Aspergillus fumigatus* and *Aspergillus amstelodami* as causes of gushing. *Journal of the Institute of Brewing* 82, 182–183. <https://doi.org/10.1002/j.2050-0416.1976.tb03748.x>
- Hansen, L.T., Allan-Wojtas, P.M., Jin, Y.L., Paulson, A.T., 2002. Survival of Ca-alginate microencapsulated *Bifidobacterium* spp. in milk and simulated gastrointestinal conditions. *Food Microbiol* 19, 35–45. <https://doi.org/10.1006/fmic.2001.0452>
- Harrison, K., Curtin, C., 2021. Microbial composition of scoby starter cultures used by commercial kombucha brewers in North America. *Microorganisms* 9. <https://doi.org/10.3390/microorganisms9051060>
- Hood, S.K., Zoitola, E.A., 1988. Effect of Low pH on the Ability of *Lactobacillus acidophilus* to Survive and Adhere to Human Intestinal Cells. *JURNAL OF FOOD SCIENCE* 53.
- Hornedo-Ortega, R., Álvarez-Fernández, M.A., Cerezo, A.B., Garcia-Garcia, I., Troncoso, A.M., Garcia-Parrilla, M.C., 2017. Influence of Fermentation Process on the Anthocyanin Composition of Wine and Vinegar Elaborated from Strawberry. *J Food Sci* 82, 364–372. <https://doi.org/10.1111/1750-3841.13624>

- Ismail, A.A., Bassyouni, R.H., Kamel, Z., Gabr, S.M., 2016. Detoxification of Patulin by Kombucha tea culture. *CYTA - Journal of Food* 14, 271–279. <https://doi.org/10.1080/19476337.2015.1096828>
- Ivanišová, E., Meňhartová, K., Terentjeva, M., Harangozo, L., Kántor, A., Kačániová, M., 2020. The evaluation of chemical, antioxidant, antimicrobial and sensory properties of kombucha tea beverage. *J Food Sci Technol* 57, 1840–1846. <https://doi.org/10.1007/s13197-019-04217-3>
- Jadhav, V., Deshmukh, S., Mahadkar, S., 2013. Evaluation of antioxidant potential of *Clitoria ternatea* L. *International Journal of Pharmacy and Pharmaceutical Sciences*.
- Jang, S.S.I.K., McIntyre, L., Chan, M., Brown, P.N., Finley, J., Chen, S.X., 2021. Ethanol concentration of kombucha teas in British Columbia, Canada. *J Food Prot* 84, 1878–1883. <https://doi.org/10.4315/JFP-21-130>
- Jayabalan, R., Malbaša, R. V., Lončar, E.S., Vitas, J.S., Sathishkumar, M., 2014. A review on kombucha tea-microbiology, composition, fermentation, beneficial effects, toxicity, and tea fungus. *Compr Rev Food Sci Food Saf* 13, 538–550. <https://doi.org/10.1111/1541-4337.12073>
- Jayabalan, R., Malbaša, R. V., Sathishkumar, M., 2017. Kombucha Tea: Metabolites, in: *Fungal Metabolites*. Springer International Publishing, pp. 965–978. https://doi.org/10.1007/978-3-319-25001-4_12
- Jayabalan, R., Malini, K., Sathishkumar, M., Swaminathan, K., Yun, S.-E., 2010. Biochemical characteristics of tea fungus produced during kombucha fermentation. *Food Sci. Biotechnol* 19, 843–847.
- Jayabalan, R., Marimuthu, S., Swaminathan, K., 2007. Changes in content of organic acids and tea polyphenols during kombucha tea fermentation. *Food Chem* 102, 392–398. <https://doi.org/10.1016/j.foodchem.2006.05.032>
- Jiang, H., Song, Z., Hao, Y., Hu, X., Lin, X., Liu, S., Li, C., 2023. Effect of co-culture of *Komagataeibacter nataicola* and selected *Lactobacillus fermentum* on the production and characterization of bacterial cellulose. *LWT* 173. <https://doi.org/10.1016/j.lwt.2022.114224>
- Kim, J., Adhikari, K., 2020. Current Trends in Kombucha: Marketing Perspectives and the Need for Improved Sensory Research. *Beverages*. <https://doi.org/10.3390/beverages6010015>
- Kim, J.Y., Ok, E., Kim, Y.J., Choi, K.S., Kwon, O., 2013. Oxidation of fatty acid may be enhanced by a combination of pomegranate fruit phytochemicals and acetic acid in HepG2 cells. *Nutr Res Pract* 7, 153–159. <https://doi.org/10.4162/nrp.2013.7.3.153>
- Kombucha Brewers International Code of Practice, 2021. Kombucha Code of Practice [WWW Document]. URL <https://kombuchabrewers.org/kombucha-code-of-practice/> (accessed 4.21.23).
- Konar, N., Palabiyik, I., Toker, O.S., Polat, D.G., Kelleci, E., Pirouzian, H.R., Akcicek, A., Sagdic, O., 2018a. Conventional and sugar-free probiotic white chocolate: Effect of

- inulin DP on various quality properties and viability of probiotics. *J Funct Foods* 43, 206–213. <https://doi.org/10.1016/j.jff.2018.02.016>
- Konar, N., Palabiyik, I., Toker, O.S., Polat, D.G., Kelleci, E., Pirouzian, H.R., Akcicek, A., Sagdic, O., 2018b. Conventional and sugar-free probiotic white chocolate: Effect of inulin DP on various quality properties and viability of probiotics. *J Funct Foods* 43, 206–213. <https://doi.org/10.1016/j.jff.2018.02.016>
- Kondo, S., Tayama, K., Tsukamoto, Y., Ikeda, K., Yamori, Y., 2001. Antihypertensive effects of acetic acid and vinegar on spontaneously hypertensive rats. *Biosci Biotechnol Biochem* 65, 2690–2694. <https://doi.org/10.1271/bbb.65.2690>
- Kozyrovskaya, N.O., Reva, O.M., Goginyan, V.B., de Vera, J.-P., n.d. Kombucha microbiome as a probiotic: a view from the perspective of post-genomics and synthetic ecology.
- Kruk, J., Aboul-Enein, H.Y., Kładna, A., Bowser, J.E., 2019. Oxidative stress in biological systems and its relation with pathophysiological functions: the effect of physical activity on cellular redox homeostasis. *Free Radic Res* 53, 497–521. <https://doi.org/10.1080/10715762.2019.1612059>
- Kungsuwan, K., Singh, K., Phetkao, S., Utama-Ang, N., 2014. Effects of pH and anthocyanin concentration on color and antioxidant activity of *Clitoria ternatea* extract. *Food and Applied Bioscience Journal* 2, 31–46.
- Laavanya, D., Shirkole, S., Balasubramanian, P., 2021. Current challenges, applications and future perspectives of SCOBY cellulose of Kombucha fermentation. *J Clean Prod* 295. <https://doi.org/10.1016/j.jclepro.2021.126454>
- Langille, M.G.I., Zaneveld, J., Caporaso, J.G., McDonald, D., Knights, D., Reyes, J.A., Clemente, J.C., Burkepille, D.E., Vega Thurber, R.L., Knight, R., Beiko, R.G., Huttenhower, C., 2013. Predictive functional profiling of microbial communities using 16S rRNA marker gene sequences. *Nat Biotechnol* 31, 814–821. <https://doi.org/10.1038/nbt.2676>
- Leung, A.K.C., 1986. Ethyl Alcohol Ingestion in Children A 15-Year Review. *Clin Pediatr (Phila)* 25, 617–619.
- Lijon, M.B., Meghla, N.S., Jahedi, E., Rahman, M.A., Hossain, I., 2017. Phytochemistry and pharmacological activities of *Clitoria ternatea*. *International Journal of Natural and Social Sciences* 4, 1–10.
- Lorquet, F., Goffin, P., Muscariello, L., Baudry, J.B., Ladero, V., Sacco, M., Kleerebezem, M., Hols, P., 2004a. Characterization and functional analysis of the *poxB* gene, which encodes pyruvate oxidase in *Lactobacillus plantarum*. *J Bacteriol* 186, 3749–3759. <https://doi.org/10.1128/JB.186.12.3749-3759.2004>
- Lorquet, F., Goffin, P., Muscariello, L., Baudry, J.B., Ladero, V., Sacco, M., Kleerebezem, M., Hols, P., 2004b. Characterization and functional analysis of the *poxB* gene, which encodes pyruvate oxidase in *Lactobacillus plantarum*. *J Bacteriol* 186, 3749–3759. <https://doi.org/10.1128/JB.186.12.3749-3759.2004>

- Lunelli, B.H., Andrade, R.R., Atala, D.I.P., MacIel, M.R.W., Filho, F.M., Filho, R.M.I., 2010. Production of lactic acid from sucrose: Strain selection, fermentation, and kinetic modeling. *Appl Biochem Biotechnol* 161, 227–237. <https://doi.org/10.1007/s12010-009-8828-0>
- Malbaša, R., Lončar, E., Djurić, M., Došenović, I., 2008. Effect of sucrose concentration on the products of Kombucha fermentation on molasses. *Food Chem* 108, 926–932. <https://doi.org/10.1016/j.foodchem.2007.11.069>
- Manjula, P., Mohan, C.H., Sreekanth, D., Keerthi, B., Devi, B.P., 2013. Phytochemical Analysis Of *Clitoria Ternatea* Linn., A Valuable Medicinal Plant. *J. Indian bot. Soc* 92, 173–178.
- Marco, M.L., Heeney, D., Binda, S., Cifelli, C.J., Cotter, P.D., Foligné, B., Gänzle, M., Kort, R., Pasin, G., Pihlanto, A., Smid, E.J., Hutkins, R., 2017. Health benefits of fermented foods: microbiota and beyond. *Curr Opin Biotechnol*. <https://doi.org/10.1016/j.copbio.2016.11.010>
- Mariana, R.R., Soekopitojo, S., Rusadi, M.P., 2023. The effects of fermentation duration on chemical properties, physical properties, and organoleptic of Butterfly Pea Kombucha, in: *AIP Conference Proceedings* 2634. AIP Publishing, p. 020114. <https://doi.org/10.1063/5.0111328>
- Marsh, A.J., O’Sullivan, O., Hill, C., Ross, R.P., Cotter, P.D., 2014a. Sequence-based analysis of the bacterial and fungal compositions of multiple kombucha (tea fungus) samples. *Food Microbiol* 38, 171–178. <https://doi.org/10.1016/j.fm.2013.09.003>
- Marsh, A.J., O’Sullivan, O., Hill, C., Ross, R.P., Cotter, P.D., 2014b. Sequence-based analysis of the bacterial and fungal compositions of multiple kombucha (tea fungus) samples. *Food Microbiol* 38, 171–178. <https://doi.org/10.1016/j.fm.2013.09.003>
- Matsuoka, M., Tsuchida, T., Matsushita, K., Adachi, O., Yoshinaga, F., 1996. NII-Electronic Library Service A Synthetic Medium for Bacterial Cellulose Production by *Acetobacter xylinum* subsp. *su crofermen tans*. *Biosci. Biotech. Biochem* 60, 575.
- May, A., Narayanan, S., Alcock, J., Varsani, A., Maley, C., Aktipis, A., 2019. Kombucha: A novel model system for cooperation and conflict in a complex multi-species microbial ecosystem. *PeerJ* 2019. <https://doi.org/10.7717/peerj.7565>
- Michael, M., Phebus, R.K., Schmidt, K.A., 2010. Impact of a plant extract on the viability of *Lactobacillus delbrueckii* ssp. *bulgaricus* and *Streptococcus thermophilus* in nonfat yogurt. *Int Dairy J* 20, 665–672. <https://doi.org/10.1016/j.idairyj.2010.03.005>
- Mills, S., Serrano, L.M., Griffin, C., O’Connor, P.M., Schaad, G., Bruining, C., Hill, C., Ross, R.P., Meijer, W.C., 2011. Inhibitory activity of *Lactobacillus plantarum* LMG P-26358 against *Listeria innocua* when used as an adjunct starter in the manufacture of cheese. *Microb Cell Fact* 10. <https://doi.org/10.1186/1475-2859-10-S1-S7>
- Moreno, Y., Collado, M.C., Ferrús, M.A., Cobo, J.M., Hernández, E., Hernández, M., 2006. Viability assessment of lactic acid bacteria in commercial dairy products stored at 4 °C

- using LIVE/DEAD® BacLight™ staining and conventional plate counts. *Int J Food Sci Technol* 41, 275–280. <https://doi.org/10.1111/j.1365-2621.2005.01060.x>
- Mozzi, F., 2015. Lactic Acid Bacteria, in: *Encyclopedia of Food and Health*. Elsevier Inc., pp. 501–508. <https://doi.org/10.1016/B978-0-12-384947-2.00414-1>
- Nazemi, L., Hashemi, S.J., Ghazvini, R.D., Saeedi, M., Khodavaisy, S., Barac, A., Modiri, M., Dana, M.A., Shahrabadi, Z.Z., Rezaie, S., 2019. Investigation of *cgrA* and *cyp51A* gene alternations in *Aspergillus fumigatus* strains exposed to kombucha fermented tea. *Curr Med Mycol* 5, 36–42. <https://doi.org/10.18502/cmm.5.3.1745>
- Neffe-Skocińska, K., Jaworska, D., Kołożyn-Krajewska, D., Dolatowski, Z., Jachacz-Jówko, L., 2015. The effect of LAB as probiotic starter culture and green tea extract addition on dry fermented pork loins quality. *Biomed Res Int* 2015. <https://doi.org/10.1155/2015/452757>
- Neffe-Skocińska, K., Sionek, B., Ścibisz, I., Kołożyn-Krajewska, D., 2017. Acid contents and the effect of fermentation condition of Kombucha tea beverages on physicochemical, microbiological and sensory properties. *CYTA - Journal of Food* 15, 601–607. <https://doi.org/10.1080/19476337.2017.1321588>
- Nguyen, N.K., Dong, N.T.N., Nguyen, H.T., Le, P.H., 2015. Lactic acid bacteria: promising supplements for enhancing the biological activities of kombucha. *Springerplus* 4, 1–6. <https://doi.org/10.1186/s40064-015-0872-3>
- Nuallakul, S., Charalampopoulos, D., 2011. Survival of *Lactobacillus plantarum* in model solutions and fruit juices. *Int J Food Microbiol* 146, 111–117. <https://doi.org/10.1016/j.ijfoodmicro.2011.01.040>
- Oancea, S., 2021. A review of the current knowledge of thermal stability of anthocyanins and approaches to their stabilization to heat. *Antioxidants* 10, 1337. <https://doi.org/10.3390/antiox10091337>
- Oguis, G.K., Gilding, E.K., Jackson, M.A., Craik, D.J., 2019. Butterfly pea (*Clitoria ternatea*), a cyclotide-bearing plant with applications in agriculture and medicine. *Front Plant Sci* 10. <https://doi.org/10.3389/fpls.2019.00645>
- Ozcan, T., Ozdemir, T., Avci, H.R., 2021. Survival of *Lactobacillus casei* and functional characteristics of reduced sugar red beetroot yoghurt with natural sugar substitutes. *Int J Dairy Technol* 74, 148–160. <https://doi.org/10.1111/1471-0307.12741>
- Pakravan, N., Kermanian, F., Mahmoudi, E., 2019. Filtered Kombucha tea ameliorates the leaky gut syndrome in young and old mice model of colitis. *Iran J Basic Med Sci* 22, 1158–1165. <https://doi.org/10.22038/ijbms.2019.36189.8622>
- Pei, J., Jin, W., Abd El-Aty, A.M., Baranenko, D.A., Gou, X., Zhang, H., Geng, J., Jiang, L., Chen, D., Yue, T., 2020. Isolation, purification, and structural identification of a new bacteriocin made by *Lactobacillus plantarum* found in conventional kombucha. *Food Control* 110. <https://doi.org/10.1016/j.foodcont.2019.106923>

- Porto-Figueira, P., Câmara, J.S., Vigário, A.M., Pereira, J.A.M., 2023. Understanding the Tolerance of Different Strains of Human Pathogenic Bacteria to Acidic Environments. *Applied Sciences (Switzerland)* 13. <https://doi.org/10.3390/app13010305>
- Prasad Raju Borelli, D., Raju, P., Tirumanyam Sri Padmavati Mahila Visvavidyalayam, M., 2014. Identification of bioactive compounds by ftir analysis and in vitro antioxidant activity of clitoria ternate leaf and flower extracts.
- Puspawati, N.Y., Arihantana, N.M.I.H., 2016. Viability of Lactic Acid Bacteria Isolated from Kombucha Tea Against Low pH and Bile Salt. *Prog. Pasca Sarjana, Univ. Udayana* ISSN 3, 2407–3814.
- Quince, C., Walker, A.W., Simpson, J.T., Loman, N.J., Segata, N., 2017. Corrigendum: Shotgun metagenomics, from sampling to analysis. *Nat Biotechnol.* <https://doi.org/10.1038/nbt1217-1211b>
- Rahayu, E.S., Cahyanto, M.N., Sarwoko, M.-A., Haryono, P., Windiarti, L., Sutriyanto, J., Kandarina, I., Nurfiani, S., Zulaichah, E., Utami, T., 2016. Effects of consumption of fermented milk containing indigenous probiotic *Lactobacillus plantarum* dad-13 on the fecal microbiota of healthy Indonesian volunteers. *Int J Probiotics Prebiotics* 11, 91–98.
- Rahayu, E.S., Mariyatun, M., Manurung, N.E.P., Hasan, P.N., Therdtatha, P., Mishima, R., Komalasari, H., Mahfuzah, N.A., Pamungkaningtyas, F.H., Yoga, W.K., Nurfiana, D.A., Liwan, S.Y., Juffrie, M., Nugroho, A.E., Utami, T., 2021a. Effect of probiotic *Lactobacillus plantarum* Dad-13 powder consumption on the gut microbiota and intestinal health of overweight adults. *World J Gastroenterol* 126, 107–128. <https://doi.org/10.3748/WJG.V27.I1.107>
- Rahayu, E.S., Mariyatun, M., Manurung, N.E.P., Hasan, P.N., Therdtatha, P., Mishima, R., Komalasari, H., Mahfuzah, N.A., Pamungkaningtyas, F.H., Yoga, W.K., Nurfiana, D.A., Liwan, S.Y., Juffrie, M., Nugroho, A.E., Utami, T., 2021b. Effect of probiotic *Lactobacillus plantarum* Dad-13 powder consumption on the gut microbiota and intestinal health of overweight adults. *World J Gastroenterol* 126, 107–128. <https://doi.org/10.3748/WJG.V27.I1.107>
- Rahayu, E.S., Nursiwi, A., N, B.S., Supriyanto, S., 2018. Development of the Traditional Tape Ketan Into Probiotic Drink. *Indonesian Food and Nutrition Progress* 15, 11. <https://doi.org/10.22146/ifnp.33387>
- Rahayu, E.S., Yogeswara, A., Mariyatun, Windiarti, L., Utami, T., Watanabe, K., 2015. Molecular characteristics of indigenous probiotic strains from Indonesia. *International Journal of Probiotics and Prebiotics* Vol. 10, No. 4, pp. xx-xx, 2015 10.
- Reddy, L.V., Min, J.H., Wee, Y.J., 2015a. Production of probiotic mango juice by fermentation of lactic acid bacteria. *Korean Journal of Microbiology and Biotechnology* 43, 120–125. <https://doi.org/10.4014/mb.1504.04007>

- Reddy, L.V., Min, J.H., Wee, Y.J., 2015b. Production of probiotic mango juice by fermentation of lactic acid bacteria. *Korean Journal of Microbiology and Biotechnology* 43, 120–125. <https://doi.org/10.4014/mbl.1504.04007>
- Saarela, M., Lahteenmaki, L., Crittenden, R., Salminen, S., Mattila-Sandholm, T., 2002. Gut bacteria and health foods-the European perspective. *Int J Food Microbiol* 78, 99–117.
- Saati, E.A., Mulandari, R.D., Wachid, M., Winarsih, S., 2018. The utilization of Telang flower as healthy-natural food coloring on dawet drink, in: *AIP Conference Proceedings*. American Institute of Physics Inc. <https://doi.org/10.1063/1.5064356>
- Sato, J., Wakayama, M., Takagi, K., 2015. Lactate Dehydrogenase Involved in Lactate Metabolism of *Acetobacter Pasteurianus*. *Procedia Environ Sci* 28, 67–71. <https://doi.org/10.1016/j.proenv.2015.07.010>
- Scibisz, I., Ziarno, M., Mitek, M., Zareba, D., 2012. Effect of probiotic cultures on the stability of anthocyanins in blueberry yoghurts. *LWT* 49, 208–212. <https://doi.org/10.1016/j.lwt.2012.06.025>
- Sengun, I.Y., Kirmizigul, A., 2020. Probiotic potential of kombucha. *J Funct Foods*. <https://doi.org/10.1016/j.jff.2020.104284>
- Setiawati, A.E., Kusnadi, J., 2021. Optimization of fermentation time and grain concentration for water kefir production from butterfly pea flower (*Clitoria ternatea*), in: *IOP Conference Series: Earth and Environmental Science*. IOP Publishing Ltd. <https://doi.org/10.1088/1755-1315/924/1/012081>
- Shahbazi, H., Hashemi Gahruei, H., Golmakani, M.T., Eskandari, M.H., Movahedi, M., 2018. Effect of medicinal plant type and concentration on physicochemical, antioxidant, antimicrobial, and sensorial properties of kombucha. *Food Sci Nutr* 6, 2568–2577. <https://doi.org/10.1002/fsn3.873>
- Sharma, R.J., Gupta, R.C., Singh, S., Bansal, A.K., Singh, I.P., 2016. Stability of anthocyanins- and anthocyanidins-enriched extracts, and formulations of fruit pulp of *Eugenia jambolana* ('jamun'). *Food Chem* 190, 808–817. <https://doi.org/10.1016/j.foodchem.2015.06.029>
- Shim, S.H., Swenson, D.C., Gloer, J.B., Dowd, P.F., Wicklow, D.T., 2006. Penifulvin A: A sesquiterpenoid-derived metabolite containing a novel dioxo[5,5,5,6]fenestrane ring system from a fungicolous isolate of *Penicillium griseofulvum*. *Org Lett* 8, 1225–1228. <https://doi.org/10.1021/ol060107c>
- Shori, A.B., 2015. The potential applications of probiotics on dairy and non-dairy foods focusing on viability during storage. *Biocatal Agric Biotechnol*. <https://doi.org/10.1016/j.bcab.2015.09.010>
- Sievers, M., Swings, J., 2005. Family *Acetobacteraceae*, in: Garrity, G.M. (Ed.), *Bergey's Manual of Systematic Bacteriology*. Springer, New York, pp. 41–95.
- Silva, P.D.L. da, Bezerra, M. de F., Santos, K.M.O. dos, Correia, R.T.P., 2015. Potentially probiotic ice cream from goat's milk: Characterization and cell viability during

- processing, storage and simulated gastrointestinal conditions. *LWT* 62, 452–457. <https://doi.org/10.1016/j.lwt.2014.02.055>
- Song, S., Jarvie, T., Hattori, M., 2013. Our Second Genome-Human Metagenome. How Next-Generation Sequencer Changes our Life Through Microbiology., in: *Advances in Microbial Physiology*. Academic Press, pp. 119–144. <https://doi.org/10.1016/B978-0-12-410515-7.00003-2>
- Srihari, T., Arunkumar, R., Arunakaran, J., Satyanarayana, U., 2013. Downregulation of signalling molecules involved in angiogenesis of prostate cancer cell line (PC-3) by kombucha (lyophilized). *Biomedicine and Preventive Nutrition* 3, 53–58. <https://doi.org/10.1016/j.bionut.2012.08.001>
- Suharman, Sutakwa, A., Nadia, L.S., 2021. Effects of Sucrose Addition to Lactic Acid Concentrations and Lactic Acid Bacteria Population of Butterfly Pea (*Clitoria Ternatea* L.) Yogurt, in: *Journal of Physics: Conference Series*. IOP Publishing Ltd. <https://doi.org/10.1088/1742-6596/1823/1/012038>
- Tanaka, T., Matsuo, Y., Kouno, I., 2010. Chemistry of secondary polyphenols produced during processing of tea and selected foods. *Int J Mol Sci*. <https://doi.org/10.3390/ijms11010014>
- Tran, T., Grandvalet, C., Verdier, F., Martin, A., Alexandre, H., Tourdot-Maréchal, R., 2020a. Microbiological and technological parameters impacting the chemical composition and sensory quality of kombucha. *Compr Rev Food Sci Food Saf* 19, 2050–2070. <https://doi.org/10.1111/1541-4337.12574>
- Tran, T., Grandvalet, C., Verdier, F., Martin, A., Alexandre, H., Tourdot-Maréchal, R., 2020b. Microbial Dynamics between Yeasts and Acetic Acid Bacteria in Kombucha: Impacts on the Chemical Composition of the Beverage. *Foods* 9. <https://doi.org/10.3390/foods9070963>
- Trček, J., Mira, N.P., Jarboe, L.R., 2015. Adaptation and tolerance of bacteria against acetic acid. *Appl Microbiol Biotechnol* 99, 6215–6229. <https://doi.org/10.1007/s00253-015-6762-3>
- Turkmen, N., Akal, C., Özer, B., 2019. Probiotic dairy-based beverages: A review. *J Funct Foods* 53, 62–75. <https://doi.org/10.1016/j.jff.2018.12.004>
- Tyl C, Sadler GD, 2017. pH and Titratable Acidity, in: S. Suzanne Nielsen (Ed.), *Food Analysis*. Springer, West Lafayette, pp. 389–40.
- Ulyatu, F., Pudji, H., Tyas, U., Umar, S., 2015. The changes of sesaminol triglucoside and antioxidant properties during fermentation of sesame milk by *Lactobacillus plantarum* Dad 13. *Int Food Res J* 22, 1945–1952.
- United States Pharmacopeia, 2020. United states pharmacopeia and national formulary. USP NF 1–10.
- US government's Alcohol and Tobacco Tax and Trade Bureau, 2019. Kombucha Information and Resources [WWW Document]. URL <https://www.ttb.gov/kombucha> (accessed 4.21.23).

- Utami, T., Kasmianti, Harmayani, E., Rahayu, E.S., 2016. Survival of *Lactobacillus plantarum* Dad 13 during Spray Drying and Its Application for Yoghurt Fermentation.
- Vargas, B.K., Fabricio, M.F., Záchia Ayub, M.A., 2021. Health effects and probiotic and prebiotic potential of Kombucha: A bibliometric and systematic review. *Food Biosci.* <https://doi.org/10.1016/j.fbio.2021.101332>
- Vasudha, S., Mishra, H.N., 2013. Non dairy probiotic beverages, *International Food Research Journal*.
- Vázquez-Cabral, B.D., Rocha-Guzmán, N.E., Gallegos-Infante, J.A., González-Herrera, S.M., González-Laredo, R.F., Moreno-Jiménez, M.R., Córdova-Moreno, I.T.S., 2014. Chemical and sensory evaluation of a functional beverage obtained from infusions of oak leaves (*Quercus resinosa*) inoculated with the kombucha consortium under different processing conditions. *Nutrafoods* 13, 169–178. <https://doi.org/10.1007/s13749-014-0035-0>
- Villarreal-Soto, S.A., Beaufort, S., Bouajila, J., Souchard, J.P., Renard, T., Rollan, S., Taillandier, P., 2019. Impact of fermentation conditions on the production of bioactive compounds with anticancer, anti-inflammatory and antioxidant properties in kombucha tea extracts. *Process Biochemistry* 83, 44–54. <https://doi.org/10.1016/j.procbio.2019.05.004>
- Wahyuningsih, S., Wulandari, L., Wartono, M.W., Munawaroh, H., Ramelan, A.H., 2017. The Effect of pH and Color Stability of Anthocyanin on Food Colorant, in: *IOP Conference Series: Materials Science and Engineering*. Institute of Physics Publishing. <https://doi.org/10.1088/1757-899X/193/1/012047>
- Wang, L., Hong, H., Zhang, C., Huang, Z., Guo, H., 2021. Transcriptome analysis of *Komagataeibacter europaeus* CGMCC 20445 responses to different acidity levels during acetic acid fermentation. *Pol J Microbiol* 70, 305–313. <https://doi.org/10.33073/PJM-2021-027>
- Wasik, A., McCourt, J., Buchgraber, M., 2007. Simultaneous determination of nine intense sweeteners in foodstuffs by high performance liquid chromatography and evaporative light scattering detection-Development and single-laboratory validation. *J Chromatogr A* 1157, 187–196. <https://doi.org/10.1016/j.chroma.2007.04.068>
- Wongthai, N., Tanticharakunsiri, W., Mangmool, S., Ochaikul, D., 2021. Characteristics and antioxidant activity of royal lotus pollen, butterfly pea flower, and oolong tea kombucha beverages. *Asia-Pacific Journal of Science and Technology* 26.
- Zhao, Z.J., Sui, Y.C., Wu, H.W., Zhou, C.B., Hu, X.C., Zhang, J., 2018. Flavour chemical dynamics during fermentation of kombucha tea. *Emir J Food Agric* 30, 732–741. <https://doi.org/10.9755/ejfa.2018.v30.i9.1794>
- Zubaidah, E., Afgani, C.A., Kalsum, U., Srianta, I., Blanc, P.J., 2019. Comparison of in vivo antidiabetes activity of snake fruit Kombucha, black tea Kombucha and metformin. *Biocatal Agric Biotechnol* 17, 465–469. <https://doi.org/10.1016/j.bcab.2018.12.026>

