

DAFTAR PUSTAKA

- Ahammed, S., Liu, F., Easdani, M., Saqib, M. N., & Zhong, F. (2023). Self-assembly of zein in aqueous acetic acid and ethanol solvents: Effect on mechanical properties of the zein film. *Food Packaging and Shelf Life*, 38, 101120. <https://doi.org/10.1016/J.FPSL.2023.101120>
- Al-Harrasi, A., Bhtaia, S., Al-Azri, M. S., Makeen, H. A., Albratty, M., Alhazmi, H. A., Mohan, S., Sharma, A., & Behl, T. (2022). Development and Characterization of Chitosan and Porphyrin Based Composite Edible Films Containing Ginger Essential Oil. *Polymers 2022*, Vol. 14, Page 1782, 14(9), 1782. <https://doi.org/10.3390/POLYM14091782>
- Andrade, R. D., Skurtys, O., & Osorio, F. A. (2012). Atomizing Spray Systems for Application of Edible Coatings. In *Comprehensive Reviews in Food Science and Food Safety* (Vol. 11, Issue 3, pp. 323–337). <https://doi.org/10.1111/j.1541-4337.2012.00186.x>
- Andrade, R., Skurtys, O., & Osorio, F. (2013). Drop impact behavior on food using spray coating: Fundamentals and applications. In *Food Research International* (Vol. 54, Issue 1, pp. 397–405). <https://doi.org/10.1016/j.foodres.2013.07.042>
- Apriliyani, M. W., Andriani, R. D., Rahayu, P. P., Purwadi, P., & Manab, A. (2020). Mechanical, Chemical and Microstructure Properties of Composite Edible Film Added with Modified Casein. *Jurnal Ilmu Dan Teknologi Hasil Ternak*, 15(3), 162–171. <https://doi.org/10.21776/ub.jitek.2020.015.03.4>
- Arah, I. K., Amaglo, H., Kumah, E. K., & Ofori, H. (2015). Preharvest and postharvest factors affecting the quality and shelf life of harvested tomatoes: A mini review. *International Journal of Agronomy*, 2015. <https://doi.org/10.1155/2015/478041>
- Arnon, H., Granit, R., Porat, R., & Poverenov, E. (2015). Development of polysaccharides-based edible coatings for citrus fruits: A layer-by-layer approach. *Food Chemistry*, 166, 465–472. <https://doi.org/10.1016/J.FOODCHEM.2014.06.061>
- Arnon-Rips, H., & Poverenov, E. (2018). Improving food products' quality and storability by using Layer by Layer edible coatings. *Trends in Food Science & Technology*, 75, 81–92. <https://doi.org/10.1016/J.TIFS.2018.03.003>

- Arroyo, B. J., Bezerra, A. C., Oliveira, L. L., Arroyo, S. J., Melo, E. A. de, & Santos, A. M. P. (2020). Antimicrobial active edible coating of alginate and chitosan add ZnO nanoparticles applied in guavas (*Psidium guajava* L.). *Food Chemistry*, *309*, 125566. <https://doi.org/10.1016/J.FOODCHEM.2019.125566>
- Barja, M. V., Ezquerro, M., Beretta, S., Diretto, G., Florez-Sarasa, I., Feixes, E., Fiore, A., Karlova, R., Fernie, A. R., Beekwilder, J., & Rodríguez-Concepción, M. (2021). Several geranylgeranyl diphosphate synthase isoforms supply metabolic substrates for carotenoid biosynthesis in tomato. *New Phytologist*, *231*(1), 255–272. <https://doi.org/10.1111/nph.17283>
- Barreto, T. A., Andrade, S. C. A., Maciel, J. F., Arcanjo, N. M. O., Madruga, M. S., Meireles, B., Cordeiro, Â. M. T., Souza, E. L., & Magnani, M. (2016). A Chitosan Coating Containing Essential Oil from *Origanum vulgare* L. to Control Postharvest Mold Infections and Keep the Quality of Cherry Tomato Fruit. *Frontiers in Microbiology*, *7*(NOV). <https://doi.org/10.3389/FMICB.2016.01724>
- Batista Silva, W., Cosme Silva, G. M., Santana, D. B., Salvador, A. R., Medeiros, D. B., Belghith, I., da Silva, N. M., Cordeiro, M. H. M., & Misobutsi, G. P. (2018). Chitosan delays ripening and ROS production in guava (*Psidium guajava* L.) fruit. *Food Chemistry*, *242*, 232–238. <https://doi.org/10.1016/J.FOODCHEM.2017.09.052>
- Beghetto, V., Gatto, V., Conca, S., Bardella, N., Buranello, C., Gasparetto, G., & Sole, R. (2020a). Development of 4-(4,6-dimethoxy-1,3,5-triazin-2-yl)-4-methyl-morpholinium chloride cross-linked carboxymethyl cellulose films. *Carbohydrate Polymers*, *249*, 116810. <https://doi.org/10.1016/J.CARBPOL.2020.116810>
- Beghetto, V., Gatto, V., Conca, S., Bardella, N., Buranello, C., Gasparetto, G., & Sole, R. (2020b). Development of 4-(4,6-dimethoxy-1,3,5-triazin-2-yl)-4-methyl-morpholinium chloride cross-linked carboxymethyl cellulose films. *Carbohydrate Polymers*, *249*. <https://doi.org/10.1016/j.carbpol.2020.116810>
- Bradford, K. J., Dahal, P., Van Asbrouck, J., Kunusoth, K., Bello, P., Thompson, J., & Wu, F. (2020). The dry chain: reducing postharvest losses and improving food safety in humid climates. *Food Industry Wastes: Assessment and Recuperation of Commodities*, 375–389. <https://doi.org/10.1016/B978-0-12-817121-9.00017-6>
- Brady, J., Drig, T., Lee, P. I., & Li, J. X. (2017). Polymer Properties and Characterization. *Developing Solid Oral Dosage Forms: Pharmaceutical Theory and Practice: Second Edition*, 181–223. <https://doi.org/10.1016/B978-0-12-802447-8.00007-8>

- Cerqueira, M. A., Souza, B. W. S., Teixeira, J. A., & Vicente, A. A. (2012). Effects of Interactions between the Constituents of Chitosan-Edible Films on Their Physical Properties. *Food and Bioprocess Technology*, 5(8), 3181–3192. <https://doi.org/10.1007/S11947-011-0663-Y/METRICS>
- Chan, J. C. Y., Burugapalli, K., Kelly, J. L., & Pandit, A. S. (2008). Influence of clinical application on bioresorbability: Host response. *Degradation Rate of Bioresorbable Materials: Prediction and Evaluation*, 267–318. <https://doi.org/10.1533/9781845695033.5.267>
- Chen, J., Zhang, J., Liu, D., Zhang, C., Yi, H., & Liu, D. (2022). Preparation, characterization, and application of edible antibacterial three-layer films based on gelatin–chitosan–corn starch–incorporated nisin. *Food Packaging and Shelf Life*, 34. <https://doi.org/10.1016/j.fpsl.2022.100980>
- Chen, W., Ma, S., Wang, Q., McClements, D. J., Liu, X., Ngai, T., & Liu, F. (2022). Fortification of edible films with bioactive agents: a review of their formation, properties, and application in food preservation. *Critical Reviews in Food Science and Nutrition*, 62(18), 5029–5055. <https://doi.org/10.1080/10408398.2021.1881435>
- Chiaregato, C. G., Bernardinelli, O. D., Shavandi, A., Sabadini, E., & Petri, D. F. S. (2023). The effect of the molecular structure of hydroxypropyl methylcellulose on the states of water, wettability, and swelling properties of cryogels prepared with and without CaO₂. *Carbohydrate Polymers*, 316, 121029. <https://doi.org/10.1016/J.CARBPOL.2023.121029>
- Choi, W. S., Singh, S., & Lee, Y. S. (2016). Characterization of edible film containing essential oils in hydroxypropyl methylcellulose and its effect on quality attributes of ‘Formosa’ plum (*Prunus salicina* L.). *LWT*, 70, 213–222. <https://doi.org/10.1016/J.LWT.2016.02.036>
- Cömert, E. D., Mogol, B. A., & Gökmen, V. (2020). Relationship between color and antioxidant capacity of fruits and vegetables. *Current Research in Food Science*, 2, 1–10. <https://doi.org/10.1016/j.crf.2019.11.001>
- da Costa de Quadros, C., Lima, K. O., Bueno, C. H. L., dos Santos Fogaça, F. H., da Rocha, M., & Prentice, C. (2020). Effect of the edible coating with protein hydrolysate on cherry tomatoes shelf life. *Journal of Food Processing and Preservation*, 44(10), e14760. <https://doi.org/10.1111/JFPP.14760>
- Deshmukh, K., Basheer Ahamed, M., Deshmukh, R. R., Khadheer Pasha, S. K., Bhagat, P. R., & Chidambaram, K. (2017). Biopolymer Composites With High Dielectric Performance: Interface Engineering. *Biopolymer Composites in Electronics*, 27–128. <https://doi.org/10.1016/B978-0-12-809261-3.00003-6>

- Dessy, A. N., Dharmayanti, N., Roswita Dewi, F., Studi Pemanfaatan Sumberdaya Perikanan, P., Industri Pengolahan Hasil Perikanan, P., AUP Jakarta, P., AUP No, J., Minggu-Jakarta Selatan, P., BBRPPB Kelautan dan Perikanan, P., Tubun, J. K., Pusat, J., Kelautan dan Perikanan Bitung, P., & Tandurusa Aertembaga Dua Kota Bitung-Sulut, J. (2021). Produksi Kitosan dari Cangkang Rajungan (*Portunus sp.*) pada Suhu Ruang: *Jurnal Pengolahan Hasil Perikanan Indonesia*, 24(3), 301–309. <https://doi.org/10.17844/JPHPI.V24I3.36635>
- Dinas Pertanian dan Perkebunan Aceh. (2020, April 22). *Tak Laku, Petani Buang Tomat*. <https://distanbun.acehprov.go.id/berita/kategori/daerah/tak-laku-petani-buang-tomat>
- Fagundes, C., Palou, L., Monteiro, A. R., & Pérez-Gago, M. B. (2015). Hydroxypropyl methylcellulose-beeswax edible coatings formulated with antifungal food additives to reduce alternaria black spot and maintain postharvest quality of cold-stored cherry tomatoes. *Scientia Horticulturae*, 193, 249–257. <https://doi.org/10.1016/J.SCIENTA.2015.07.027>
- Fatchurrahman, D., Amodio, M. L., de Chiara, M. L. V., Chaudhry, M. M. A., & Colelli, G. (2020). Early discrimination of mature-and immature-green tomatoes (*Solanum lycopersicum L.*) using fluorescence imaging method. *Postharvest Biology and Technology*, 169, 111287. <https://doi.org/10.1016/J.POSTHARVBIO.2020.111287>
- Freitas, P. A. V., de Oliveira, T. V., Silva, R. R. A., Fialho e Moraes, A. R., Pires, A. C. dos S., Soares, R. R. A., Junior, N. S., & Soares, N. F. F. (2020). Effect of pH on the intelligent film-forming solutions produced with red cabbage extract and hydroxypropylmethylcellulose. *Food Packaging and Shelf Life*, 26, 100604. <https://doi.org/10.1016/J.FPSL.2020.100604>
- Fuentes, S., Fuentes, S., & Poblete-Echeverria, C. (2020). Emerging Sensor Technology in Agriculture. *Emerging Sensor Technology in Agriculture*, 240. <https://doi.org/10.3390/BOOKS978-3-03943-614-9>
- Ghadermazi, R., Hamdipour, S., Sadeghi, K., Ghadermazi, R., & Khosrowshahi Asl, A. (2019). Effect of various additives on the properties of the films and coatings derived from hydroxypropyl methylcellulose—A review. *Food Science & Nutrition*, 7(11), 3363–3377. <https://doi.org/10.1002/FSN3.1206>
- Homez-Jara, A., Daza, L. D., Aguirre, D. M., Muñoz, J. A., Solanilla, J. F., & Váquiro, H. A. (2018). Characterization of chitosan edible films obtained with various polymer concentrations and drying temperatures. *International Journal of Biological Macromolecules*, 113, 1233–1240. <https://doi.org/10.1016/J.IJBIOMAC.2018.03.057>

- Huang, P., Ding, J., Liu, C., Li, H., Wang, C., Lin, Y., Sameen, D. E., Hossen, M. A., Chen, M., Yan, J., Liu, Y., & Qin, W. (2023). Konjac glucomannan/low-acyl gellan gum edible coating containing thymol microcapsule regulates cell wall polysaccharides disassembly and delays postharvest softening of blueberries. *Postharvest Biology and Technology*, *204*, 112449. <https://doi.org/10.1016/J.POSTHARVBIO.2023.112449>
- Jafarzadeh, S., Mohammadi Nafchi, A., Salehabadi, A., Oladzad-abbasabadi, N., & Jafari, S. M. (2021). Application of bio-nanocomposite films and edible coatings for extending the shelf life of fresh fruits and vegetables. *Advances in Colloid and Interface Science*, *291*, 102405. <https://doi.org/10.1016/J.CIS.2021.102405>
- Jurić, S., Bureš, M. S., Vlahoviček-Kahlina, K., Stracenski, K. S., Fruk, G., Jalšenjak, N., & Bandić, L. M. (2023). Chitosan-based layer-by-layer edible coatings application for the preservation of mandarin fruit bioactive compounds and organic acids. *Food Chemistry: X*, *17*. <https://doi.org/10.1016/j.fochx.2023.100575>
- Khater, E. S., Bahnasawy, A., Gabal, B. A., Abbas, W., & Morsy, O. (2023). Effect of adding nano-materials on the properties of hydroxypropyl methylcellulose (HPMC) edible films. *Scientific Reports 2023 13:1*, *13*(1), 1–14. <https://doi.org/10.1038/s41598-023-32218-y>
- Kumar, L. R., Yellapu, S. K., Tyagi, R. D., & Zhang, X. (2019). A review on variation in crude glycerol composition, bio-valorization of crude and purified glycerol as carbon source for lipid production. *Bioresource Technology*, *293*, 122155. <https://doi.org/10.1016/J.BIORTECH.2019.122155>
- Kumar, N., Pratibha, Prasad, J., Yadav, A., Upadhyay, A., Neeraj, Shukla, S., Petkoska, A. T., Heena, Suri, S., Gniewosz, M., & Kieliszek, M. (2023). Recent Trends in Edible Packaging for Food Applications — Perspective for the Future. *Food Engineering Reviews 2023 15:4*, *15*(4), 718–747. <https://doi.org/10.1007/S12393-023-09358-Y>
- Kumar, N., Pratibha, Trajkovska Petkoska, A., Khojah, E., Sami, R., & Al-Mushhin, A. A. M. (2021). Chitosan Edible Films Enhanced with Pomegranate Peel Extract: Study on Physical, Biological, Thermal, and Barrier Properties. *Materials 2021, Vol. 14, Page 3305*, *14*(12), 3305. <https://doi.org/10.3390/MA14123305>
- Kumar, S., Mukherjee, A., & Dutta, J. (2020). Chitosan based nanocomposite films and coatings: Emerging antimicrobial food packaging alternatives. *Trends in Food Science & Technology*, *97*, 196–209. <https://doi.org/10.1016/J.TIFS.2020.01.002>

- Lara, G. R., Uemura, K., Khalid, N., Kobayashi, I., Takahashi, C., Nakajima, M., & Neves, M. A. (2020). Layer-by-Layer Electrostatic Deposition of Edible Coatings for Enhancing the Storage Stability of Fresh-Cut Lotus Root (*Nelumbo nucifera*). *Food and Bioprocess Technology*, *13*(4), 722–726. <https://doi.org/10.1007/S11947-020-02410-3/METRICS>
- Li, H., Huang, Z., Addo, K. A., & Yu, Y. (2022). Evaluation of postharvest quality of plum (*Prunus salicina* L. cv. 'French') treated with layer-by-layer edible coating during storage. *Scientia Horticulturae*, *304*, 111310. <https://doi.org/10.1016/J.SCIENTA.2022.111310>
- Li, N., Wu, X., Zhuang, W., Xia, L., Chen, Y., Wu, C., Rao, Z., Du, L., Zhao, R., Yi, M., Wan, Q., & Zhou, Y. (2021). Tomato and lycopene and multiple health outcomes: Umbrella review. *Food Chemistry*, *343*, 128396. <https://doi.org/10.1016/j.foodchem.2020.128396>
- Lim, L. I., Tan, H. L., & Pui, L. P. (2021). Development and characterization of alginate-based edible film incorporated with hawthorn berry (*Crataegus pinnatifida*) extract. *Journal of Food Measurement and Characterization*, *15*(3), 2540–2548. <https://doi.org/10.1007/S11694-021-00847-4/METRICS>
- López Camelo, A. F., & Gómez, P. A. (2004). Comparison of color indexes for tomato ripening. *Horticultura Brasileira*, *22*(3), 534–537. <https://doi.org/10.1590/S0102-05362004000300006>
- Lufu, R., Ambaw, A., & Opara, U. L. (2020). Water loss of fresh fruit: Influencing pre-harvest, harvest and postharvest factors. *Scientia Horticulturae*, *272*, 109519. <https://doi.org/10.1016/j.scienta.2020.109519>
- Malik, G. K., Khuntia, A., & Mitra, J. (2022). Comparative Effect of Different Plasticizers on Barrier, Mechanical, Optical, and Sorption Properties of Hydroxypropyl Methylcellulose (HPMC)–Based Edible Film. *Journal of Biosystems Engineering*, *47*(2), 93–105. <https://doi.org/10.1007/S42853-022-00132-2/METRICS>
- Melikoğlu, A. Y., Hayatioğlu, N., Hendekçi, M. C., Tekin, İ., & Ersus, S. (2022). Development and characterization of edible films based on carboxymethyl cellulose enriched with pomegranate seed oil and the coating of strawberries. *Journal of Food Processing and Preservation*, *46*(7), e16607. <https://doi.org/10.1111/JFPP.16607>
- Murugan, L., Krishnan, N., Venkataravanappa, V., Saha, S., Mishra, A. K., Sharma, B. K., & Rai, A. B. (2020). Molecular characterization and race identification of *Fusarium oxysporum* f. sp. *lycopersici* infecting tomato in India. *3 Biotech*, *10*(11), 486. <https://doi.org/10.1007/s13205-020-02475-z>

- Naseri, H. R., Beigmohammadi, F., Mohammadi, R., & Sadeghi, E. (2020). Production and characterization of edible film based on gelatin–chitosan containing *Ferulago angulata* essential oil and its application in the prolongation of the shelf life of turkey meat. *Journal of Food Processing and Preservation*, 44(8), e14558. <https://doi.org/10.1111/JFPP.14558>
- Ndagiono, Muliansyah, & M, S. (2019). APLIKASI PRA PENDINGINAN TERHADAP DAYA SIMPAN BUAH TOMAT (*Solanum lycopersicum* L.) (Pre-cooling Application to Shelflife Tomatos Fruit (*Solanum lycopersicum* L.)). *Jurnal AGRI PEAT*, 20(1), 27–35.
- Ngo, T. M. P., Nguyen, T. H., Dang, T. M. Q., Tran, T. X., & Rachtanapun, P. (2020). Characteristics and Antimicrobial Properties of Active Edible Films Based on Pectin and Nanochitosan. *International Journal of Molecular Sciences* 2020, Vol. 21, Page 2224, 21(6), 2224. <https://doi.org/10.3390/IJMS21062224>
- Nguyen, T. L., Nguyen, H. T., Nguyen, V. K., Pham, T. T. H., Le, T. H. T., & Nguyen, T. T. (2020). Characteristics of HPMC/Beeswax Edible Composite Film and its Application for Preservation of Seedless Lime Fruit. *Key Engineering Materials*, 850, 87–93. <https://doi.org/10.4028/WWW.SCIENTIFIC.NET/KEM.850.87>
- Padma Sree, K., Author, C., Swapna Sree, M., & Supriya, P. (2020). Application of chitosan edible coating for preservation of tomato. *International Journal of Chemical Studies*, 8(4), 3281–3285. <https://doi.org/10.22271/CHEMI.2020.V8.I4AO.10157>
- Pah, Y. I., Sutrisno, & Emmy Darmawati. (2021). Aplikasi Coating Gel Lidah Buaya Untuk Mempertahankan Mutu Buah Alpukat Pada Penyimpanan Suhu Ruang. *Jurnal Keteknik Pertanian*, 8(3), 105–112. <https://doi.org/10.19028/jtep.08.3.105-112>
- Pavinatto, A., de Almeida Mattos, A. V., Malpass, A. C. G., Okura, M. H., Balogh, D. T., & Sanfelice, R. C. (2020). Coating with chitosan-based edible films for mechanical/biological protection of strawberries. *International Journal of Biological Macromolecules*, 151, 1004–1011. <https://doi.org/10.1016/J.IJBIOMAC.2019.11.076>
- Peralta-Ruiz, Y., Tovar, C. D. G., Sinning-Mangonez, A., Coronell, E. A., Marino, M. F., & Chaves-Lopez, C. (2020). Reduction of Postharvest Quality Loss and Microbiological Decay of Tomato “Chonto” (*Solanum lycopersicum* L.) Using Chitosan-E Essential Oil-Based Edible Coatings under Low-Temperature Storage. *Polymers* 2020, Vol. 12, Page 1822, 12(8), 1822. <https://doi.org/10.3390/POLYM12081822>

- Perone, N., Torrieri, E., Nicolai, M. A., Cavella, S., Addeo, F., & Masi, P. (2014). Structure and properties of hydroxypropyl methyl cellulose—Sodium caseinate film cross-linked by TGase. *Food Packaging and Shelf Life*, 1(2), 113–122. <https://doi.org/10.1016/J.FPSL.2014.03.002>
- Pham, T. T., Nguyen, L. L. P., Dam, M. S., & Baranyai, L. (2023). Application of Edible Coating in Extension of Fruit Shelf Life: Review. *AgriEngineering*, 5(1), 520–536. <https://doi.org/10.3390/agriengineering5010034>
- Qiao, C., Ma, X., Wang, X., & Liu, L. (2021). Structure and properties of chitosan films: Effect of the type of solvent acid. *LWT*, 135, 109984. <https://doi.org/10.1016/J.LWT.2020.109984>
- Qin, C., Li, H., Xiao, Q., Liu, Y., Zhu, J., & Du, Y. (2006). Water-solubility of chitosan and its antimicrobial activity. *Carbohydrate Polymers*, 63(3), 367–374. <https://doi.org/10.1016/J.CARBPOL.2005.09.023>
- Roshandel-hesari, N., Mokaber-Esfahani, M., Taleghani, A., & Akbari, R. (2022). Investigation of physicochemical properties, antimicrobial and antioxidant activity of edible films based on chitosan/casein containing *Origanum vulgare* L. essential oil and its effect on quality maintenance of cherry tomato. *Food Chemistry*, 396, 133650. <https://doi.org/10.1016/J.FOODCHEM.2022.133650>
- Ruggeri, E., Kim, D., Cao, Y., Farè, S., De Nardo, L., & Marelli, B. (2020). A Multilayered Edible Coating to Extend Produce Shelf Life. *ACS Sustainable Chemistry and Engineering*, 8(38), 14312–14321. https://doi.org/10.1021/ACSSUSCHEMENG.0C03365/SUPPL_FILE/SC0C03365_SI_001.PDF
- Saiki, E., Iwase, H., Horikawa, Y., & Shikata, T. (2023). Structure and Conformation of Hydroxypropylmethyl Cellulose with a Wide Range of Molar Masses in Aqueous Solution—Effects of Hydroxypropyl Group Addition. *Biomacromolecules*, 24(9), 4199–4207. https://doi.org/10.1021/ACS.BIOMAC.3C00517/ASSET/IMAGES/MEDIUM/BM3C00517_0012.GIF
- Saini, A., Sharma, D., Xia, Y., Saini, A., You, X., Su, Y., Chen, L., Yadav, C., & Li, X. (2021). Layer-by-layer assembly of cationic guar gum, cellulose nanocrystals and hydroxypropyl methylcellulose based multilayered composite films. *Cellulose*, 28(13), 8445–8457. <https://doi.org/10.1007/S10570-021-04064-6/METRICS>
- Sancakli, A., Basaran, B., Arican, F., & Polat, O. (2021). Effects of bovine gelatin viscosity on gelatin-based edible film mechanical, physical and morphological properties. *SN Applied Sciences*, 3(1), 1–11. <https://doi.org/10.1007/S42452-020-04076-0/FIGURES/8>

- Shan, P., Wang, K., Yu, F., Yi, L., Sun, L., & Li, H. (2023). Gelatin/sodium alginate multilayer composite film crosslinked with green tea extract for active food packaging application. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 662, 131013. <https://doi.org/10.1016/J.COLSURFA.2023.131013>
- Sikorski, D., Gzyra-Jagiela, K., & Draczyński, Z. (2021). The Kinetics of Chitosan Degradation in Organic Acid Solutions. *Marine Drugs*, 19(5). <https://doi.org/10.3390/MD19050236>
- Silva-Vera, W., Zamorano-Riquelme, M., Rocco-Orellana, C., Vega-Viveros, R., Gimenez-Castillo, B., Silva-Weiss, A., & Osorio-Lira, F. (2018). Study of spray system applications of edible coating suspensions based on hydrocolloids containing cellulose nanofibers on grape surface (*Vitis vinifera* L.). *Food and Bioprocess Technology*, 11(8), 1575–1585. <https://doi.org/10.1007/S11947-018-2126-1/METRICS>
- Singha, P., Rani, R., & Badwaik, L. S. (2023). Influence of sugarcane bagasse fibre on the properties of sweet lime peel- and polyvinyl alcohol-based biodegradable films. *Sustainable Food Technology*, 1(4), 610–620. <https://doi.org/10.1039/d3fb00052d>
- Sinha, S. R., Singha, A., Faruquee, M., Jiku, Md. A. S., Rahaman, Md. A., Alam, Md. A., & Kader, M. A. (2019). Post-harvest assessment of fruit quality and shelf life of two elite tomato varieties cultivated in Bangladesh. *Bulletin of the National Research Centre*, 43(1), 185. <https://doi.org/10.1186/s42269-019-0232-5>
- Spence, C. (2024). On the psychological effects of food color. In *Handbook on Natural Pigments in Food and Beverages* (pp. 33–60). Elsevier. <https://doi.org/10.1016/B978-0-323-99608-2.00004-5>
- Suhag, R., Kumar, N., Petkoska, A. T., & Upadhyay, A. (2020). Film formation and deposition methods of edible coating on food products: A review. *Food Research International*, 136, 109582. <https://doi.org/10.1016/J.FOODRES.2020.109582>
- Sultan, M., Hafez, O. M., Saleh, M. A., & Youssef, A. M. (2021). Smart edible coating films based on chitosan and beeswax–pollen grains for the postharvest preservation of Le Conte pear. *RSC Advances*, 11(16), 9572–9585. <https://doi.org/10.1039/D0RA10671B>
- Takeshita, S., Zhao, S., Malfait, W. J., & Koebel, M. M. (2021). Chemistry of Chitosan Aerogels: Three-Dimensional Pore Control for Tailored Applications. *Angewandte Chemie International Edition*, 60(18), 9828–9851. <https://doi.org/10.1002/ANIE.202003053>

- Tarangini, K., Kavi, P., & Jagajjanani Rao, K. (2022). Application of sericin-based edible coating material for postharvest shelf-life extension and preservation of tomatoes. *EFood*, 3(5), e36. <https://doi.org/10.1002/EFD2.36>
- Turhan, K. N., & Şahbaz, F. (2004). Water vapor permeability, tensile properties and solubility of methylcellulose-based edible films. *Journal of Food Engineering*, 61(3), 459–466. [https://doi.org/10.1016/S0260-8774\(03\)00155-9](https://doi.org/10.1016/S0260-8774(03)00155-9)
- Umaraw, P., & Verma, A. K. (2017). Comprehensive review on application of edible film on meat and meat products: An eco-friendly approach. <https://doi.org/10.1080/10408398.2014.986563>, 57(6), 1270–1279. <https://doi.org/10.1080/10408398.2014.986563>
- United States Department of Agriculture (2019). Tomatoes, red, ripe, raw, year-round average: USDA FoodData central.
- Wang, Q., Chen, W., Zhu, W., McClements, D. J., Liu, X., & Liu, F. (2022). A review of multilayer and composite films and coatings for active biodegradable packaging. *Npj Science of Food* 2022 6:1, 6(1), 1–16. <https://doi.org/10.1038/s41538-022-00132-8>
- Warkoyo, W., Haris, M. A., & Wahyudi, V. A. (2022). The Physical, Mechanical, Barrier Characteristics, and Application of Edible Film from Yellow Sweet Potato and Aloe Vera Gel. *AgriTECH*, 42(4), 390. <https://doi.org/10.22146/agritech.68633>
- Wibowo, C., Haryanti, P., & Wicaksono, R. (2021). Effect of edible coating application by spraying method on the quality of red chili during storage. *IOP Conference Series: Earth and Environmental Science*, 746(1), 012004. <https://doi.org/10.1088/1755-1315/746/1/012004>
- Wibowo, C., Salsabila, S., Muna, A., Rusliman, D., & Wasisto, H. S. (2024). Advanced biopolymer-based edible coating technologies for food preservation and packaging. *Comprehensive Reviews in Food Science and Food Safety*, 23(1), 1–31. <https://doi.org/10.1111/1541-4337.13275>
- Won, J. S., Lee, S. J., Park, H. H., Song, K. Bin, & Min, S. C. (2018). Edible Coating Using a Chitosan-Based Colloid Incorporating Grapefruit Seed Extract for Cherry Tomato Safety and Preservation. *Journal of Food Science*, 83(1), 138–146. <https://doi.org/10.1111/1750-3841.14002>
- Yadav, A., Kumar, N., Upadhyay, A., Sethi, S., & Singh, A. (2022). Edible coating as postharvest management strategy for shelf-life extension of fresh tomato (*Solanum lycopersicum* L.): An overview. *Journal of Food Science*, 87(6), 2256–2290. <https://doi.org/10.1111/1750-3841.16145>

- Yan, J., Luo, Z., Ban, Z., Lu, H., Li, D., Yang, D., Aghdam, M. S., & Li, L. (2019). The effect of the layer-by-layer (LBL) edible coating on strawberry quality and metabolites during storage. *Postharvest Biology and Technology*, *147*, 29–38. <https://doi.org/10.1016/j.postharvbio.2018.09.002>
- Yarnpakdee, S., Kaewprachu, P., Jaisan, C., Senphan, T., Nagarajan, M., & Wangtueai, S. (2022). Extraction and Physico–Chemical Characterization of Chitosan from Mantis Shrimp (*Oratosquilla nepa*) Shell and the Development of Bio-Composite Film with Agarose. *Polymers*, *14*(19). <https://doi.org/10.3390/polym14193983>
- Yu, X., Liu, Q., Jin, Z., & Jiao, A. (2023a). Preparation and characterization of hydroxypropyl methylcellulose/hydroxypropyl starch composite films reinforced by chitosan nanoparticles of different sizes. *Materials Today Communications*, *35*, 105714. <https://doi.org/10.1016/J.MTCOMM.2023.105714>
- Yu, X., Liu, Q., Jin, Z., & Jiao, A. (2023b). Preparation and characterization of hydroxypropyl methylcellulose/hydroxypropyl starch composite films reinforced by chitosan nanoparticles of different sizes. *Materials Today Communications*, *35*. <https://doi.org/10.1016/j.mtcomm.2023.105714>
- Zhang, J., Zeng, L., Sun, H., Zhang, J., & Chen, S. (2017). Using Chitosan Combined Treatment with Citric Acid as Edible Coatings to Delay Postharvest Ripening Process and Maintain Tomato (*Solanum lycopersicon* Mill) Quality. *Journal of Food and Nutrition Research*. <https://doi.org/10.12691/JFNR-5-3-1>
- Zhang, L., Huang, C., & Zhao, H. (2019). Application of Pullulan and Chitosan Multilayer Coatings in Fresh Papayas. *Coatings 2019, Vol. 9, Page 745*, *9*(11), 745. <https://doi.org/10.3390/COATINGS9110745>
- Zhang, X., Yang, H., & Du, T. (2024). Coupled mechanisms of water deficit and soil salinity affecting tomato fruit growth. *Agricultural Water Management*, *295*, 108747. <https://doi.org/10.1016/j.agwat.2024.108747>
- Zhao, J., Wang, Y., & Liu, C. (2022). Film Transparency and Opacity Measurements. *Food Analytical Methods*, *15*(10), 2840–2846. <https://doi.org/10.1007/s12161-022-02343-x>
- Zhong, Y., Cavender, G., & Zhao, Y. (2014). Investigation of different coating application methods on the performance of edible coatings on Mozzarella cheese. *LWT - Food Science and Technology*, *56*(1), 1–8. <https://doi.org/10.1016/J.LWT.2013.11.006>

Zhou, N., Wang, L., You, P., Wang, L., Mu, R. J., & Pang, J. (2021). Preparation of pH-sensitive food packaging film based on konjac glucomannan and hydroxypropyl methyl cellulose incorporated with mulberry extract. *International Journal of Biological Macromolecules*, 172, 515–523. <https://doi.org/10.1016/J.IJBIOMAC.2021.01.047>

Zhu, F., Wen, W., Cheng, Y., & Fernie, A. R. (2022). The metabolic changes that effect fruit quality during tomato fruit ripening. *Molecular Horticulture*, 2(1), 2. <https://doi.org/10.1186/s43897-022-00024-1>

