



DAFTAR PUSTAKA

- Abedinia, A., Ariffin, F., Huda, N., Mohammadi Nafchi, A., 2018. Preparation and characterization of a novel biocomposite based on duck feet gelatin as alternative to bovine gelatin. *International Journal of Biological Macromolecules*. 109:855–862.
<https://doi.org/10.1016/j.ijbiomac.2017.11.051>
- Abrial, H., Basri, A., Muhammad, F., Fernando, Y., Hafizulhaq, F., Mahardika, M., Sugiarti, E., Sapuan, S.M., Ilyas, R.A., Stephane, I., 2019. A simple method for improving the properties of the sago starch films prepared by using ultrasonication treatment. *Food Hydrocolloids*. 93:276–283.
<https://doi.org/10.1016/J.FOODHYD.2019.02.012>
- Agussalim, Nurhayati, Afriani, 2021. Aplikasi Edible Film Antimikroba Sebagai Kemasan Ramah Lingkungan Dalam Meningkatkan Kualitas Dan Daya Terima Bakso Ikan Tenggiri. *Jurnal Pembangunan Berkelanjutan*. 4:38–43.
- Agustina, R.K., Dieny, F.F., Rustanti, N., 2018. Antioxidant Activity and Soluble Protein Content of Tempeh Gembus Hydrolysate 67:.
- Agustini, T.W., Widayat, W., Suzery, M., Darmanto, Y., Mubarak, I., 2020. Pengaruh Jenis Ikan Terhadap Rendemen Pembuatan Gelatin Dari Ikan Dan Karakteristik Gelatinnya. *Indonesia Journal of Halal*. 2:46–52.
<https://doi.org/10.14710/HALAL.V2I2.7342>
- Agustiningsih, Wildan, A., Mindaningsih, 2010. Optimasi cairan penyari pada pembuatan ekstrak daun pandan wangi (Pandanus amaryllifolius Roxb) secara maserasi terhadap kadar fenolik dan flavonoid total. *Momentum*. 6:36–41.
- Ahadi, A., Linton, A., 2021. International Journal of Biological Macromolecules Characterization of a natural biodegradable edible film obtained from arrowroot starch and iota-carrageenan and application in food packaging. *International Journal of Biological Macromolecules*. 191:618–626.
<https://doi.org/10.1016/j.ijbiomac.2021.09.141>
- Alamsjah, M.A., Sudarno, S., Nurindra, A.P., 2015. Karakterisasi Edible Film dari Pati Propagul Mangrove Lindur (*Bruguiera gymnorhiza*) dengan Penambahan Carboxymethyl Cellulose (Cmc) sebagai Pemlastis. *Jurnal Ilmiah Perikanan dan Kelautan*. 7:125–132.
<https://doi.org/10.20473/JIPK.V7I2.11195>
- Alex, M., 2017. Edible film with antioxidant capacity based on salmon gelatin and boldine. *Food Science and Technology*. 77:160–169.
<https://doi.org/10.1016/j.lwt.2016.11.039>
- Anandito, R.B.K., Nurhartadi, E., Bukhori, A., 2012. Pengaruh gliserol terhadap karakteristik edible film berbahan dasar tepung jali. *Jurnal Teknologi Hasil Pertanian*. 5:17–23.
- Arizka, A.A., Daryatmo, J., 2015. Perubahan Kelembaban dan Kadar Air Teh



Selama Penyimpanan pada Suhu dan Kemasan yang Berbeda 4:124–129.

- Arvanitoyannis, I., Psomiadou, E., Nakayama, A., Aiba, S., Yamamoto, N., 1997. Edible films made from gelatin, soluble starch and polyols. *Food Chemistry*. 60:593–604. [https://doi.org/10.1016/S0308-8146\(97\)00038-1](https://doi.org/10.1016/S0308-8146(97)00038-1)
- Banker, G.S., 1966. Film Coating Theory and Practice. *Journal of Pharmaceutical Sciences*. 55:81–89. <https://doi.org/10.1002/JPS.2600550118>
- Barlian, G., Bowes, J., 1977. The structure and properties of collagen. In : Ward AG, Courts A (eds) The Science and Technology of Gelatin. Academic Press, London.
- Boran, G., Regenstein, J.M., 2010. Fish gelatin, Advances in Food and Nutrition Research. Elsevier Inc. [https://doi.org/10.1016/S1043-4526\(10\)60005-8](https://doi.org/10.1016/S1043-4526(10)60005-8)
- Cazón, P., Velazquez, G., Ramírez, J.A., Vázquez, M., 2017. Polysaccharide-based films and coatings for food packaging: A review. *Food Hydrocolloids*. 68:136–148. <https://doi.org/10.1016/J.FOODHYD.2016.09.009>
- Choe, E., Min, D.B., 2006. Mechanisms and Factors for Edible Oil Oxidation. *Comprehensive Reviews in Food Science and Food Safety*. 5:169–186. <https://doi.org/10.1111/J.1541-4337.2006.00009.X>
- Clarke, R.J., 2003. COFFEE | Instant. *Encyclopedia of Food Sciences and Nutrition*. 1493–1498. <https://doi.org/10.1016/B0-12-227055-X/00270-4>
- Dalimarta, S., 2002. Atlas Tumbuhan Obat Indonesia. PT. Pustaka Pembangunan Swadaya Nusantara, Jakarta.
- Dangaran, K., Tomasula, P.M., Qi, P., 2009. Edible Films and Coatings for Food Applications, Edible Films and Coatings for Food Applications. <https://doi.org/10.1007/978-0-387-92824-1>
- Darni, Y., Utami, H., 2010. Studi Pembuatan dan Karakteristik Sifat Mekanik dan Hidrofobisitas Bioplastik dari Pati Sorgum. *Jurnal Rekayasa Kimia dan Lingkungan*. Vol. 7:190–195.
- de Figueiredo, V.R.G., Justus, A., Pereira, D.G., Georgetti, S.R., Ida, E.I., Kurozawa, L.E., 2019. Production of hydrolysate of okara protein concentrate with high antioxidant capacity and aglycone isoflavone content. *Brazilian Archives of Biology and Technology*. 62:1–13. <https://doi.org/10.1590/1678-4324-2019180478>
- Debeaufort, F., Quezada-Gallo, J.A., Voilley, A., 2010. Edible Films and Coatings: Tomorrow's Packagings: A Review. *Critical Reviews in Food Science and Nutrition*. 38:299–313. <https://doi.org/10.1080/10408699891274219>
- Denavi, G.A., Pérez-Mateos, M., Añón, M.C., Montero, P., Mauri, A.N., Gómez-Guillén, M.C., 2009. Structural and functional properties of soy protein isolate and cod gelatin blend films. *Food Hydrocolloids*. 23:2094–2101. <https://doi.org/10.1016/j.foodhyd.2009.03.007>



- Deotale, S.M., Dutta, S., Moses, J.A., Anandharamakrishnan, C., 2022. Measurement : Food Influence of drying techniques on sensory profile and chlorogenic acid content of instant coffee powders. *Measurement: Food*. 6:100030. <https://doi.org/10.1016/j.meafoo.2022.100030>
- Detduangchan, N., Sridach, W., Wittaya, T., 2014. Enhancement of the properties of biodegradable rice starch films by using chemical crosslinking agents. *international food research journal*.
- Eastoe, J.E., Leach, A.A., 1977. Chemical constitution of gelatin, in: The Science and Technology of Gelatin. Academic Press, New York, hal. 73–105.
- Eryalcin, K.M., 2018. Effects of Different Commercial Feeds and Enrichments on Biochemical Composition and Fatty Acid Profile of Rotifer (*Brachionus Plicatilis*, Müller 1786) and Artemia Franciscana. *Turkish Journal of Fisheries and Aquatic Sciences*. 18:81–90. <https://doi.org/10.4194/1303-2712-v18>
- Eslahi, N., Dadashian, F., Hemmati Nejad, N., Rabiee, M., 2014. Evaluation of wool nanoparticles incorporation in chitosan/gelatin composite films. *Journal of Applied Polymer Science*. 131:. <https://doi.org/10.1002/APP.40294>
- Fakhreddin, S., Rezaei, M., Zandi, M., Ghavi, F.F., 2013. Preparation and functional properties of fish gelatin-chitosan blend edible films. *Food Chemistry*. 136:1490–1495. <https://doi.org/10.1016/j.foodchem.2012.09.081>
- Gómez-Guillén, M.C., Pérez-Mateos, M., Gómez-Estaca, J., López-Caballero, E., Giménez, B., Montero, P., 2009. Fish gelatin: a renewable material for developing active biodegradable films. *Trends in Food Science & Technology*. 20:3–16. <https://doi.org/10.1016/J.TIFS.2008.10.002>
- Gordon, I., 1994. Functional Food, Food Desain, Pharmafood. Champman dan Hall, New York.
- Gozali, T., Wijaya, W.P., 2020. Pengaruh Konsentrasi Cmc Dan Konsentrasi Gliserol Terhadap Karakteristik Edible Packaging Kopi Instan Dari Pati Kacang Hijau (*Vigna radiata L.*). *Pasundan Food Technology Journal*. 7:1–9. <https://doi.org/10.23969/pftj.v7i1.2690>
- Gudmundsson, M., Hafsteinsson, H., 1997. Gelatin from cod skins as affected by chemical treatments. *Journal of Food Science*. 62:37–39. <https://doi.org/10.1111/J.1365-2621.1997.TB04363.X>
- Guimarães, R.M., Silva, T.E., Lemes, A.C., Boldrin, M.C.F., da Silva, M.A.P., Silva, F.G., Egea, M.B., 2018. Okara: A soybean by-product as an alternative to enrich vegetable paste. *LWT- Food Science and Technology*. 92:593–599. <https://doi.org/10.1016/j.lwt.2018.02.058>
- Gumilar, J., Pratama, A., 2018. Produksi Dan Karakteristik Gelatin Halal Berbahan Dasar Usus Ayam. *Jurnal Teknologi Industri Pertanian*. 28:75–81. <https://doi.org/10.24961/j.tek.ind.pert.2018.28.1.75>



- Handa, A., Gennadios, A., Froning, G.W., Kuroda, N., Hanna, M.A., 1999. Tensile, Solubility, and Electrophoretic Properties of Egg White Films as Affected by Surface Sulfhydryl Groups. *Journal of Food Science*. 64:82–85. <https://doi.org/10.1111/J.1365-2621.1999.TB09865.X>
- Handayani, R., Nurzanah, H., 2018. Karakteristik edible film pati talas dengan penambahan antimikroba dari minyak atsiri lengkuas. *Jurnal Kompetensi Teknik*. 10:1–11.
- Harianto, M., Djafar, J., Adinegoro, H., 2017. Pengaruh penambahan minyak sawit terhadap karakteristik edible film dan daya simpan bumbu mie instan. *Jurnal Standardisasi*. 19:39–46.
- Hasdar, M., Erwanto, Y., Triatmojo, S., Peterakan, F., Mada, U.G., No, J.F., 2011. Karakteristik Edible Film Yang Diproduksi Dari Kombinasi Gelatin Kulit Kaki Ayam Dan Soy Protein Isolate 35:188–196.
- Hawa, L., 2020. Kajian Fiskokimia Edible Casing Sosis Berbasis Gelatin Ceker Ayam. *AGROINTEK : Jurnal Teknologi Industri Pertanian*. 14:213–227.
- Head, K.A., 1997. Isoflavones And Other Soy Constituents In Human Health And Disease. *Alternative Medicine Review*. 2:.
- Hidayati, A., 2019. Aktivitas Antioksidan Hidrolisat Protein Miofibril Belut (*Synbranchus benalensis*) yang Dihidrolisis dengan Enzim Papain. *Jurnal Teknologi Industri Pertanian*. 29:247–259. <https://doi.org/10.24961/j.tek.ind.pert.2019.29.3.247>
- Hinterwaldner, R., 1977. Technology of gelatin manufacture, in: The Science and Technology of Gelatin. Academic Press, New York, hal. 315–361.
- Housam, H., Warid, K., Zaid, A., 2014. Estimating The Antioxidant Activity For Natural Antioxidants (Tocochromanol) And Synthetic One By DPPH.
- Indrarti, L., Indriyanti, 2016. Incorporation of citrus essential oils into bacterial cellulose-based edible films and assessment of their physical properties, in: Earth and Environmental Science 60.
- Intarasiriswat, R., Benjakul, S., Visessanguan, W., Wu, J., 2012. Antioxidative and functional properties of protein hydrolysate from defatted skipjack (*Katsuwonous pelamis*) roe. *Food Chemistry*. 135:3039–3048. <https://doi.org/10.1016/J.FOODCHEM.2012.06.076>
- Isnawati, R., 2008. Kajian rasio mentega dan chitosan dalam edible film protein pollard terhadap sifat fisik telur ayam. Universitas Brawijaya Malang.
- Jridi, M., Abdelhedi, O., Salem, A., Kechaou, H., Nasri, M., Menchari, Y., 2020. Physicochemical, antioxidant and antibacterial properties of fish gelatin-based edible films enriched with orange peel pectin: Wrapping application. *Food Hydrocolloids*. 103:105688. <https://doi.org/10.1016/j.foodhyd.2020.105688>
- Jyoti, A., Gurpreet, S., Seema, S., Rana, A.C., 2011. Fast Dissolving Films: a Novel



Approach To Oral Drug Delivery. *International Research Journal of Pharmacy*. 2:69–74.

Katili, S., Harsunu, B.T., Irawan, S., 2013. Pengaruh Konsentrasi Plasticizer Gliserol Dan Komposisi Khitosan Dalam Zat Pelarut Terhadap Sifat Fisik Edible Film Dari Khitosan. *Jurnal Teknologi*. 6:29–38.

Kim, D., Min, S.C., 2012. Trout skin gelatin-based edible film development. *Journal of food science*. 77:. <https://doi.org/10.1111/J.1750-3841.2012.02880.X>

Krochta, J., Muller Johnson, D., 1997. Edible and Biodegradable Polymer Films. *Journal of Food Technology*. 2:61–74.

Labuza, T., 1979. Properties of water as related to the keeping quality of foods, in: Proceedings of the Third International Congress of Food Science. Washington DC, hal. 618–635.

Li, B., Qiao, M., Lu, F., Li, B.O., 2012. Composition, Nutrition, and Utilization of Okara (Soybean Residue). *Food Reviews International*. 231–252. <https://doi.org/10.1080/87559129.2011.595023>

Li, J., Ye, F., Liu, J., Zhao, G., 2015. Effects of octenylsuccination on physical, mechanical and moisture-proof properties of stretchable sweet potato starch film. *Food Hydrocolloids*. 46:226–232. <https://doi.org/10.1016/j.foodhyd.2014.12.017>

Lin, D., Zheng, Y., Wang, X., Huang, Y., Ni, L., Chen, X., Wu, Z., Huang, C., Yi, Q., Li, J., Qin, W., Zhang, Q., Chen, H., Wu, D., 2020. Study on physicochemical properties, antioxidant and antimicrobial activity of okara soluble dietary fiber/sodium carboxymethyl cellulose/thyme essential oil active edible composite films incorporated with pectin. *International Journal of Biological Macromolecules*. 165:1241–1249. <https://doi.org/10.1016/j.ijbiomac.2020.10.005>

Liu, C., Huang, J., Zheng, X., Liu, S., Lu, K., Tang, K., Liu, J., 2020. Heat sealable soluble soybean polysaccharide/gelatin blend edible films for food packaging applications. *Food Packaging and Shelf Life*. 24:1–9. <https://doi.org/10.1016/j.fpsl.2020.100485>

Machin, A., 2012. The Potency of Tempe Hydrolysate as a Flavor Enhancer by Utilization of the Pineapple Extract. *Biosantifika*. 4:71–77.

Maria, M.S., Moore, G., Silva Paes, S., Gandolfo, C., Laurindo, J.B., 2006. Influence of plasticizers on the water sorption isotherms and water vapor permeability of chicken feather keratin films. *LWT - Food Science and Technology*. 39:292–301. <https://doi.org/10.1016/J.LWT.2004.12.014>

Mateos-Aparicio, I., Redondo-Cuenca, A., Villanueva-Suárez, M.J., Zapata-Revilla, M.A., Tenorio-Sanz, M.D., 2010. Pea pod, broad bean pod and okara, potential sources of functional compounds. *LWT - Food Science and*



Technology. 43:1467–1470. <https://doi.org/10.1016/J.LWT.2010.05.008>

Mchugh, T.H., Aujard, J. -F, Krochita, J.M., 1994. Plasticized Whey Protein Edible Films: Water Vapor Permeability Properties. *Journal of Food Science*. 59:416–419. <https://doi.org/10.1111/J.1365-2621.1994.TB06980.X>

Mihalca, V., Kerezsi, A.D., Weber, A., Gruber-traub, C., Schmucker, J., Anca, F., Vodnar, D.C., Dulf, F.V., Ancut, S., Suharoschi, R., Pop, O.L., 2021. Protein-Based Films and Coatings for Food Industry Applications. *Polymers*. 1–23.

Montilha, M.S., Sbroggio, M.F., Figueiredo, V.R.G., Ida, E.I., Kurozawa, L.E., 2017. Optimization of enzymatic protein hydrolysis conditions of okara with endopeptidase Alcalase. *International Food Research Journal*. 24:1067–1074.

Mulyadi, A.F., 2016. Producing of Cornstarch Edible film and Antibacterial Activity Test (The Study of Glycerol Concentration and Beluntas Leaves Extract (Pluchea Indica L .)). *Jurnal Teknologi dan Manajemen Agroindustri*. 5:149–158. <https://doi.org/10.21776/ub.industria.2016.005.03.5>

Ningrum, A., Wardani, D.W., Vanidia, N., Sarifudin, A., Kumalasari, R., Ekafitri, R., Kristanti, D., Setiaboma, W., Munawaroh, H.S.H., 2022. In Silico Approach of Glycinin and Conglycinin Chains of Soybean By-Product (Okara) Using Papain and Bromelain. *Molecule*. 1–11.

Nugroho, A.A., Basito, Katri, R.B., 2013. Kajian Pembuatan Edible Film Tapioka Dengan Pengaruh Penambahan Pektin Beberapa Jenis Kulit Pisang Terhadap Karakteristik Fisik Dan Mekanik. *Jurnal Teknosains Pangan*. 2:73–79.

Nurdiani, R., Jaziri, A.A., Puspita, F.S., 2020. Karakteristik Kemasan Aktif dari Film Gelatin Ikan dengan Penambahan Ekstrak Daun Jeruju (Acanthus ilicifolius). *Jurnal Pascapanen dan Bioteknologi Kelautan dan Perikanan*. 15:63. <https://doi.org/10.15578/jpbkp.v15i1.628>

Nurdiani, R., Yufidasari, H.S., Sherani, J.S., 2019. Karakteristik Edible Film Dari Gelatin Kulit Ikan Kakap Merah (Lutjanus argentimaculatus) Dengan Penambahan Pektin. *Jphpi*. 22:.

Nurilmala, M., Jacoeb, A.M., Dzaky, R.A., 2017a. Characterization of Fish Skin Gelatin Yellowfin Tuna. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 20:339–350. <https://doi.org/10.17844/JPHPI.V20I2.18049>

Nurilmala, M., Jacoeb, A.M., Dzaky, R.A., 2017b. Karakteristik Gelatin Kulit Ikan Tuna Sirip Kuning. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 20:339. <https://doi.org/10.17844/jphpi.v20i2.18049>

Oh, J.H., Wang, B., Field, P.D., Aglan, H.A., 2004. Characteristics of edible films made from dairy proteins and zein hydrolysate cross-linked with transglutaminase. *International Journal of Food Science and Technology*. 39:287–294. <https://doi.org/10.1111/j.1365-2621.2004.00783.x>

Oliveira, M., Casal, S., Morais, S., Alves, C., Dias, F., Ramos, S., Mendes, E.,



Delerue-Matos, C., Beatriz, M., 2012. Intra- and interspecific mineral composition variability of commercial instant coffees and coffee substitutes: Contribution to mineral intake. *Food Chemistry*. 130:702–709. <https://doi.org/10.1016/j.foodchem.2011.07.113>

Palijama, S., Bremer, R., Topurmera, M., 2020. Karakteristik Kimia dan Fisik Bubur Instan Berbahan Dasar Tepung Jagung Pulut dan Tepung Kacang Merah Chemical and Physical Characteristics of Instant Porridge Made from Waxy Corn and Red Bean Flours 9:20–27. <https://doi.org/10.30598/jagritekno.2020.9.1.20>

Pavlath, A.E., Orts, W., 2009. Edible Films and Coatings for Food Applications. *Edible Films and Coatings for Food Applications*. 1–23. <https://doi.org/10.1007/978-0-387-92824-1>

Pelu, H., 1998. Ekstraksi gelatin dari kulit ikan tuna melalui. *Jurnal Penelitian Perikanan Indonesia*. 4:66–74.

Pranoto, Y., 2008. Pembuatan Edible Film dari Gelatin Hasil Ekstraksi Kulit Ikan Nila (*Oreochromis niloticus*) dan Kerisi Putih (*Pristipomoides multidens*) dengan Penambahan K-Karaginan, in: Seminar PATPI, Palembang 14-16 Oktober 2008. hal. 981–992.

Rachmawati, A., Anandito, B., Manuhara, G., 2010. Ekstraksi dan karakterisasi pektin pada cincau hijau (*Premma oblongifolia*) untuk pembuatan edible film. *Biofarmasi*. 1–10.

Ren, X.Q., Ma, L.Z., Chu, J., 2011. Effect of catfish bone hydrolysate on the quality of catfish sausage during ambient temperature (37 °C) storage. *Advanced Materials Research*. 236–238:2886–2889. <https://doi.org/10.4028/WWW.SCIENTIFIC.NET/AMR.236-238.2886>

Resmi, A., Mardianingsih, A., 2016. Pandan leaves extract (*Pandanus amaryllifolius Roxb*) as a food preservative. *Jurnal Kedokteran dan Kesehatan Indonesia Indonesian*. 7:166–173.

Rofikah, 2013. Pemanfaatan Pektin Kulit Pisang Kepok (*Musa Paradisiaca Linn*) Untuk Pembuatan Edible Film. Universitas Negeri Semarang.

Rosida, D.F., Hapsari, N., Dewati, R., 2018. Edible Coating dan Film dari Biopolimer Bahan Alami Terbarukan.

Rowat, R.J., 1993. The Plastic Waste Problem. *Chem Tech*. 23:56–60.

Rusli, A., Metusalach, Salengke, Tahir, M.M., 2017. Karakterisasi Edible Film Karagenan Dengan Pemlastis Gliserol. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 20:219–229.

Salem, A., Jridi, M., Abdelhedi, O., Fakhfakh, N., Nasri, M., Debeaufort, F., Zouari, N., 2021. Development and characterization of fish gelatin-based biodegradable film enriched with *Lepidium sativum* extract as active



packaging for cheese preservation. *Heliyon.* 7:e08099.
<https://doi.org/10.1016/j.heliyon.2021.e08099>

Santoso, B., Amilita, D., Priyanto, G., 2018. Pengembangan Edible Film Komposit Berbasis Pati Jagung dengan Penambahan Minyak Sawit dan Tween 20 Development of Composite Edible Film Based on Corn Starch with Addition of Palm Oil and Tween 20 38:119–124.

Saolan, Sukainah, A., Wijaya, M., 2020. Pengaruh Jenis Kemasan dan Lama Waktu Penyimpanan Terhadap Mutu Bubuk Kopi Robusta (*Coffea robusta*). *Jurnal Pendidikan Teknologi Pertanian.* 6:337–338.

Sari, T., Manurung, H., Permadi, F., 2008. Pembuatan edible film dari kolang kaling. *Jurnal Teknik Kimia.* 4:27–35.

Setyani, S., 2002. Teknologi Pengolahan Kopi. Fakultas Pertanian, Bandar Lampung.

Siburian, W.Z., Rochima, E., Andriani, Y., Praseptiangga, D., 2020. Fish gelatin (definition, manufacture, analysis of quality characteristics, and application): A review. *International Journal of Fisheries and Aquatic Studies.* 8:90–95.

Sirisha, S., Chakravartula, N., Soccio, M., Lotti, N., Balestra, F., Rosa, M.D., Siracusa, V., 2019. Characterization of Composite Edible Films Based on Pectin / Alginate / Whey Protein Concentrate 1–19.

Sothornvit, R., Krochta, J.M., 2001. Plasticizer effect on mechanical properties of β -lactoglobulin films. *Journal of Food Engineering.* 50:149–155.
[https://doi.org/10.1016/S0260-8774\(00\)00237-5](https://doi.org/10.1016/S0260-8774(00)00237-5)

Sothornvit, R., Krochta, J.M., 2000. Water vapor permeability and solubility of films from hydrolyzed whey protein. *Journal of Food Science.* 65:700–703.
<https://doi.org/10.1111/j.1365-2621.2000.tb16075.x>

Subagio, A., Hartanti, S., Windrati, W.S., 2002. Kajian Sifat Fisikokimia dan Organoleptik Hidrolisat Tempe Hasil Hidrolisis Protease. *Jurnal Teknologi dan Industri Pangan.* 13:204–210.

Suryanti, S., Marseno, D.W., Indrati, R., Irianto, H.E., 2018. Pengaruh Jenis Asam dalam Isolasi Gelatin dari Kulit Ikan Nila (*Oreochromis niloticus*) terhadap Karakteristik Emulsi. *Agritech.* 37:410.
<https://doi.org/10.22146/agritech.13025>

Tamat, S.R., Wikanta, T., Maulina, L.S., 2007. Aktivitas Antioksidan dan Toksisitas Senyawa Bioaktif dari Ekstrak Rumput Laut Hijau *Ulva reticulata* Forsskal. *Jurnal Ilmu Kefarmasian Indonesia.* 5:31–36.

Tkaczewska, J., 2020. Peptides and protein hydrolysates as food preservatives and bioactive components of edible films and coatings - A review. *Trends in Food Science and Technology.* 106:298–311.
<https://doi.org/10.1016/j.tifs.2020.10.022>



- Utami, R., Khasanah, L.U., Yuniter, K.K., Manuhara, G.J., 2018. Pengaruh Oleoresin Daun Kayu Manis (*Cinnamomum burmanii*) Dua Tahap Terhadap Karakteristik Edible Film Tapioka. *Caraka Tani: Journal of Sustainable Agriculture*. 32:55. <https://doi.org/10.20961/carakatani.v32i1.15474>
- Wang, F., 2013. Handbook of Food Powders, Woodhead Publishing Limited. <https://doi.org/10.1201/9781420004281.bmatt1>
- Widyaningih, S., 2012. Pengaruh Penambahan Sorbitol dan Kalsium Karbonat terhadap Karakteristik dan Sifat Biodegradasi Film dari Pati Kulit Pisang. *Molekul*. 7:69–81.
- Wijayani, K.D., Darmanto, Y.S., Susanto, E., 2021. Karakterisasi Edible Film dari Gelatin Kulit Ikan yang Berbeda. *Jurnal Ilmu dan Teknologi Perikanan*. 3:6.
- Yokomizo, A., Takenaka, Y., Takenaka, T., 2002. Antioxidative Activity of Peptides Prepared from Okara Protein. *Food Science and Technology Research*. 8:357–359. <https://doi.org/10.3136/fstr.8.357>
- Yuliana, L., 2021. Pengaruh Aplikasi Edible Coating dari Komposit Gelatin-Kitosan dan Ekstrak Daun Pandan terhadap Sifat Fisik dan Kimia Buah Pepaya Terolah Minimal. Universitas Gadjah Mada.
- Yulianti, R., Ginting, E., 2012. Perbedaan Karakteristik Fisik. *Penelitian Pertanian Tanaman Pangan*. 131–136.
- Zanin, R.C., Smrke, S., Kurozawa, L.E., Yamashita, F., Yeretzian, C., 2021. Modulation of aroma release of instant coffees through microparticles of roasted coffee oil. *Food Chemistry*. 341:128193. <https://doi.org/10.1016/j.foodchem.2020.128193>
- Zhang, C., Wang, Z., Li, Y., Yang, Y., Ju, X., He, R., 2019. The preparation and physiochemical characterization of rapeseed protein hydrolysate-chitosan composite films. *Food Chemistry*. 272:694–701. <https://doi.org/10.1016/j.foodchem.2018.08.097>