



DAFTAR PUSTAKA

- Abdullah, A., Nurjanah, T. Hidayat, & V. Yusefi. 2013. Profil asam amino dan asam lemak kerang bulu (*Anadara antiquata*). Jurnal Pengolahan Hasil Perikanan Indonesia, 16(2).
- Adler-Nissen, J. 1986. Enzymatic Hydrolysis of Food Protein. Elsevier Applied Science Publishers. London.
- Agustin, V. 2022. Antioxidant Activity of Protein Hydrolysate from By-product of Snakehead Fish (*Channa striata*) Obtained by Enzymatic Process. Universitas Gadjah Mada. Skripsi. <http://etd.repository.ugm.ac.id/>
- Ahmadifard, N., J. H. C. Murueta, A. Abedian-Kenari, A. Motamedzadegan, & H. Jamali. 2016. Comparison the effect of three commercial enzymes for enzymatic hydrolysis of two substrates (rice bran protein concentrate and soy-been protein) with SDS-PAGE. Journal of Food Science and Technology, 53(2): 1279–1284. <https://doi.org/10.1007/s13197-015-2087-6>
- Ahn, C. B., J. G. Kim, & J. Y. Je. 2014. Purification and antioxidant properties of octapeptide from salmon byproduct protein hydrolysate by gastrointestinal digestion. Food Chemistry, 147: 78–83. <https://doi.org/10.1016/j.foodchem.2013.09.136>
- Alahmad, K., W. Xia, Q. Jiang, & Y. Xu. 2022. Effect of the degree of hydrolysis on nutritional, functional, and morphological characteristics of protein hydrolysate produced from bighead carp (*Hypophthalmichthys nobilis*) using ficin enzyme. Foods, 11(9). <https://doi.org/10.3390/foods11091320>
- Antolovich, M., P. D. Prenzler, E. Patsalides, S. McDonald, & K. Robards. 2002. Methods for testing antioxidant activity. Analyst, 127(1): 183–198. <https://doi.org/10.1039/b009171p>
- [AOAC] Association of Official Agricultural Chemists. 1995. Official Methods of Analysis of the Association of Official of Analytical Chemist. AOAC, Inc. Washington D. C.
- [AOAC] Association of Official Analytical Chemist. 2005. Official Method of Analysis of The Association of Official Analytical of Chemist. AOAC, Inc. USA.
- Asare, S. N., F. G. Ijong, J. Rieuwpassa, & N. P. Setiawati. 2018. Penambahan hidrolisat protein ikan lemuru (*Sardinella lemuru*) pada pembuatan biskuit. Jurnal Ilmiah Tindalung, 4(1): 10–18.
- Athallah, N. H. 2023. Pengaruh Konsentrasi Enzim Papain terhadap Aktivitas Antioksidan Hidrolisat Protein Insang dan Arborescent Lele. Universitas Gadjah Mada. Skripsi.
- Baehaki, A., S. D. Lestari, & A. R. Romadhoni. 2015. Protein hydrolysis from catfish prepared by papain enzyme and antioxidant activity of hydrolyzate. Jurnal Pengolahan Hasil Perikanan Indonesia, 18(3). <https://doi.org/10.17844/jphpi.2015.18.3.230>



- Berker, K. I., K. Güllü, B. Demirata, & R. Apak. 2010. A novel antioxidant assay of ferric reducing capacity measurement using ferrozine as the colour forming complexation reagent. *Analytical Methods*, 2(11): 1770–1778. <https://doi.org/10.1039/c0ay00245c>
- Berkman, E. T., & S. P. Reise. 2011. *A conceptual guide to statistics using SPSS*. Sage.
- Bhaskar, N., & N. S. Mahendrakar. 2008. Protein hydrolysate from visceral waste proteins of catla (*Catla catla*): optimization of hydrolysis conditions for a commercial neutral protease. *Bioresource Technology*, 99(10): 4105–4111. <https://doi.org/10.1016/j.biortech.2007.09.006>
- Borrajó, P., M. Pateiro, M. Gagaoua, D. Franco, W. Zhang, & J. M. Lorenzo. 2020. Evaluation of the antioxidant and antimicrobial activities of porcine liver protein hydrolysates obtained using alcalase, bromelain, and papain. *Applied Sciences (Switzerland)*, 10(7). <https://doi.org/10.3390/app10072290>
- Bücker, F., M. Marder, M. R. Peiter, D. N. Lehn, V. M. Esquerdo, L. Antonio de Almeida Pinto, & O. Konrad. 2020. Fish waste: an efficient alternative to biogas and methane production in an anaerobic mono-digestion system. *Renewable Energy*, 147: 798–805. <https://doi.org/10.1016/j.renene.2019.08.140>
- Chen, C., Y. J. Chi, M. Y. Zhao, & W. Xu. 2012. Influence of degree of hydrolysis on functional properties, antioxidant and ace inhibitory activities of egg white protein hydrolysate. *Food Science and Biotechnology*, 21(1): 27–34. <https://doi.org/10.1007/s10068-012-0004-6>
- Daliri, E. B. M., D. H. Oh, & B. H. Lee. 2017. Bioactive peptides. *Foods*, 6(5): 1–21. <https://doi.org/10.3390/foods6050032>
- Devita, C., W. Pratjojo, & S. M. R. Sedyawati. 2015. Perbandingan metode hidrolisis enzim dan asam dalam pembuatan sirup glukosa ubi jalar ungu. *Indonesian Journal of Chemical Science*, 4(1). <http://journal.unnes.ac.id/sju/index.php/ijcs>
- Diniariwisan, D., M. Marzuki, & W. A. Lestariningsih. 2023. Identifikasi dimensi biologi gurita di Pantai Ketapang Lombok Timur untuk pengelolaan perikanan berkelanjutan. *Jurnal Ganec Swara*, 17(4): 1308–1312. <http://journal.unmasmataram.ac.id/index.php/GARA>
- Domínguez, R., M. Pateiro, M. Gagaoua, F. J. Barba, W. Zhang, & J. M. Lorenzo. 2019. A comprehensive review on lipid oxidation in meat and meat products. *Antioxidants*, 8(10). <https://doi.org/10.3390/antiox8100429>
- Dong, S., M. Zeng, D. Wang, Z. Liu, Y. Zhao, & H. Yang. 2008. Antioxidant and biochemical properties of protein hydrolysates prepared from silver carp (*Hypophthalmichthys molitrix*). *Food Chemistry*, 107(4): 1485–1493. <https://doi.org/10.1016/j.foodchem.2007.10.011>
- Doucet, D., D. E. Otter, S. F. Gauthier, & E. A. Foegeding. 2003. Enzyme-induced gelation of extensively hydrolyzed whey proteins by alcalase: peptide identification and



- determination of enzyme specificity. *Journal of Agricultural and Food Chemistry*, 51(21): 6300–6308. <https://doi.org/10.1021/jf026242v>
- Dwihastuty, L., M. N. Arkham, A. A. Digdo, & A. R. Putriraya. 2023. Pengelolaan perikanan gurita dengan pendekatan pengelolaan perikanan berbasis ekosistem (EAFM) di Kabupaten Minahasa Utara, Provinsi Sulawesi Utara. *Buletin Ilmiah Marina Sosial Ekonomi Kelautan dan Perikanan*, 9(2): 179–194. <https://doi.org/http://dx.doi.org/10.15578/marina.v9i2.12825>
- Edison, Dewita, R. Karnila, & D. Yoswaty. 2020. The hydrolysis of fish protein from giant mudskipper (*Periophthalmodon schlosseri*) using alcalase enzyme. *Current Research in Nutrition and Food Science*, 8(3): 1056–1063. <https://doi.org/10.12944/CRNFSJ.8.3.32>
- Eggers, N., C. Kirsch, F. Giebner, & T. Birth. 2023. Optimizability of Biogenic Hydrogen Production. In *From Biomass to Biobased Products*. IntechOpen. www.intechopen.com
- Elavarasan, K., V. Naveen Kumar, & B. A. Shamasundar. 2014. Antioxidant and functional properties of fish protein hydrolysates from fresh water carp (*Catla catla*) as influenced by the nature of enzyme. *Journal of Food Processing and Preservation*, 38(3), 1207–1214. <https://doi.org/10.1111/jfpp.12081>
- Estefanell, J., J. Socorro, F. Tuya, M. Izquierdo, & J. Roo. 2011. Growth, protein retention and biochemical composition in *Octopus vulgaris* fed on different diets based on crustaceans and aquaculture by-products. *Aquaculture*, 322–323: 91–98. <https://doi.org/10.1016/j.aquaculture.2011.09.027>
- Fahimah, A. Rusli, & Syamsuar. 2021. Proses produksi gurita legs beku sesuai standar mutu ekspor. *Lutjanus*, 26(1): 29–37. https://ppnp.e-journal.id/lutjanus_PPNP
- Faskanu, I. 2019. Morfometri Gurita (*Octopus* sp.) di Perairan Teupah Selatan Kabupaten Simeulue sebagai Referensi Praktikum Zoologi Invertebrata. Universitas Islam Negeri Ar-Raniry. Skripsi.
- Febryani, S. N., S. Suharto, & P. H. Riyadi. 2023. Nutrient characteristics of liquid organic fertilizer viscera waste of tilapia (*Oreochromis niloticus*) with different fermentation times. *Asian Journal of Plant and Soil Sciences*, 8(1): 32–38.
- Figueiredo, V. R. G. de, F. Yamashita, A. L. L. Vanzela, E. I. Ida, & L. E. Kurozawa. 2018. Action of multi-enzyme complex on protein extraction to obtain a protein concentrate from okara. *Journal of Food Science and Technology*, 55(4): 1508–1517. <https://doi.org/10.1007/s13197-018-3067-4>
- Habibie, A., T. J. Raharjo, R. T. Swasono, & E. Retnaningrum. 2023. Antibacterial activity of active peptide from marine macroalgae *Chondrus crispus* protein hydrolysate against *Staphylococcus aureus*. *Pharmacia*, 70(4): 983–992. <https://doi.org/10.3897/pharma>



- Handoyo, W. T., & L. Assadad. 2016. Karakterisasi proses produksi dan kualitas tepung ikan di beberapa pengolah skala kecil. Seminar Nasional Tahunan XIII Hasil Penelitian Perikanan dan Kelautan.
- Haslaniza, H., M. Y. Maskat, W. M. Wan Aida, & S. Mamot. 2010. The effects of enzyme concentration, temperature and incubation time on nitrogen content and degree of hydrolysis of protein precipitate from cockle (*Anadara granosa*) meat wash water. *International Food Research Journal*, 17: 147–152.
- Hunsakul, K., T. Laokuldilok, V. Sakdatorn, W. Klangpetch, C. S. Brennan, & N. Utama-ang. 2022. Optimization of enzymatic hydrolysis by alcalase and flavourzyme to enhance the antioxidant properties of jasmine rice bran protein hydrolysate. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-16821-z>
- Idowu, A. T., S. Benjakul, S. Sinthusamran, P. Sookchoo, & H. Kishimura. 2019. Protein hydrolysate from salmon frames: production, characteristics and antioxidative activity. *Journal of Food Biochemistry*, 43(2). <https://doi.org/10.1111/jfbc.12734>
- Iduantoro, C. P., I. Zuraida, S. Sulistiawati, A. Mismawati, & B. F. Pamungkas. 2024. Potensi peptida bioaktif dari hasil samping perikanan sebagai antihipertensi dan antioksidan— review. *Media Teknologi Hasil Perikanan*, 19–26. <https://doi.org/10.35800/mthp.12.1.2024.52202>
- Ishak, N. H., & N. M. Sarbon. 2018. Physicochemical characterization of enzymatically prepared fish protein hydrolysate from waste of shortfin scad (*Decapterus macrosoma*). *International Food Research Journal*, 25(6): 2593–2600.
- Klompong, V., S. Benjakul, D. Kantachote, K. D. Hayes, & F. Shahidi. 2008. Comparative study on antioxidative activity of yellow stripe trevally protein hydrolysate produced from alcalase and flavourzyme. *International Journal of Food Science and Technology*, 43(6): 1019–1026. <https://doi.org/10.1111/j.1365-2621.2007.01555.x>
- Kurniawan, S. Lestari, & S. Hanggita R.J. 2012. Hidrolisis protein tinta cumi-cumi (*Loligo* sp) dengan enzim papain. *Fishtech*, 1(1): 41–54.
- Lionetto, F., & C. E. Corcione. 2021. Recent applications of biopolymers derived from fish industry waste in food packaging. *Polymers*, 13(14). <https://doi.org/10.3390/polym13142337>
- Mamta, K. Misra, G. S. Dhillon, S. K. Brar, & M. Verma. 2014. Antioxidants. In *Biotransformation of Waste Biomass into High Value Biochemicals* (Vol. 9781461480051, pp. 117–138). Springer. New York. https://doi.org/10.1007/978-1-4614-8005-1_6
- Marcet, I., C. Álvarez, B. Paredes, & M. Díaz. 2016. The use of sub-critical water hydrolysis for the recovery of peptides and free amino acids from food processing wastes. Review of sources and main parameters. *Waste Management*, 49: 364–371. <https://doi.org/10.1016/j.wasman.2016.01.009>



- Mohanty, U., R. K. Majumdar, B. Mohanty, N. K. Mehta, & J. Parhi. 2020. Influence of the extent of enzymatic hydrolysis on the functional properties of protein hydrolysates from visceral waste of *Labeo rohita*. *Journal of Food Science and Technology*, 58(11): 4349-4358. <https://doi.org/10.1007/s13197-020-04915-3>
- Montserrat-de la Paz, S., A. Villanueva, J. Pedroche, F. Millan, M. E. Martin, & M. C. Millan-Linares. 2021. Antioxidant and anti-inflammatory properties of bioavailable protein hydrolysates from lupin-derived agri-waste. *Biomolecules*, 11(10): 1458. <https://doi.org/10.3390/biom11101458>
- Natsir, N. A., & S. Latifa. 2018. Analisis kandungan protein total ikan kakap merah dan ikan kerapu bebek. *Jurnal Biology Science & Education*, 7(1).
- Noman, A., J. Qixing, Y. Xu, A. H. Ali, W. Q. Al-Bukhaiti, S. M. Abed, & W. Xia. 2019. Influence of degree of hydrolysis on chemical composition, functional properties, and antioxidant activities of chinese sturgeon (*Acipenser sinensis*) hydrolysates obtained by using Alcalase 2.4L. *Journal of Aquatic Food Product Technology*, 28(6): 583–597. <https://doi.org/10.1080/10498850.2019.1626523>
- Noman, A., Y. Wang, C. Zhang, & S. M. Abed. 2022. Antioxidant activity of hybrid sturgeon (*Huso dauricus* × *Acipenser schrenckii*) protein hydrolysate prepared using bromelain, its fractions and purified peptides. *Polish Journal of Food and Nutrition Sciences*, 72(1): 79–89. <https://doi.org/10.31883/pjfn/146317>
- Nurhayati, T., E. Salamah, Cholifah, & R. Nugraha. 2014. Optimasi proses pembuatan hidrolisat jeroan ikan kakap putih. *JPHPI* 2014, 17(1).
- Nurjanah, T. Nurhayati, A. Latifah, & T. Hidayat. 2021. Aktivitas antioksidan dan komponen bioaktif hidrolisat protein jeroan ikan kakap putih (*Lates calcalifer*). *Journal of Agro-Based Industry*, 38(1): 70–78.
- Palla, A. N. F. 2022. Hidrolisat Protein Jeroan Ikan Kerapu (*Epinephelus* sp) Menggunakan Ekstrak Kasar Enzim Bromelin. Universitas Hasanuddin. Tesis.
- Peng, B., B. Cai, & J. Pan. 2022. Octopus-derived antioxidant peptide protects against hydrogen peroxide-induced oxidative stress in IEC-6 cells. *Food Science & Nutrition*, 10(11): 4049–4058. <https://doi.org/10.1002/fsn3.3000>
- Piotrowicz, I. B. B., & M. M. S. Mellado. 2015. Antioxidant hydrolysates production from argentine anchovy (*Engraulis anchoita*) with different enzymes. *International Food Research Journal*, 22(3): 1203–1211.
- Pisoschi, A. M., A. Pop, F. Iordache, L. Stanca, L. Bilteanu, & A. I. Serban. 2021. Antioxidant determination with the use of carbon-based electrodes. *Chemosensors*, 9(4). <https://doi.org/10.3390/chemosensors9040072>
- Putri, R. T., L. Hardjito, & J. Santoso. 2020. Optimasi hidrolisis mikrobiologi serta bioaktivitas antibakteri, antioksidan, dan antikoagulan hidrolisat *Ulva lactuca*. *Jurnal Pascapanen dan Bioteknologi Kelautan dan Perikanan*, 15(2): 123. <https://doi.org/10.15578/jpbkp.v15i2.657>



- Rahmatang, Asia, A. Rumpa, P. Tandipuang, & R. Ohorella. 2023. Karakteristik unit penangkapan gurita (*Octopus* sp.) di perairan Teluk Bone. *Jurnal Salamata*, 5(2): 72. <https://doi.org/10.15578/salamata.v5i2.13594>
- Ramakrishnan, V., A. Ghaly, M. Brooks, & S. Budge. 2013. Extraction of proteins from mackerel fish processing waste using alcalase enzyme. *Journal of Bioprocessing & Biotechniques*, 3(2): 130. <https://doi.org/10.4172/2155-9821.1000130>
- Rao, M. B., A. M. Tanksale, M. S. Ghatge, & V. V. Deshpande. 1998. Molecular and biotechnological aspects of microbial proteases. *Microbiology and Molecular Biology Reviews*, 62(3): 597-635.
- Re, R., N. Pellegrini, A. Proteggente, A. Pannala, M. Yang, & C. Rice-Evans. 1999. Antioxidant activity applying an improved ABTS radical cation decolorization assay. *Free Radical Biology & Medicine*, 26(9-10): 1231-1237.
- Restiani, R. 2016. Hidrolisis secara enzimatis protein bungkil biji nyamplung (*Calophyllum inophyllum*) menggunakan bromelain. *Biota*, 1(3): 103-110.
- Riyanto, B., W. Trilaksani, & R. Lestari. 2016. Minuman nutrisi olahraga berbasis hidrolisat protein gurita. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 19(3): 339-347. <https://doi.org/10.17844/jphpi.2016.19.3.339>
- Rizal, A. F. 2008. Hidrolisis Protein Ikan Lemuru (*Sardinella* sp.) Menggunakan Ekstrak Kasar Protease dari Isi Perut Ikan Skipjack Tuna (*Katsuwonus pelamis*). Universitas Jember. Skripsi.
- Rosa, R., P. R. Costa, & M. L. Nunes. 2004. Effect of sexual maturation on the tissue biochemical composition of *Octopus vulgaris* and *O. defilippi* (Mollusca: Cephalopoda). *Marine Biology*, 145(3): 563-574. <https://doi.org/10.1007/s00227-004-1340-8>
- Sahura, A. R. 2024. Pengaruh Suhu Pengeringan Oven Terhadap Aktivitas Antioksidan Hidrolisat Protein Insang Lele (*Clarias* sp.) yang Dihidrolisis dengan Enzim Papain. Universitas Gadjah Mada. Skripsi.
- Salem, R. B. S., I. Bkhairia, O. Abdelhedi, & M. Nasri. 2017. *Octopus vulgaris* protein hydrolysates: characterization, antioxidant and functional properties. *Journal of Food Science and Technology*, 54(6): 1442-1454. <https://doi.org/10.1007/s13197-017-2567-y>
- Salem, R. B. S., N. Ktari, I. Bkhairia, R. Nasri, L. Mora, R. Kallel, S. Hamdi, K. Jamoussi, T. Boudaouara, A. El-Feki, F. Toldrá, & M. Nasri. 2018. In vitro and in vivo anti-diabetic and anti-hyperlipidemic effects of protein hydrolysates from *Octopus vulgaris* in alloxanic rats. *Food Research International*, 106: 952-963. <https://doi.org/10.1016/j.foodres.2018.01.068>
- Salwanee, S., W. M. Wan Aida, S. Mamot, M. Y. Maskat, & S. Ibrahim. 2013. Effects of enzyme concentration, temperature, ph and time on the degree of hydrolysis of



- protein extract from viscera of tuna (*Euthynnus affinis*) by using Alcalase. Sains Malaysiana, 42(3): 279–287.
- Senphan, T., & S. Benjakul. 2014. Antioxidative activities of hydrolysates from seabass skin prepared using protease from hepatopancreas of pacific white shrimp. *Journal of Functional Foods*, 6(1): 147–156. <https://doi.org/10.1016/j.jff.2013.10.001>
- Shamloo, M., J. Bakar, D. Mat Hashim, & A. Khatib. 2012. Biochemical properties of red tilapia (*Oreochromis niloticus*) protein hydrolysates. *International Food Research Journal*, 19(1): 183–188.
- Sholahuddin, M. A., N. D. R. Lastuti, & M. Amin. 2024. Effect of difference bromelain enzyme concentration on protein hydrolysate from waste of tilapia viscera (*Oreochromis* sp.) on antioxidant activity. *Jurnal Biosains Pascasarjana*, 26(1): 15–22. <https://doi.org/10.20473/jbp.v26i1.2024.15-22>
- Silvestre, M. P. C., H. A. Morais, V. D. M. Silva, & M. R. Silva. 2013. Degree of hydrolysis and peptide profile of whey proteins using pancreatin. *Nutrire*, 38(3): 278–290. <https://doi.org/10.4322/nutrire.2013.026>
- SNI 01-2891-1992. 1992. Cara Uji Makanan dan Minuman. Badan Standardisasi Nasional.
- Soewarlan, L. C., L. N. L. Toruan, & S. A. Saraswati. 2023. Analisis kandungan proksimat *Octopus cyanea* dari perairan Nusa Tenggara Timur. *Jurnal Pengolahan Hasil Perikanan Indonesia*, 26(2): 251–259. <https://doi.org/10.17844/jphpi.v26i2.44821>
- Song, L., T. Li, R. Yu, C. Yan, S. Ren, & Y. Zhao. 2008. Antioxidant activities of hydrolysates of *Arca subcrenata* prepared with three proteases. *Marine Drugs*, 6(4): 607–619. <https://doi.org/10.3390/md6040607>
- Suherman, R. Maliza, F. Syahbanu, A. D. Supardan, R. S. Rita, D. Arisanty, T. Minarsih, E. Yerizel, A. H. Amrinanto, D. Handito, & M. A. S. Jati. 2021. Analisis Zat Gizi Pangan Teori dan Praktik. *Eureka Media Aksara*.
- Susanto, E., & A. S. Fahmi. 2012. Senyawa fungsional dari ikan: aplikasinya dalam pangan. *Jurnal Aplikasi Teknologi Pangan*, 1(4).
- Tacias-Pascacio, V. G., R. Morellon-Sterling, E. H. Siar, O. Tavano, Á. Berenguer-Murcia, & R. Fernandez-Lafuente. 2020. Use of alcalase in the production of bioactive peptides: a review. *International Journal of Biological Macromolecules*, 165: 2143–2196. <https://doi.org/10.1016/j.ijbiomac.2020.10.060>
- Tawalbeh, D., W. A. N. Wan Ahmad, & N. M. Sarbon. 2022. Effect of ultrasound pretreatment on the functional and bioactive properties of legumes protein hydrolysates and peptides: a comprehensive review. *Food Reviews International*, 39(8): 5423-5445. <https://doi.org/10.1080/87559129.2022.2069258>
- Tejasari, S. Yuwanti, M. B. Ahmadi, & Y. L. Afsari. 2020. The anti hypertensive nutraceuticals of *Vigna* sp bean protein hydrolyzed by alcalase and flavourzyme.



- Journal of Functional Food and Nutraceutical, 2(1): 63–73.
<https://doi.org/10.33555/jffn.v2i1.40>
- Theafelicia, Z., & S. N. Wulan. 2023. Perbandingan berbagai metode pengujian aktivitas antioksidan (DPPH, ABTS dan FRAP) pada teh hitam (*Camellia sinensis*). Jurnal Teknologi Pertanian, 1: 35–44.
- Thiansilakul, Y., S. Benjakul, & F. Shahidi. 2007. Antioxidative activity of protein hydrolysates from round scad muscle using alcalase and flavourzyme. Journal of Food Biochemistry, 31: 266–287.
- Tupen, P. S., Yahyah, & A. Al Ayubi. 2024. Analisis hasil tangkapan gurita pada alat tangkap hand line menggunakan umpan pocong - pocong yang dioperasikan oleh nelayan diperaian Kabupaten Ende Provinsi Nusa Tenggara Timur. Jurnal Ilmiah Bahari Papadak, 5(1): 65–76.
- Um, J. H., E. A. Kim, W. W. Lee, N. Kang, E. J. Han, J. Y. Oh, S. Y. Park, Y. J. Jeon, S. H. Lee, & G. Ahn. 2017. Protective effects of an enzymatic hydrolysate from *Octopus ocellatus* meat against hydrogen peroxide-induced oxidative stress in chang liver cells and zebrafish embryo. Advances in Experimental Medicine and Biology, 975: 603–620. https://doi.org/10.1007/978-94-024-1079-2_47
- Varidah, N., L. C. Soewarlan, & S. A. Saraswati. 2024. Deteksi potensi bahaya merkuri (Hg) dalam gurita batu (*Octopus* sp) hasil tangkapan nelayan Desa Nangahale, Kabupaten Sikka, NTT. Jurnal TECHNO-FISH, 8(1).
- Wang, Z., X. Liu, H. Xie, Z. Liu, K. Rakariyatham, C. Yu, F. Shahidi, & D. Zhou. 2021. Antioxidant activity and functional properties of alcalase-hydrolyzed scallop protein hydrolysate and its role in the inhibition of cytotoxicity in vitro. Food Chemistry, 344. <https://doi.org/10.1016/j.foodchem.2020.128566>
- Wijayanti, I., Romadhon, & L. Rianingsih. 2015. Pengaruh konsentrasi enzim papain terhadap kadar proksimat dan nilai rendemen hidrolisat protein ikan bandeng (*Chanos chanos* Forsskal). PENA Akuatika, 12(1).
- Winarno, F. G. 2008. Ilmu Pangan dan Gizi. Gramedia Pustaka Utama. Jakarta.
- Winarno, F. G. 2004. Pangan, Gizi, Teknologi dan Konsumen. Gramedia Pustaka Utama. Jakarta.
- Witono, Y., Aulanni'am, A. Subagio, & S. B. Widjanarko. 2007. Karakterisasi hidrolisat protein kedelai hasil hidrolisis menggunakan protease dari tanaman biduri (*Calotropis gigantea*). Berkala Penelitian Hayati, 13(7–13): 13–20.
- Ximenes, J., A. Siqueira, E. Kochańska, & R. M. Łukasik. 2021. Valorisation of agri- and aquaculture residues via biogas production for enhanced industrial application. Energies, 14(9). <https://doi.org/10.3390/en14092519>



- Youlanda, H. 2016. Ekstraksi dan Evaluasi Gelatin dari Kulit Sapi yang Telah Mengalami Proses Buang Bulu Menggunakan Hidrolisis Asam. UIN Syarif Hidayatullah Jakarta. Skripsi.
- Yuniarti, T., A. Prayudi, L. Supenti, H. Suhrawardan, & P. Martosuyono. 2021. Produksi dan profil kimia hidrolisat protein dari hasil samping pengolahan udang segar. *Jurnal Perikanan Universitas Gadjah Mada*, 23(1): 63. <https://doi.org/10.22146/jfs.59906>
- Zamuz, S., B. M. Bohrer, M. A. Shariati, M. Rebezov, M. Kumar, M. Pateiro, & J. M. Lorenzo. 2023. Assessing the quality of octopus: from sea to table. *Food Frontiers*, 4(2): 733–749. <https://doi.org/10.1002/fft2.226>
- Zhang, X., P. Noisa, & J. Yongsawatdigul. 2020. Chemical and cellular antioxidant activities of in vitro digesta of tilapia protein and its hydrolysates. *Foods*, 9(6). <https://doi.org/10.3390/foods9060833>
- Zheng, X., L. Li, X. Liu, X. Wang, J. Lin, & D. Li. 2006. Production of hydrolysate with antioxidative activity by enzymatic hydrolysis of extruded corn gluten. *Applied Microbiology and Biotechnology*, 73(4): 763–770. <https://doi.org/10.1007/s00253-006-0537-9>