

DAFTAR PUSTAKA

- Adejumo, B. A., S. G. Inaede, and T. S. Adamu. 2013. Effect of moisture content on the yield and characteristics of oil from *Moringa Oleifera* seeds. *Academic Research International* 4(4): 160-170.
- Adl, S. M., A. G. B. Simpson, M. A. Farmer, R. A. Andersen, O. R. Anderson, J. R. Barta, S. S. Bowser, G. Brugerolle, R. A. Fensome, S. Fredericq, T. Y. James, S. Karpov, P. Kugrens, J. Krug, C. E. Lane, L. A. Lewis, J. Lodge, D. H. Lynn, D. G. Mann, R. M. Mccourt, L. Mendoza, O. Moestrup, S. E. Mozley-Standridge, T. A. Nerad, C. A. Shearer, A. V. Smirnov, F. W. Spiegel, and M. F. J. R. Taylor. 2005. The new higher level classification of eukaryotes with emphasis on the taxonomy of protists. *J. Eukaryot. Microbiol.* 52(5): 399-451.
- Ahmad, F., M. R. Sulaiman, W. Saimon, C. F. Yee, and P. Matanjun. 2012. Proximate compositions and total phenolic contents of selected edible seaweed from Semporna, Sabah, Malaysia. *Borneo Science* 31: 85-96.
- Anh, N. T. N., N. T. Nhi, and N. V. Hoa. 2015. Effect of different drying methods on total lipid and fatty acid profiles of dried *Artemia franciscana* biomass. *Can Tho University J of Science* 1: 1-9.
- Anonim. 2014. Volume produksi kerapu-rumput laut- nila 2009 – 2013. Direktorat Jendral Perikanan Budidaya. Jakarta. <<https://www.djpb.kkp.go.id/public/upload/statistikseries/Statistik%202009%20-%202013%20Kerapu,%20Nila,%20RL.pdf>>. Diakses tanggal 14 Maret 2018.
- Anonim^a. 2018. Capillary HP-5 <<https://www.agilent.com/en/products/gas-chromatography/gc-columns/capillary/hp-5>>. Diakses 14 Maret 2018.
- Anonim^b. 2018. *Gracilaria edulis* (S.G.Gemelin) P.C.Silva. http://www.algaebase.org/search/species/detail/?species_id=1899>. Diakses 15 Maret 2018.
- Anonim^c. 2018. *Halymenia floresii* (Clemente) C.Agardh. http://www.algaebase.org/search/species/detail/?species_id=1459>. Diakses 15 Maret 2018.
- AOAC. 1995. Official Methods of Analysis of The Association of Analytical Chemist. Wasington, D. C.
- Atadashi, I. M., M. K. Aroua, A. R. A. Aziz, dan N. M. N. Sulaiman. 2012. The effects of water on biodiesel product and refining technologies: A review. *Renewable and Sustainable Energy Reviews* 16: 3456-3470.
- Bai, X., F. G. Naghdi, L. Ye, P. Lant, and S. Pratt. 2014. Enhanced lipid extraction from algae using free nitrous acid pretreatment. *Bioresource Technology* 159: 36-40.
- Baldosano, H. Y., M. B. M. G. Castillo, C. D. H. Elloran, and F. T. Bacan. 2015. Effect of Particle Size, Solvent and Extraction Time of Tannin Extract from *Spondias purpurea* Bark Through Soxhlet Extraction. *Proceedings of the DLSU Research Congress* 3: 1-6.

- Barsanti, L. and P. Gualtieri. 2006. *Algae Anatomy, Biochemistry, and Biotechnology*. Taylor and Francis, New York.
- Benito, P. J. Caballero, J. Moreno, C. Gutierrez-Alcantara, C. Munoz, G. Rojo, S. Garcia, and F. C. Soriguer. 2006. Effects of milk enriched with omega-3 fatty acid, oleic acid, and folic acid in patients with metabolic syndrome. *Clinical Nutrition* 25: 581-587.
- Burtin, P. 2003. Nutritional value of seaweeds. *Electronic J. of Environmental, Agricultural, and Food Chemistry* 2(4): 498-503.
- Caballero, B. 2006. *Lipids*. Johns Hopkins Bloomberg School of Public Health, Amerika Serikat.
- Clement, R. E. and V. Y. Taguchi. 1989. Techniques for the gas chromatography-mass spectrometry identification of organic compounds in effluents. Queen's Printer fo Ontario, Ontario.
- Dawczynski, C., R. Schubert, and G. Jahreis. 2007. Amino acids, fatty acids, and dietary fibre in edible seaweed products. *Food Chemistry* 103: 891-899.
- FAO. 2010. *Fats and Fatty Acids in Human Nutrition Report of an Expert Consultation*. Food and Agriculture Organization of the United Nation, Rome.
- Felder, D. L., and D. K. Camp. 2009. *Gulf of Mexico Origin, Water, and Biota. Vol. 1 Biodiversity*. Texas A&M Press, College Station, Texas.
- Fleurence, J., G. Gutbier, S. Mabeu, and C. Leray. 1994. Fatty acids from 11 marine macroalgae of the French Brittany coast. *J. of Applied Phycology* 6: 527-532.
- Garcia, J. S., V. Palacios, dan A. Roldan. 2016. Nutritional potential of four seaweed species collected in the Barbate Estuary (Gulf of Cadiz, Spain). *J. of Nutrition & Food Sciences* 6(3): 1-7.
- Gressler, V., N. S. Yokoya, M T. Fujii, P. Colepicolo, J. M. Filho, R. P. Torres, dan E. Pinto. 2010. Lipid, fatty acid, protein, amino acid and ash contents in four Brazilian red algae species. *Food Chemistry* 120: 585-590.
- Gumilar, G., M. Zackiyah, G. Dwiyantri, dan H. Munawaroh. 2015. Pengaruh pemanasan terhadap profil asam lemak tak jenuh minyak bekatul. Abstrack. <https://www.researchgate.net/publication/308125760_PENGARUH_PEMANASAN_TERHADAP_PROFIL_ASAM_LEMAK_TAK_JENUH_MINYAK_BEKATUL>. Diakses 9 April 2018.
- Haryatfrehni, R., S. C. Dewi, A. Meilianda, S. Rahmawati, and I. Z. R. Sari. 2015. Preliminary study the potency of macroalgae in Yogyakarta: extraction and analysis of algal pigments from common Gunungkidul seaweeds. *Procedia Chemistry* 14: 373-380.
- Hussain, S. Z., and K. Maqbool. 2014. GC-MS: Principle, technique and its application in food science. *Int. J. Curr. Sci.* 13: 116-126.

- Illijas, M. I., Arifudin, L. Saleh, and Y. Itabashi. 2012. Fatty acid composition and prostaglandin content of the red seaweed *Gracilaria* sp. from Indonesia. *Indonesian Aquaculture J.* 7(1): 49-54.
- Jayasankar, R. and S. Varghese. 2002. Cultivation of marine red alga *Gracilaria edulis* (Gigartinales, Rhodophyta) from spores. *Indian J. of Marine Sciences* 3(1): 75-77.
- Jiang, J. and X. Jia. 2015. Profiling of fatty acid composition in suet oil based on GC-EI-qMS and chemometrics analysis. *International J. of Molecular Sciences* 16: 22864-2878.
- Jiwandana, A. L. 2017. Pengaruh Metode Ekstraksi terhadap Kandungan Asam Lemak *Sargassum crassifolium* dan *Sargassum pallidum* dari Kabupaten Gunungkidul. Fakultas Pertanian. Universitas Gadjah Mada. Skripsi.
- Kenkel, J. 2003. *Analytical Chemistry for Technicians*. 3rd edition. CRC Press, United States of Amerika.
- Khotimchenko, S. V. 2005. Lipids from the marine alga *Gracilaria verrucosa*. *Chemistry of Natural Compounds* 41(3): 285-288.
- Kim. 2012. *Handbook of Marine Macroalgae Biotechnology and Applied Phycology*. John Willey and Son, UK.
- Kresge, N., R. D. Simoni, and R. L. Hill. 2010. JBC historical perspectives: lipid biochemistry. <http://www.jbc.org/site/home/teaching_tools/historicalperspectives/pdf/jbc_hist_persp_lipids.pdf>. Diakses 15 Maret 2018.
- Kris-Etherton, P. 2016. Saturated fat and ASCVD risk: synthesizing the evidence for optimal patient care. <<https://www.lipid.org/sites/default/files/10dr.pennykris-etherton.pdf>>. Diakses 15 Maret 2018.
- Kumari, P., A. J. Bijo, V.A. Mantri, C. R. K. Reddy, and B. Jha. 2013. Fatty acid profiling of tropical marine macroalgae: an analysis from chemotaxonomic and nutritional perspectives. *Phytochemistry* 86: 44-56.
- Kumari, P., C. R. K. Reddy, and B. Jha. 2011. Comparative evaluation and selection of a method for lipid and fatty acid extraction from macroalgae. *Analytical Biochemistry* 415: 134-144.
- Kumari, P., M. Kumar, V. Gupta, C. R. K. Reddy, and B. Jha. 2010. Tropical marine macroalgae as potential sources of nutritionally important PUFAs. *Food Chemistry* 120: 749-757.
- Lee, J. 2013. Polyunsaturated fatty acid for children. *Pediatric Gastroenterology, Hepatology & Nutrition* 16(3): 153-161.
- Lee, R. E. 2008. *Phycology*. Cambridge University Press, New York.
- Maghraby, D. M. E. and E. M. Fakhry. 2015. Lipid content and fatty acid composition of Mediterranean macro-algae as dynamic factor for biodiesel production. *Oceanologia* 57: 86-92.

- Mathlouthi, M. 2001. Water content, water activity, water structure and the stability of foodstuffs. *Food Control* 12: 409-417.
- McDermid, K. J. and B. Stuercke. 2003. Nutritional composition of edible Hawaiian seaweeds. *J. of Applied Phycology* 15: 513-524.
- Meina, U. 2017. Pengaruh Metode Ekstraksi Terhadap Kandungan Asam Lemak *Enteromorpha compressa* dan *Ulva lactuca* dari Kabupaten Gunungkidul. Fakultas Pertanian. Universitas Gadjah Mada. Skripsi.
- Milledge, J. J., B. Smith, P. W. Dyer, and P. Harvey. 2014. Macroalgae-derived biofuel: a review of method of energy extraction from seaweed biomass. *Energies* 7: 7194-7222.
- Milicevic, D., D. Vranic, Z. Masic, N. Parunovic, D. Trbovic, J. Nedeljkovic-Trailovic, and Z. Petrovic. 2014. The role of total fats, saturated/unsaturated fatty acids and cholesterol content in meat as cardiovascular risk factors. *Lipid in Health and Disease* :1-12. <<https://link.springer.com/content/pdf/10.1186%2F1476-511X-13-42.pdf>>. Diakses 25 Maret 2018.
- Mohammadi, M, H. Tajik, and P. Hajeb. 2013. Nutritional composition of seaweeds from the Northern Persian Gulf. *Iranian J. of Fisheries Sciences* 12(1): 232-240.
- Mukhriani. 2014. Ekstraksi, pemisahan senyawa, dan identifikasi senyawa aktif. *Jurnal Kesehatan* 7(2): 361-367.
- Murata, M. and J. Nakozoe. 2001. Production and use of marine algae in Japan. *JARQ* 35(4): 281-290.
- Ningtyas, D. P., S. A. Budhiyanti, dan L. Sahubawa. 2013. Pengaruh katalis basa (NaOH) pada tahap reaksi transesterifikasi terhadap kualitas biofuel dari minyak tepung ikan sardin. *Jurnal Teknosains* 2(2): 103-114.
- Noer, S. F. 2011. Pengaruh kadar etanol dalam sediaan gel antiseptika terhadap pertumbuhan bakteri *Salmonella thyposa*. *ILTEK* 6(12): 887-891.
- Norziah, M. H. and C. Y. Ching. 2000. Nutritional composition of edible seaweed *Gracilaria changgi*. *Food Chemistry* 68(1): 69-76.
- Ortega, J. L. G., D. R. Ramirez, Y. F. Pelegrin, and T. R. Castillo. 2012. Composicion estacional de acidos grasos de *Halymenia floresii* (Rhodophyta) de Yucatan, Mexico. *Revista Latinoamericana de Quimica* 40(2): 100-105.
- Ortiz, J., N. Romero, P. Robert, J. Araya, J. Lopez-Hernandez, C. Bozzo, E. Navarrete, A. Osorio, dan A. Rios. 2006. Dietary fiber, amino acid, fatty acid and tocopherol contents of the edible seaweeds *Ulva lactuca* and *Durvillae antarctica*. *Food Chemistry* 99: 98-104.
- Pakidi, C. S. dan H. S. Suwoyo. 2017. Potensi dan pemanfaatan bahan aktif alga cokelat *Sargassum sp.*. *Octopus Jurnal Ilmu Perikanan* 6(1): 551-562.
- Pereira, A. S. C., M. V. dos Santos, G. Aferri, R. Ruegger, P. da S. Corte, S. da L. e Silva, J. E. de F. Junior, P. R. Leme, and F. P. Renno. 2012. Lipid and selenium sources on fatty acid composition of intramuscular fat and muscle selenium

- concentration of Nellore steers. *Revista Brasileira de Zootecnia* 44(11): 2357-2363.
- Pham, H. N. T., V. T. Nguyen, Q. V. Vuong, M. C. Bowyer, and C. J. Scarlett. 2015. Effect of extraction solvent and drying method on the physicochemical and antioxidant properties of *Helicteres hirsute* Lour. Leaves. *Technologies* 3: 285-301.
- Pirian, K., Z. Z. Jeliani, J. Sohrabipour, M. Arman, M. M. Faghihi, and M. Yousefzadi. 2017. Nutritional and bioactivity evaluation of common seaweed species from the Persian Gulf. *Iran J Sci Technol Trans Sci* : 1-10.
- Purnami, I.N.G. Wardana, dan K. Veronika. 2015. Pengaruh penggunaan katalis terhadap laju dan efisiensi pembentukan hidrogen. *Jurnal Rekayasa Mesin* 6(1): 51-59.
- Pusparini. 2006. Low density lipoprotein padat kecil sebagai faktor risiko aterosklerosis. *Universa Medicina* 25(1): 22-32.
- Quin, P. J. 1988. Effects of temperature on cell membranes. *Symposia of the Society for Experimental Biology* : 237-258.
- Rachmaniah, O., R. D. Setyarini, dan L. Maulida. 2010. Pemilihan Metode Ekstraksi Minyak Alga dari *Chlorella sp.* dan Prediksi sebagai Biodiesel. *Seminar Teknik Kimia Soehadi Reksowardojo* : 1-10.
- Rahmawati, S., R. Haryatfrehni, A. Meilianda, M. Nuhamunada, L. Pradani, and B. L. Prakasa. 2015. Pigments characterization of macroalgae in Drini beach, Gunungkidul, Yogyakarta for systematics study. *KnE Life Sciences* 2: 294-299.
- Ratnaningtyas, H. 2009. Pengaruh Suhu dan Waktu Pengovenan terhadap Aktivitas Antioksidan *Sargassum sp.* Fakultas Pertanian, Universitas Gadjah Mada. Skripsi.
- Ravi, S and P. D. Kasi. 2014. Evaluation of physicochemical properties, proximate and nutritional composition of *Gracilaria edulis* collected from Palk Bay. *Food Chemistry* 10: 142-174.
- Rosadi, I., Ismoyowati, dan N. Iriyanti. 2013. Kadar HDL (*High Density Lipoprotein*) dan LDL (*Low Density Lipoprotein*) darah pada berbagai itik lokal betina yang pakannya disuplementasi dengan probiotik. *J. Ilmiah Peternakan* 1(2): 597-605.
- Rustan, A. C. and C. A. Drevon. 2005. Fatty Acid: Structures and Properties. *Encyclopedia of Life Sciences*. John & Willey & Son.
- Safia, R. N. 2013. Jenis dan Sebaran Makroalga di Zona Intertidal Pantai Ngandong dan Drini Kabupaten Gunungkidul. Fakultas Pertanian. Universitas Gadjah Mada. Skripsi.
- Sartika, R. A. D. 2008. Pengaruh asam lemak jenuh, tidak jenuh dan asam lemak trans terhadap kesehatan. *Jurnal Kesehatan Masyarakat Nasional* 2(4): 154-160.
- Saunders, G. W. and M. H. Hommersand. 2004. Assessing red algal supraordinal diversity and taxonomy in the context of contemporary systematic data. *American J. of Botany* 91(10): 1494-1507.

- Schwingshackl, L. and G. Hoffman. 2012. Monounsaturated fatty acids and risk of cardiovascular disease: synopsis of the evidence available from systematic reviews and meta-analyses. *Nutrients* 4: 1989-2007.
- Siddique, M. A. M., M. S. K. Khan, and M. K. A. Bhuiyan. 2013. Nutritional composition and amino acid profile of a sub-tropical red seaweed *Gelidium pusillum* collected from St. Martin's Island, Bangladesh. *International Food Research* 20(5): 2287-2292.
- Soelistyowati, D. T., I. A. A. D. Murni, dan Wiyoto. 2014. Morfologi *Gracilaria* spp. yang dibudidayakan di tambak Desa Pantai Sederhana, Muara Gembong. *Jurnal Akuakultur Indonesia* 13(1): 94-104.
- Sormin, R. B. D. 2011. Komposisi Kimia dan Potensi Bioaktif Sayur Laut (*Porphyra* sp.). *Prosiding Seminar Nasional* : 77-84
- Suparmi dan A. Sahri. 2009. Mengenal potensi rumput laut : kajian pemanfaatan sumber daya rumput laut dari aspek industri dan kesehatan. *Jurnal Sultan Agung* 44(118): 95-116.
- Triningrat, A. A. M. P., N. M. K. Rahayu, dan I. B. P. Manuaba. 2010. Visual acuity of methanol intoxicated patients before and after hemodialysis, methylprednisolone and prednisone therapy. *J. Oftalmologi Indonesia* 7(4): 129-132.
- Tuminah, S. 2009. Efek asam lemak jenuh dan asam lemak tak jenuh "trans" terhadap kesehatan. *Media Penelit. dan Pengembang. Kesehat.* 19(2): 13-20.
- Vimala, T. dan T. V. Poonghuzhali. 2013. Estimation of pigments from seaweed by using acetone and DMSO. *International J. of Science and Research* 4(10): 1850-1854.
- Xue, Z., L. Duan, and X. Qi. 2015. Gas Chromatography Mass Spectrometry Coupling Techniques. Chemical Industry Press, Beijing.
- Yoon, H. S., G. C. Zuccarello, and D. Bhattacharya. 2010. Evolutionary history and taxonomy of red algae. *Science and Business* : 27-42
- Yuliani, S. dan S. Satuhu. 2012. Panduan Lengkap Minyak Asiri. Penebar Swadaya, Jakarta.