

7. DAFTAR PUSTAKA

- Andini, R., Febriani, R. and Qubra, H. (2019). Jurnal Redoks : Jurnal Pendidikan Kimia dan Ilmu Kimia. Volume 2. No. 1. ISSN : 2614-7300
<http://jurnal.stkipbima.ac.id/index.php/RE/article/view/72>
- Asgar (2006). Optimalisasi Cara , Suhu , dan Lama Blansing. Volume 16(3). pp. 245–252.
<http://www.ejurnal.litbang.pertanian.go.id/index.php/jhort/article/view/1159>
- Balbas, J. *et al.* (2015). Comparison of physicochemical characteristics, sensory properties and volatile composition between commercial and New Zealand made wakame from *Undaria pinnatifida*. Elsevier Ltd. doi: 10.1016/j.foodchem.2015.03.079.
<https://sci-hub.tw/10.1016/j.foodchem.2015.03.079>
- Bruckheimer EM, Kyprianou N (2000). Apoptosis in prostate carcinogenesis. pp. 153–162
<https://sci-hub.tw/10.1007/s004410000196>
- Burtin, P. (2003). Nutritional value of seaweeds. Page 498–503.
<https://sci-hub.tw/10.1007/s10811-012-9951-9>
- Cho, M. *et al.* (2011). Antioxidant properties of extract and fractions from Enteromorpha prolifera , a type of green seaweed. *Food Chemistry*. Elsevier Ltd, 127(3), pp. 999–1006. doi: 10.1016/j.foodchem.2011.01.072.
<https://sci-hub.tw/10.1016/j.foodchem.2011.01.072>
- Concrete, K. *et al.* (2015). Efektivitas jenis pelarut dan lama ekstraksi terhadap karakteristik concrete minyak atsiri kulit jeruk mandarin (*citrus reticulata*). 3(4). pp. 21–29.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=EFEKTIVITAS+JENIS+PELARUT+DAN+LAMA+EKSTRAKSI+TERHADAP+KARAKTERI STIK+CONCRETE+MINYAK+ATSIRI+KULIT+JERUK+MANDARIN+%28 Citrus+reticulata%29&btnG=
- Cucikodana, Y., Supriadi, A. and Purwanto, B. (2012). Pengaruh perbedaan suhu perebusan dan konsentrasi natrium hidroksida terhadap kualitas bubuk tulang ikan gabus (*Channa striata*). pp. 91–101.

- <https://core.ac.uk/download/pdf/267822603.pdf>
- Daun, E. et al. (2009). Analisis aktivitas antioksidan ekstrak etanolik daun yodium (*Jatropha multifida l.*) dengan metode *cupric ion reducing antioxidant capacity*.Fakultas Farmasi Universitas Muslim Indonesia , Makassar', 2(1). pp. 90–93.
<http://jurnal.farmasi.umi.ac.id/index.php/fitofarmakaindo/article/view/185>
- Defiana, E. (2013). Stabilitas fukosantin dari alga cokelat pada berbagai ph, 1(1).
<http://thpi.studentjournal.ub.ac.id/index.php/thpi/article/view/16>
- Doll, R. & Peto, R. (2001). The causes of cancer: quantitative estimate of avoidable risks of cancer in the United States today. J. Natl. Cancer Inst. 66:1195-1308
<https://sci-hub.tw/10.1093/jnci/66.6.1192>
- Eko, A. (2013). Stabilitas fukosantin dari rumput laut cokelat, 1(1), p.
<http://thpi.studentjournal.ub.ac.id/index.php/thpi/article/view/13>
- Fadilah , Ruslan dan Nurfidianty Annafi. (2019). Jurnal Pendidikan Kimia dan Ilmu Kimia Volume 2 No . 1 Tahun 2019 ISSN : 2614-7300', 2(1), pp. 1–8.
<https://ojs.unm.ac.id/ptp/article/view/8555>
- Feltons, J.S. et al. (2004). Isolation and characterization of new mutagens from fried ground beef, pp. 95-102.
<https://sci-hub.tw/10.1093/carcin/5.1.95>
- Fleurence, J., Morançais, M. and Dumay, J. (2018). *Seaweed proteins*. Second Edition, *Proteins in Food Processing*. Second Edition. Elsevier Ltd. doi: 10.1016/B978-0-08-100722-8.00010-3.
<https://sci-hub.tw/10.1016/B978-0-08-100722-8.00010-3>
- Fung, A., Hamid, N. and Lu, J. (2013). Fucoxanthin content and antioxidant properties of *Undaria pinnatifida*', *Food Chemistry*. Elsevier Ltd, 136(2), pp. 1055–1062. doi: 10.1016/j.foodchem.2012.09.024.
<https://sci-hub.tw/10.1016/j.foodchem.2012.09.024>
- Gregor, M. F. and Hotamisligil, S. (2011). Inflammatory Mechanisms in Obesity. doi: 10.1146/annurev-immunol-031210-101322.
<https://www.annualreviews.org/doi/abs/10.1146/annurev-immunol-031210-101322>

- Handayani (2018). Fukosantin: karotenoid berharga dari makroalga coklat. XLIII. pp. 16–28.
<https://oseana.lipi.go.id/oseana/article/view/60>
- Hart, Harold. (2003). Kimia Organik Suatu Kuliah Singkat. Erlangga: Jakarta.
- Hashimoto, T. *et al.* (2009). The distribution and accumulation of fucoxanthin and its metabolites after oral administration in mice, pp. 242–248. doi: 10.1017/S0007114508199007.
<https://www.cambridge.org/core/journals/british-journal-of-nutrition/article/distribution-and-accumulation-of-fucoxanthin-and-its-metabolites-after-oral-administration-in-mice/A2A75EE594854CBF5425379BE869C445>
- Heo, S. and Jeon, Y. (2009). Journal of Photochemistry and Photobiology B : Biology Protective effect of fucoxanthin isolated from *Sargassum siliquastrum* on UV-B induced cell damage C3-1 C3-2 C3-3, *Journal of Photochemistry & Photobiology, B: Biology*. Elsevier B.V., 95(2), pp. 101–107. doi: 10.1016/j.jphotobiol.2008.11.011.
<https://sci-hub.tw/10.1016/j.jphotobiol.2008.11.011>
- Hong, D. D., Hien, H. M., & Son, P. N. (2007). Seaweeds from Vietnam used for functional food, medicine and biofertilizer. *Journal of Applied Phycology*, 19(6), 817–826. <https://doi.org/10.1007/s10811-007-9228-x>
<https://sci-hub.tw/10.1007/s10811-007-9228-x>
- Hosokawa, M. *et al.* (2004). Fucoxanthin induces apoptosis and enhances the antiproliferative effect of the PPAR g ligand , troglitazone , on colon cancer cells', 1675, pp. 113–119. doi: 10.1016/j.bbagen.2004.08.012.
<https://sci-hub.tw/10.1016/j.bbagen.2004.08.012>
- Hosokawa, M. *et al.* (2010). Fucoxanthin regulates adipocytokine mRNA expression in white adipose tissue of diabetic / obese KK- A y mice', *Archives of Biochemistry and Biophysics*. Elsevier Inc., 504(1), pp. 17–25. doi: 10.1016/j.abb.2010.05.031.
<https://sci-hub.tw/10.1016/j.abb.2010.05.031>
- Husain, D. R. (2012). Potensi ekstrak cacing biru *Peryonix excavatus* sebagai senyawa antibakteri pada pelarut patogen, (978), pp. 336–343.

- <http://jurnal.fmipa.unila.ac.id/index.php/snsmap/article/view/486>
- Irawati, I. (2008). Perbandingan metode penentuan aktivitas antioksidan rimpang temulawak, 1, p. 18.
- http://chem.ipb.ac.id/kim/index.php?p=show_detail&id=1012&keywords=
- Ishikawa, C. *et al.* (2008). Antiadult T-cell leukemia effects of brown algae fucoxanthin and its deacetylated product , fucoxanthinol', 2712(May), pp. 2702–2712. doi: 10.1002/ijc.23860.
<https://onlinelibrary.wiley.com/doi/full/10.1002/ijc.23860>
- Kasimala, M. (2018) A review on biochemical composition and nutritional aspects of seaweeds. pp. 657–660.
https://www.researchgate.net/profile/Madhubabu_Kasimala/publication/326416830_A_Review_on_biochemical_composition_and_nutritional_aspects_of_Sea_weeds/links/5b4c819745851519b4c0b675/A-Review-on-biochemical-composition-and-nutritional-aspects-of-Seaweeds.pdf
- Kelor, D. *et al.* (2015). Uji Aktivitas Antioksidan terhadap DPPH dan ABTS dari Fraksi-fraksi', 2015(Snips), pp. 657–660.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Uji+Aktivitas+Antioksidan+terhadap+DPPH+dan+ABTS+dari+Fraksi-fraksi&btnG=
- Kim, K., Heo, S., Yoon, W., *et al.* (2010). Fucoxanthin inhibits the inflammatory response by suppressing the activation of NF- κ B and MAPKs in lipopolysaccharide-induced RAW 264 . 7 macrophages, *European Journal of Pharmacology*. Elsevier B.V., 649(1–3), pp. 369–375. doi: 10.1016/j.ejphar.2010.09.032.
<https://sci-hub.tw/10.1016/j.ejphar.2010.09.032>
- Kim, K., Heo, S., Kang, S., *et al.* (2010). Toxicology in Vitro Fucoxanthin induces apoptosis in human leukemia HL-60 cells through a ROS-mediated Bcl-xL pathway, *Toxicology in Vitro*. Elsevier Ltd, 24(6), pp. 1648–1654. doi: 10.1016/j.tiv.2010.05.023.
<https://sci-hub.tw/10.1016/j.tiv.2010.05.023>
- Kotake-nara, E., Asai, A. and Nagao, A. (2005). Neoxanthin and fucoxanthin induce apoptosis in PC-3 human prostate cancer cells, 220, pp. 75–84. doi: 10.1016/j.canlet.2004.07.048.

- <https://sci-hub.tw/10.1016/j.canlet.2004.07.048>
- Kumar, S. R., Hosokawa, M. and Miyashita, K. (2013). Fucoxanthin: A Marine Carotenoid Exerting Anti-Cancer Effects by Affecting Multiple Mechanisms, pp. 5130–5147. doi: 10.3390/md11125130.
- <https://www.mdpi.com/1660-3397/11/12/5130>
- López-lópez, I. et al. (2010). Frozen storage characteristics of low-salt and low-fat beef patties as affected by Wakame addition and replacing pork backfat with olive oil-in-water emulsion, *Food Research International*. Elsevier Ltd, 43(5), pp. 1244–1254. doi: 10.1016/j.foodres.2010.03.005.
- <https://sci-hub.tw/10.1016/j.foodres.2010.03.005>
- Mabeau, S. and Fleurence, J. (1993). Seaweed in food products: biochemical and nutritional aspects, pp. 927–929.
- <https://sci-hub.tw/10.1016/0924-2244%2893%2990091-n>
- Maeda, H. et al. (2006). Fucoxanthin and its metabolite, fucoxanthinol, suppress adipocyte differentiation in 3T3-L1 cells', 1, pp. 147–152.
- <https://sci-hub.tw/10.3892/ijmm.18.1.147>
- Maeda, H. et al. (2007). Effect of Medium-chain Triacylglycerols on Anti-obesity Effect of Fucoxanthin, 621(12), pp. 615–621.
- https://www.jstage.jst.go.jp/article/jos/56/12/56_12_615/_article/-char/ja/
- Maeda, H. et al. (2008). Seaweed carotenoid , fucoxanthin , as a multi-functional nutrient', 17(September 2007), pp. 196–199.
- https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Seaweed+carotenoid+%2C+fucoxanthin+%2C+as+a+multi+functional+nutrient&btnG=
- Maeda, H., Hosokawa, M. and Sashima, T. (2009). Anti-obesity and anti-diabetic effects of fucoxanthin on diet-induced obesity conditions in a murine model, pp. 897–902. doi: 10.3892/mmr.
- https://sci-hub.tw/10.3892/mmr_00000189
- Matsumoto, M., Hosokawa, M. and Matsukawa, N. (2010). Suppressive effects of the marine carotenoids , fucoxanthin and fucoxanthinol on triglyceride absorption in lymph duct-cannulated rats, pp. 243–249. doi: 10.1007/s00394-009-0078-y.
- <https://sci-hub.tw/10.1007/s00394-009-0078-y>

- Meli, D. (2014). Diagnosis and Classification of Diabetes Mellitus, 37(January), pp. 81–90. doi: 10.2337/dc14-S081.
https://scholar.google.com/scholar?q=Diagnosis+and+Classification+of+Diabetes+Mellitus&hl=en&as_sdt=0,5
- Mikami, K. and Hosokawa, M. (2013). Biosynthetic Pathway and Health Benefits of Fucoxanthin , an Algae-Specific Xanthophyll in Brown Seaweeds, pp. 13763–13781. doi: 10.3390/ijms140713763.
<https://www.mdpi.com/1422-0067/14/7/13763>
- Miyashita, K. (2009). The carotenoid fucoxanthin from brown seaweed affects obesity', 21(8), pp. 186–190. doi: 10.1002/lite.200900040.
<https://onlinelibrary.wiley.com/doi/abs/10.1002/lite.200900040>
- Mohamed, S., Hashim, S. N. and Rahman, A. (2012). Seaweeds : A sustainable functional food for complementary and alternative therapy', *Trends in Food Science & Technology*. Elsevier Ltd, 23(2), pp. 83–96. doi: 10.1016/j.tifs.2011.09.001.
<https://sci-hub.tw/10.1007/s00394-009-0078-y>
- Nakazawa, Y. et al. (2008). Comparative evaluation of growth inhibitory effect of stereoisomers of fucoxanthin in human cancer cell lines', *Journal of Functional Foods*. Elsevier Ltd, 1(1), pp. 88–97. doi: 10.1016/j.jff.2008.09.015.
<https://sci-hub.tw/10.1016/j.jff.2008.09.015>
- Nakazawa, Y. & Hosono, A. (2002). Function of fermented milk: Challenges for the health sciencis. Elsevier Applied Science.
<https://academic.oup.com/jn/article/132/12/3772/4712139>
- Negishi, C., et al. (2004). Formation of 2-amino-3,7,8-trimethylimidazo (4,5-f) quinoxaline, a new mutagen, by heating a mixture of creatinine, glucose and glycine. Mutat. Res. 140: 55-59.
<https://sci-hub.tw/10.1016/0165-7992%2884%2990042-3>
- Nodera, M. O., Tark, Y. Y. O. and Uzuki, T. S. (2008). Changes in Texture and Dietary Fiber of the Brown Alga Undaria Pinnatifida by Various Processing Methods, 14(1), pp. 89–94.
https://www.jstage.jst.go.jp/article/fstr/14/1/14_1_89/_article/-char/ja/

- Noviantari, N. P., Suhendra, L. and Wartini, N. M. (2017). Pengaruh ukuran partikel bubuk dan konsentrasi pelarut aseton terhadap karakteristik ekstrak warna *Sargassum polycystum*, 5(3), pp. 102–112.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Pengaruh+ukuran+partikel+bubuk+dan+konsentrasi+pelarut+aseton+terhadap+karakteristik+ekstrak+warna+Sargassum+polycystum&btnG=
- Nursid, M., Wikanta, T. and Susilowati, R. (2013). Kandungan fukosantin ekstrak rumput laut coklat dari pantai binuangeun , banten of Brown Algae Extract Collected from Binuangeun Coast , Banten', pp. 73–84.
<https://www.bbp4b.litbang.kkp.go.id/jurnal-jpbkp/index.php/jpbkp/article/view/55>
- Osokawa, M. A. H. *et al.* (2007). Radical Scavenging and Singlet Oxygen Quenching Activity of Marine Carotenoid Fucoxanthin and Its Metabolites, pp. 8516–8522.
<https://pubs.acs.org/doi/abs/10.1021/jf071848a>
- Pal, A., Kamthania, M. C. and Kumar, A. (2014). Bioactive Compounds and Properties of Seaweeds — A Review, pp. 1–17. doi: 10.4236/oalib.1100752.
<https://www.scirp.org/journal/paperinformation.aspx?paperid=64231>
- Peng, J. *et al.* (2011) Fucoxanthin , a Marine Carotenoid Present in Brown Seaweeds and Diatoms : Metabolism and Bioactivities Relevant to Human Health, pp. 1806–1828. doi: 10.3390/md9101806.
<https://www.mdpi.com/1660-3397/9/10/1806>
- Pereira, L. (2014). *A review of the nutrient composition of selected edible seaweeds.*
https://www.researchgate.net/profile/Leonel_Pereira/publication/235767788_A_review_of_the_nutrient_composition_of_selected_edible_seaweeds/links/0fcfd5135df5158c64000000.pdf
- Prabhasankar, P. *et al.* (2009). Edible Japanese seaweed , wakame (*Undaria pinnatifida*) as an ingredient in pasta : Chemical , functional and structural evaluation, *Food Chemistry*. Elsevier Ltd, 115(2), pp. 501–508. doi: 10.1016/j.foodchem.2008.12.047.
<https://sci-hub.tw/10.1016/j.foodchem.2008.12.047>
- Rohim, A., Estiasih, T. and Bioaktif, S. (2019). Senyawa-senyawa bioaktif pada rumput laut cokelat *Sargassum* sp , 20(2).

- <https://jtp.ub.ac.id/index.php/jtp/article/view/676>
- Rompas, R. A., H. J. Edy, A. Yudistira. (2012). Isolasi Dan Identifikasi Flavonoid Dalam Daun Lamun (*Syringodium isoetifolium*). *Pharmacon* Vol. 1(2): 59-63.
<https://ejournal.unsrat.ac.id/index.php/pharmacon/article/viewFile/487/380>
- Satou, Y. *et al.* (2006) HTLV-I basic leucine zipper factor gene mRNA supports proliferation of adult T cell leukemia cells, 103(3), pp. 1–7.
<https://www.pnas.org/content/103/3/720.short>
- Singh, A. V *et al.* (2004). Sulforaphane induces caspase-mediated apoptosis in cultured PC-3 human prostate cancer cells and retards growth of PC-3 xenografts in vivo, 25(1). doi: 10.1093/carcin/bgg178.
<https://academic.oup.com/carcin/article/25/1/83/2390580>
- Susantiningsih, T. (2015). Obesitas dan Stres Oksidatif Obesity and Oxidative Stress.
<http://juke.kedokteran.unila.ac.id/index.php/juke/article/view/639>
- Tamura, M. and Kusumi, T. (2004). Marine Drugs, (1), pp. 63–72.
<https://www.mdpi.com/1660-3397/2/2/63>
- Taylor, P., Amorim, K. and López-hernández, J. (2012). Changes in bioactive compounds content and antioxidant activity of seaweed after cooking processing, (March 2015), pp. 37–41. doi: 10.1080/19476337.2012.658871.
<https://www.tandfonline.com/doi/full/10.1080/19476337.2012.658871>
- The, J. O. F. and Society, W. A. (2007). Isolation of Sulfated Anticoagulant Compound from Fermented Red Seaweed *Gratelouphia filicina*, 38(3), pp. 407–417.
<https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1749-7345.2007.00112.x>
- Thera. (2004). biotransformation of fucoxanthinol into amarouciaxanthin a in mice and hepg2 cells : formation and cytotoxicity of fucoxanthin metabolites, 32(2), pp. 205–211.
<http://dmd.aspetjournals.org/content/32/2/205.short>
- USP Convention. (2016). United States of Pharmacopeia National Formulary, USP 30/ NF 25. Twinbrook Parkway: United States Pharmacopeial Convention
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=United+States+of+Pharmacopeia+National+Formulary&btnG=
- Utami, S. (2007). Peran Kaspase pada Apoptosis sebagai Salah Satu Usaha dalam Kemoterapi Kanker, 7, pp. 95–103.

- https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Peran+Kaspase+pada+Apoptosis+sebagai+Salah+Satu+Usaha+dalam+Kemoterapi+Kanker&btnG=%E2%80%A6
- Utami. (2009). Potensi daun alpukat (*Persea americana Mill*) sebagai sumber antioksidan alami. Jurnal Teknik Kimia UPN Jawa Timur. 2(1) : 58-64.
<https://ejournal.unsrat.ac.id/index.php/chemprog/article/viewFile/65/61>
- Verdiana, M. *et al.* (2018). Gelombang ultrasonik terhadap aktivitas antioksidan ekstrak kulit buah lemon (*citrus limon* (linn .) burm f .), 7(4), pp. 213–222.
https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Gelombang+ultrasonik+terhadap+aktivitas+antioksidan+ekstrak+kulit+buah+lemon+&btnG=%E2%80%A6
- Wirahadi, A. and Aries, N. (2010). Efek sitotoksik dan antiproliferatif kuersetin pada sel kanker kolon, 7(3), pp. 107–122.: Penerbit Universiti Putra Malaysia.
<http://www.jurnalnasional.ump.ac.id/index.php/PHARMACY/article/view/584>
- Yamanaka, R. and Akiyama, K. (1993). Cultivation and utilization of Undaria pinnatifida (wakame) as food, (1948), pp. 249–253.
<https://sci-hub.tw/10.1007/bf00004026>
- Yan, X. and Chuda, Y. (1999). Fucoxanthin as The Major Antioxidant in *Hijikia fusiformis*.
<https://www.tandfonline.com/doi/abs/10.1271/bbb.63.605>
- Yannai, S. and Fares, F. A. (2004). Induction of apoptosis in human prostate cancer cell line , PC3 , by 3 , 3 0 -diindolylmethane through the mitochondrial pathway, pp. 1358–1363. doi: 10.1038/sj.bjc.6602145.
<https://sci-hub.tw/10.1038/sj.bjc.6602145>
- Zulaidah, A. (2012). Modifikasi ubi kayu dengan kombinasi proses penggaraman dan proses biologi untuk substitusi terigu, 1, p. 10.
<http://jurnal.unpand.ac.id/index.php/dinsain/article/view/150>

LAMPIRAN



PLAGIARISM
CHECK.ORG



7.82% PLAGIARISM APPROXIMATELY

Report #10894236

PENDAHULUAN Latar Belakang Rumput laut (seaweed) merupakan tanaman yang tumbuh di perairan khususnya dilaut dan sangat berpotensi sebagai salah satu sumber pangan alternatif. Rumput laut memiliki nilai kandungan nutrisi yang tinggi, antara lain mineral, vitamin, serat tidak berkalsori, dan senyawa antioksidan ADDIN (Yan dan Chuda, 1999). Rumput laut terbagi menjadi 3 kelompok besar berdasarkan struktur kimia serta distribusi pigmenya, yaitu rumput laut cokelat (Phaeophyta), rumput laut hijau (Chlorophyta), dan rumput laut merah (Rhodophyta) ADDIN (Mabéau dan Fleurence, 1993). Dari ketiga kelompok tersebut, rumput laut cokelat merupakan rumput laut yang cukup banyak dijumpai dan memiliki kandungan nutrisi yang tinggi. Rumput laut cokelat sendiri terbagi menjadi beberapa spesies, antara lain *Hijikia fusiformis*, *Undaria pinnatifida*, dan *Sargassum fulvellum* ADDIN (Yan dan Chuda, 1999). Secara umum rumput laut cokelat memiliki beberapa kandungan senyawa yang samawanu berbeda spesies, antara lain fucoxanthin, fucoidan, fucoxanthinol, peridinin, dan halocynthiaxanthine ADDIN (Osokawa et al, 2007). Dari senyawa-senyawa tersebut, senyawa fucoxanthin (fukosantin) merupakan senyawa yang paling banyak dimanfaatkan dibandingkan senyawa lain yang terkandung didalam rumput laut cokelat. Fukosantin merupakan salah satu

REPORT

CHECKED

AUTHOR

PAGE