

BAB IV

KESIMPULAN DAN SARAN

4.1 Kesimpulan

- a. Aktivitas antioksidan dipengaruhi oleh umur rambut jagung dan perbedaan kepolaran pelarut.
- b. Total polifenol dan total flavonoid dipengaruhi oleh umur rambut jagung dan perbedaan kepolaran pelarut.
- c. Nilai total antioksidan dipengaruhi oleh perbedaan kepolaran pelarut.
- d. Aktivitas *scavenging* antioksidan pada radikal bebas dipengaruhi oleh perbedaan kepolaran pelarut.
- e. Penambahan ekstrak rambut jagung dapat memberikan efek protektif stres oksidatif
- f. Penambahan ekstrak rambut jagung dapat menurunkan produksi ROS pada otot skeletal.

4.2 Saran

Perlu dilakukan penelitian lebih lanjut yang lebih spesifik dalam pemilihan rambut jagung berdasarkan umur dan penggunaan pelarut dalam pengekstrakan rambut jagung.

DAFTAR PUSTAKA

- Awad, M.A., de Jager, A., van der Plas, L.H.W., van der Krol, A.R., 2001. Flavonoid and Chlorogenic Acid Changes in Skin of 'Elstar' and 'Jonagold' Apples during Development and Ripening. *Sci. Hortic.* 90: 69–83.
- Cabrera, S. G., I.F.R. Perez, L.J.L. Aguilar, M.C. Caringal, A.G. Dado, dan D.M. Evangelista. 2015. Determination of Properties of Selected Fresh and Processed Medical Plants. *Asia Pacific Journal of Multidisciplinary Research*, Vol. 3, No. 4, November 2015 Part I: 34-40.
- Chang, S. T., Wu, J. H., Wang, S. Y., Kang, P. L., Yang, N. S., & Shyur, L. F. (2001). Antioxidant Activity of Extracts from *Acacia confusa* bark and Heartwood. *Journal of Agricultural and Food Chemistry*, 49(7), 3420–3424.
- Chen, C. Y., G. I. Holtzman, R. M. Bakhit. 2002. High-Genistin Isoflavone Supplementation Modulated Erythrocyte Antioxidant Enzymes and Increased Running Endurance in Rats Undergoing One Session of Exhausting Exercise – A pilot study. *Pak. J. Nutr.* 1 (1): 1-7.
- Clarkson, P. M., Thompson, H. S. 2000. Antioxidants: What Role Do They Play in Physical Activity and Health. *J. Clin Nutr. Biochem*, 72.: 637S-46S.
- Fraga, C.G., Oteiza, P.I., 2011. Dietary Flavonoids: role of (-)- epicatechin and Related Procyanidins in Cell Signaling. *Free Radic. Biol. Med.* 51: 813–823.
- Halliwell, B. and Gutteridge, J. M. C. 2007. *Free Radicals in Biology and Medicine*. Oxford: Oxford University Press dalam Henry, J. 2014. *Advances in Food and Nutrition Research*. Volume 71- Academic Press
- Hamid, A.A., O. O. Aiyelaagbe , L. A. Usman , O. M. Ameen, A. Lawal. Antioxidants: Its medicinal and pharmacological Applications. *African Journal of Pure and Applied Chemistry* Vol. 4(8), pp: 142-151.

- Hasanudin, K., Hashim, P. and Mustafa, S. 2012. Corn Silk (Stigma Maydis) in Healthcare: A Phytochemical and Pharmacological Review.
- Hu, Qing-lan dan Deng, Zhi-hong. 2011. Protective Effects of Flavonoids from Corn Silk on Oxidative Stress Induced by Exhaustive Exercise in Mice. *African Journal of Biotechnology Vol. 10(16)*: 3163-3167
- Kaur G, Alam MS, Jabbar Z, Javed K, Athar M. 2006. Evaluation of Antioxidant Activity of Cassia siamea Flowers. *Journal of Ethnopharmacology 108*: 340-348.
- Kementerian Pertanian. 2015. *Rencana Strategis Kementerian Pertanian Tahun 2015-2019*. Jakarta: Biro Perencanaan, Sekretariat Jenderal
- Laseduw, J. 2013. *Mencegah Radikal Bebas*. <http://www.necturajuice.com/mencegah-radikal-bebas/> (19 Juli 2017)
- Leeuwenburgh C, Heinecke JW . 2001. Oxidative Stress and Antioxidants in Exercise. *Curr. Med. Chem. 8(7)*: 829-838.
- Li W., Chen Y., Yang M. 1995. Studies on Decreasing Blood Sugar of Corn Silk. *Chinese Traditional Herb Drugs 6*: 305.
- Liu, J., C. Wang, Z. Wang, C. Zhang, S. Lu, J. Liu. 2010. The Antioxidant and Free-Radical Scavenging Activities of Extract and Fractions from Corn Silk (*Zea mays L.*) and Related Flavone Glycosides. *Food Chemistry 126 (2011)A*: 261–269.
- Lu, H. K., C. C. Hsieh, J. J. Hsu , Y. K. Yang, H. N. Chou. 2006. Preventive Effects of Spirulina Platensis on Skeletal Muscle Damage Under Exercise-Induced Oxidative Stress. *Eur. J. Appl. Physiol. 98(2)*: 220-226.
- Nugroho. 2007. Antioksidan. <http://nugroho.wordpress.com/2007/12/03/antioksidan/> (20 Juni 2018).
- Pfeiffer, J. M., E. W. Askew, D. E. Roberts, S. M. Wood, J.E. Benson, S. C. Johnson, M. S. Freedman. 1999. Effect of Antioxidant Supplementation on Urine and Blood Markers of Oxidative Stress during Extended Moderate-Altitude Training. *Wilderness Environ. Med. 10(2)*: 66-74.
- Rahman, N. A., W. I. W. Rosli. 2013. Nutritional Composition and Antioxidative Capacity of the Silk Obtained from Immature and Mature Corn. *Journal of King Saud University – Science (2014) 26*: 119–127.

- Ramessar, K., Sabalza, M., Capell, T., Christou, P., 2008. Maize Plants: An Ideal Production Platform for Effective and Safe Molecular Pharming. *Plant Sci.* 174, 409–419.
- Solihah, M. A., W.I. Wan Rosli, and Nurhanan, A.R. 2012. Nutrition Programme, School of Health Sciences, Universiti Sains Malaysia, Kubang Kerian, Kelantan, Malaysia.
- Shwartz, E., Glazer, I., Bar-Ya'akov, I., Matityahu, I., Bar-Ilan, I., Holland, D., Amir, R., 2009. Changes in chemical constituents during the maturation and ripening of two commercially important pomegranate accessions. *Food Chem.* 115: 965–973.
- Tang L.H., Ding X.L. 1995. Bio-Active Substances From Corn Silk-Corn Silk Polysaccharide (CSPS) and Its Immunological Enhancing Function. *Journal of Wuxi University of Light Industry*, 4: 319–324.
- Warisno. 2007. *Jagung Hibrida*. Yogyakarta: Kanisius.
- Wirawan, G.N. dan M.I. Wahab. 2007. *Teknologi Budidaya Jagung*. <http://www.pustaka-deptan.go.id> (20 Juni 2016).
- Yuswantina, R., 2009, *Uji Aktivitas Penangkap Radikal dari Ekstrak Petroleum Eter, Etil Asetat, dan Etanol Rhizoma Binahong dengan metode DPPH (2,2-difenil-1-pikrihidrazil)*.Universitas Muhamadiyah Surakarta.