

BAB V KESIMPULAN DAN SARAN

5.1. Kesimpulan

1. Perbedaan proporsi bit dan pisang kepok putih memberikan pengaruh terhadap sifat fisikokimia velva bit pisang kepok putih yang meliputi pH, TPT, viskositas, laju leleh, dan warna, serta total fenol.
2. Peningkatan proporsi pisang kepok putih menyebabkan penurunan pH (5,79-5,07), laju leleh, dan total fenol (35,62 mg GAE/100 g – 14,29 mg GAE/100 g) sedangkan terdapat peningkatan TPT (9,68-11,70°Brix) dan viskositas (66,02-406,01 cP).
3. Hasil pengujian warna velva bit pisang kepok putih meliputi nilai *lightness* dengan kisaran nilai 27,40 – 37,125 ; a* dengan nilai 8,575 – 12,825 ; b* dengan nilai 0,350- 1,050 ; hue 8,587- 12,873° dan *chroma* 2,336- 4,679.
4. Perlakuan velva bit pisang kepok putih yang terbaik adalah proporsi bit pisang kepok putih sebesar 5:5 dengan nilai tingkat kesukaan warna 4,54 (suka), rasa 3,87 (agak suka), aroma 4,00 (agak suka), dan tekstur (*mouthfeel*) 4,65 (suka) dengan kadar serat pangan sebesar 0,28%.

5.2. Saran

Hasil organoleptik velva bit pisang kepok putih berada pada kisaran agak suka (rasa, aroma) hingga suka (warna, tekstur). Nilai tersebut kemungkinan disebabkan karena rasa dan aroma pisang kepok putih yang kurang kuat sehingga perlu dilakukan pengembangan formulasi untuk meningkatkan sifat organoleptik.

DAFTAR PUSTAKA

- Aditya, A. Ali, dan D.F. Ayu. 2018. Minuman Fungsional Serbuk Instan Jahe (*Zingiber officinale* R.) dengan Penambahan Sari Umbi Bit (*Beta vulgaris* L.) sebagai Perwarna Alami. *Sagu* 17 (2): 9-17.
- Andarwulan, N. dan R.H.F. Faradilla. 2012. *Pewarna Alami untuk Pangan*. Bogor: Seafast Center Institut Pertanian Bogor.
- Ang, C.Y.W., K.S. Liu, Y.W. Huang. 1999. *Asian Foods: Science & Technology*. Lancaster: Technomic Publishing Company, Inc.
- Anwar, Y. 2013. *Pisang Crispy & Kentang Bumbu*. Jakarta: PT. Gramedia Pustaka Utama.
- AOAC. 2005. *Official Methods of Analysis of The Association of Official Analytical Chemist*. Washington: AOAC Inc.
- Arbuckle, W.S. 1986. *Ice Cream. 4th Edition*. New York: Springer US.
- Astawan, M. 2008. *Khasiat Warna-warni Makanan*. Jakarta: PT. Gramedia Pustaka Utama.
- Badan Pusat Statistik dan Direktorat Jendral Hortikultura, 2018. <http://epublikasi.setjen.pertanian.go.id/epublikasi/StatistikPertanian/2018/Statistik%20Pertanian%202018/files/assets/basic-html/page200.html> (7 Juli 2019).
- Belitz, H.D., W. Grosch, and P. Schieberle. 2009. *Food Chemistry*. Berlin: Springer.
- Bolliger, S., H.D. Goff, and B.W. Tharp. 2000. Correlation Between Colloidal Properties of Ice Cream Mix and Ice Cream. *International Dairy Journal* 10: 303-309.
- Brown, A. 2008. *Understanding Food: Principles and Preparation*. USA: Thomson Learning Inc.
- Causiol, L. 2001. Postharvest Quality Conventional and Organically Grown Banana Fruit. *Master Thesis*, University of Cranfield at Silsoe.

- Cody, T.L., A. Olabi, A.G. Pettingell, P.S. Tong, and J.H. Walkers. 2007. Evaluation of Rice Flour for Use in Vanilla Ice Cream. *Journal of Dairy Science* 90: 4575-4585.
- Cree, D. 2017. *Hello, My Name Is Ice Cream: The Art and Science of The Scoop*. New York: Clarkson Potter.
- Davidson, J. dan M. Usman. 2015. *Health Benefits of Beetroot*. London: JD-Biz Publishing.
- Dewi, R. K. 2010. Stabilizer Concentration and Sucrose to the Velva Tomato Fruit Quality. *Jurnal Teknik Kimia* 4 (2): 330-334.
- Dian, G. 2014. *Detox Juice: 40 Variasi Minuman Sari Buah dan Sayur Berkhasiat*. Jakarta: Kawan Pustaka.
- Dris, R., and S.M. Jain. 2004. *Quality Handling and Evaluation Vol 3: Quality Handling and Evaluation*. New York: Kluwer Academic Publishers.
- Dziedzic, S.Z., and M.W. Kearsley. 1995. *Handbook of Starch Hydrolysis Products and Their Derivatives*. New York: Springer Science+Business Media, B.V.
- Effendi, H. 2003. *Telaah Kualitas Air Bagi Pengelolaan Sumber Daya Lingkungan Perairan*. Yogyakarta: Kanisius.
- Farikha, I.N., C. Anam, E. Widowati. 2013. Pengaruh Jenis dan Konsentrasi Bahan Penstabil Alami Terhadap Karakteristik Fisikokimia Sari Buah Naga Merah (*Hylocereus polyrhizus*) Selama Penyimpanan. *Jurnal Teknosains Pangan* 2 (1): 30- 38.
- Featherstone, S. 2015. *A Complete Course in Canning and Related Processes, Fourteenth Edition*. UK: Elsevier Ltd.
- Goff, H.D. and R.W. Hartel. 2013. *Ice Cream 7th Edition*. New York: Springer.
- Guinard, J.X. 1997. Sugar and Fat Effects on Sensory Properties of Ice Cream. *Journal of Food Science* 62 (5): 1087-1094.
- Hapsari, L., dan D.A. Lestari. 2016. Fruit Characteristic and Nutrient Values of Four Indonesian Banana Cultivars (*Musa* spp.) at Different Genomic Groups. *Journal of Agricultural Science* 38 (3): 303-311.

- Haryonto dan E. Priyatno. 2018. *Potensi Buah Salak Sebagai Suplemen Obat dan Pangan*. Surakarta: Muhammadiyah University Press.
- Hassan, B., S.A.S. Chatha, A.I. Hussain, K.M. Zia, and N. Akhtar. 2017. Recent Advances on Polysaccharides, Lipids, and Protein Based Edible Films and Coatings: A Review. *International Journal of Biological Macromolecules* 109: 1095-1107.
- Hui, Y.H., L. I. Guerrero, L.M. Hoong, K.D. Murrell, N. Wai-kit, and C. Paul. 2004. *Handbook of Frozen Food*. New York: Marcel Dekker.
- Hutchings, J.B. 1999. *Food Color and Appearance*. Maryland: Aspen Publisher Inc.
- Ide, P. 2009. *Health Secret of Dragon Fruit*. Jakarta: PT. Elex Media Komputindo.
- Imeson, A. 2010. *Food Stabilizer*. UK: Blackwell Publishing Ltd.
- Ishartani, D., Rahman, F.L.F., Hartanto, R., Utami R., and Khasanah, I.U. 2017. Physical, Chemical, and Sensory Characteristics of Red Guava (*Psidium guajava*) Velve at Different Fruit Ripening Time. <https://iopscience.iop.org/article/10.1088/1755-1315/102/1/012075> (28 Juli 2019).
- Iskandar, S. 2017. *Ilmu Kimia Teknik*. Yogyakarta: Deepublish Publisher.
- Jeremiah, L.E. 1996. *Freezing Effects on Food Quality*. New York: Marcel Dekker.
- Kartika, B., P. Hastuti, dan W. Supartono. 1988. *Pedoman Uji Inderawi Pangan*. Yogyakarta: Universitas Gadjah Mada.
- Ketiku, A.O. 1973. Chemical Composition of Unripe (Green) and Ripe Plantain (*Musa paradisiaca*). *Journal of the Science of Food and Agriculture* 24 (6): 703-707.
- Krahl, T., H. Fuhrmann, and S. Dimassi. 2016. *Handbook on Natural Pigments in Food and Beverages*. London: Elsevier Ltd.
- Lestario, L. N. 2018. *Antosianin: Sifat Kimia, Perannya dalam Kesehatan, dan Prospeknya sebagai Pewarna Makanan*. Yogyakarta: UGM Press.

- Lin, Y.Y. 1988. A Soluble Mannan From Ripe Banana Fruit. *Master Thesis*, Virginia Polytechnic Institute and State University at Blacksburg.
- Lindriati, T., Y. Praptiningsih, D.F. Wijayanti. 2014. Karakteristik Fisis Gel *Edible Film* yang Dibuat dengan Variasi pH dan Rasio Kasein dan Tapioka. *Jurnal Ilmu Dasar* 15 (1): 51-58.
- Lingga, L. 2010. *Cerdas Memilih Sayuran; Plus Minus 54 Jenis Sayuran*. Jakarta: Agromedia Pustaka.
- Lutfika, E. 2006. Evaluasi Mutu Gizi dan Indeks Glikemik Produk Olahahan Panggang Berbahan Dasar Tepung Ubi Jalar (*Ipomoea batatas* L.) Klon Unggul BB00105.10, *Skripsi S-1*, Institut Pertanian Bogor, Bogor.
- Maduwanthi, S.D.T., and R.A.U.J. Marapana. 2017. Biochemical changes during ripening of banana: A review. *International Journal of Food Science and Nutrition* 2 (5): 166-170.
- Mardianti, A., Y. Praptiningsih, dan N. Kuswardhani. 2016. Karakteristik Velva Buah Mangga Endhog (*Mangifera indica* L.) dengan Penstabil CMC dan Pektin. *Prosiding Seminar Nasional Apta*. Jember 26-27 Oktober 2016.
- Maria, D.V. dan E. Zubaidah. 2014. Pembuatan Velva Jambu Biji Merah Probiotik (*Lactobacillus acidophilus*) Kajian Persentase Penambahan Sukrosa dan CMC. *Jurnal Pangan dan Agroindustri* 2 (4): 18-28.
- Marshall, R.T., H.D. Goff, R.W. Hartel. 2003. *Ice Cream 6th Edition*. New York: Plenum Publishers.
- Masterton, W.L., and C.N. Hurley. 2008. *Chemistry: Principles and Reactions*. California: Brooks/Cole Cengage Learning.
- Midayanto, D.N., dan S.S. Yuwono. 2014. Penentuan Atribut Mutu Tekstur Tahu untuk Direkomendasikan Sebagai Syarat Tambahan dalam Standar Nasional Inonesia. *Jurnal Pangan dan Agroindustri* 2 (4): 259-267.
- Miguel, M.G. 2018. Betalains in Some Species of the Amaranthaceae Family: A Review. *Antioxidants* 7(53): 1-33.

- Muntana, N. and P. Srihanam. 2010. Study on Total Phenolic Contents and Their Antioxidant Activities of Tha Whit, Red, and Black Rice Bran Extracts. *Pakistan Journal of Biological Sciences* 13 (4): 170-174.
- Nahla, T.K., S.U. Wisam, and N.M. Tariq. 2018. Antioxidant Activities of Beetroot (*Beta vulgaris* L.) Extracts. *Pakistan Journal of Nutrition*, 17: 500-505.
- Novidahlia, N., G.P. Pangandian, dan Aminullah. 2018. Karakteristik *Red Smoothies* dari Buah Pisang Ambon dan Naga Merah dengan Penambahan CMC (*Carboxymethyl Cellulose*). *Jurnal Agroindustri Halal ISSN 2442-3548* 4 (2): 183-191.
- Oceña-Po, L.G. 2006. Banana, Mango, and Passion Fruit dalam Hui (Ed). 2006. *Handbook of Fruits and Fruit Processing*. New Jersey: Blackwell Publishing.
- Panda, H. 2010. *The Complete Book on Gums and Stabilizers for Food Industry*. India: Asia Pacific Business Press Inc.
- Perozzi, C. and H. Beaune. 2009. *The Naked Pint: An Unadulterated Guide to Craft Beer*. New York: Penguin Group.
- Prabawati, S., Suyanti, dan D.A. Setyabudi. 2008. Teknologi Pascapanen dan Teknik Pengolahan Buah Pisang. http://www.pascapanen.litbang.pertanian.go.id/assets/media/publikasi/juknis_pisang.pdf (10 Juli 2019).
- Puspaningtyas, D.E. 2013. *The Miracle of Fruits*. Jakarta: PT. AgroMedia Pustaka.
- Rahman, S. 2018. *Teknologi Pengolahan Tepung dan Pati Biji-Bijian Berbasis Tanaman Kayu*. Yogyakarta: Deepublish Publisher.
- Ralla, T., H. Salminen, T. Wolfangel, M. Edelmann, C.David, T. Hoffman, and J. Weiss. 2018. Value addition of red beed (*Beta vulgaris* L.) by-products: Emulsion formation and stability. *International Journal of Food Science and Technology* 54 (3): 1-7.
- Ranggana, S. 1986. *Handbook of Analysis and Quality Control for Fruit and Vegetable Products*. New Delhi: Tata Mc-Graw Hill.

- Redaksi AgroMedia Pustaka. 2009. *Buku Pintar: Budi Daya Tanaman Buah Unggul Indonesia*. Jakarta: AgroMedia Pustaka.
- Redaksi Trubus. 2006. *Berkebun Pisang Secara Intensif*. Jakarta: Penebar Swadaya.
- Ressang, A.A. dan A.M. Nasution. 1982. *Ilmu Kesehatan Susu (Milk Hygiene)*. Bogor: Institut Pertanian Bogor.
- Rice-Evans, C.A., and L. Packer. 2003. *Flavonoids in Health and Disease*. 2nd Edition. New York: Marcel Dekker, Inc.
- Salunke, D.K., and S.S. Kadam. 1995. *Handbook of Vegetable Science and Technology: Production, Composition, Storage, and Processing*. New York: Marcel Dekker, Inc.
- Sastrahidayat, I.R., dan S. Djauhari. 2014. *Studi Introduksi Pisang Cavendish dan Hama Penyakitnya*. Malang: Universitas Brawijaya Press.
- Siddiq, M. 2012. *Tropical and Subtropical Fruits: Postharvest Physiology, Processing, and Packaging*. Iowa: John Wiley & Sons.
- Silva, J.A.L., and M.A. Rao. 2006. Pectins: Structure, Functionality, and Uses, (dalam *Food Polysaccharides and Their Applications Second Edition*, Stephen, A.M., G.O. Phillips, and P.A. Williams, Eds.), New York: Taylor & Francis Group.
- Sunarjono, H. 2015. *Bertanam 36 Jenis Sayur*. Jakarta: Penebar Swadaya.
- Sunarti, 2018. *Serat Pangan dalam Penanganan Sindrom Metabolik*. Yogyakarta: Gadjah Mada University Press.
- Susanto. T. dan S. Yuwono. 2001. *Pengujian Fisik Pangan*. Malang: Universitas Brawijaya.
- Syed, Q.A., S. Anwar, R. Shukat, and T. Zahoor. 2018. Effects of Different Ingredients on Texture of Ice Cream. *Journal of Nutritional Health & Food Engineering* 8 (6): 422-435.
- Tarwendah, I.P. 2017. Jurnal Review: Studi Komparasi Atribut Sensoris dan Kesadaran Merek Produk Pangan. *Jurnal Pangan dan Agroindustri* 5 (2): 66-73.

- Thomas, S., R. Rajakumari, A. George, and N. Kalarikkal. 2018. *Innovative Food Science and Emerging Technologies: The Science Behind Health*. Oakville: Apple Academic Press, Inc.
- Tibbits, C.W., A.J. MacDougall, and S.G. Ring. 1997. Calcium Binding and Swelling Behavior of a High Methoxyl Pectin Gel. *Carbohydrate Research* 310: 101-107.
- USDA. 2018. Full Report (all nutrients): 11080, beets, raw. <https://ndb.nal.usda.gov/ndb/foods/show/11080?n1=%7BQv%3D1%7D&fgcd=&man=&lfacet=&count=&max=&sort=&qlookup=&ofset=&format=Full&new=&measureby=&Qv=1&ds=&qt=&qp=&q a=&qn=&q=&ing=> (23 Juli 2019).
- USDA, NRCS. 2019. The Plants Database. <https://plants.usda.gov/java/ClassificationServlet?source=display&classid=BEVU2> (28 Juli 2019).
- Venkatachalam, K., R. Rangasamy, V. Krishnan. 2014. Total Antioxidant Activity and Radical Scavenging Capacity of Selected Fruits and Vegetables from South India. *International Food Research Journal* 21 (3): 1039-1043.
- Verna, L.R. 2000. *Postharvest Technology of Fruits and Vegetables : General Concepts and Principles*. New Delhi: Indus Publishing Company.
- Wibowo, P., J.A. Saputra, A. Ayucitra., dan L.E. Setiawan. 2008. Isolasi Pati dari Pisang Kepok dengan Menggunakan Metode Alkaline Steeping. *Widya Teknik* 7(2):113-123.
- Wijaya, H. 2002. *Pembuatan Velva Fruit*. Majalah Sedap Sekejap (Edisi 8/111/2002). Jakarta: PT. Media Boga Utama.
- Wisesa, T.B., dan S.B. Widjanarko. 2014. Penentuan Nilai Maksimum Proses Ekstraksi Kulit Buah Naga Merah (*Hylocereus polyrhizus*). *Jurnal Pangan dan Agroindustri* 2 (3): 88-97.
- Winarti, S. 2006. *Minuman Kesehatan*. Surabaya: Tiara Aksara.
- Wu, Q., T. Li, X. Chen, L. Wen, Z. Yun, and Y. Jiang. 2018. Sodium dichloroisocyanurate delays ripening and senescence of banana fruit during storage. *Chemistry Central Journal* 12 (131).