

## **BAB VI** **KESIMPULAN DAN SARAN**

### **6.1 Kesimpulan**

1. Penyosohan biji sorgum pada berbagai derajat penyosohan memberikan pengaruh nyata terhadap kadar air, daya serap air, solubilitas, dan kadar tanin tepung sorgum yang dihasilkan.
2. Semakin besar derajat penyosohan sorgum, kadar air, daya serap air, solubilitas, dan kadar tanin tepung sorgum yang dihasilkan semakin menurun.
3. Penyosohan biji sorgum pada berbagai derajat penyosohan tidak berpengaruh nyata terhadap kadar air, daya patah dan organoleptik *cookies* sorgum yang dihasilkan.

### **6.2 Saran**

1. Perlu dilakukan penelitian lebih lanjut terhadap nilai cerna *cookies* sorgum yang dihasilkan untuk mengetahui potensi *cookies* sorgum sebagai makanan berkalori rendah.
2. Produk *cookies* sorgum dapat dikonsumsi oleh orang pada golongan usia remaja hingga dewasa yang sudah tidak pada masa pertumbuhan, menyukai pola hidup sehat, menjalani program diet, atau menderita *celiac disease*.

## **DAFTAR PUSTAKA**

- Belitz, H. D. dan W. Grosch. 1999. *Food Chemistry* (2<sup>nd</sup> Edition). New York: Springer Verlag Berlin Heidelberg.
- BeMiller, J. N. dan Whistler R. L., 1996. Carbohydrates, (dalam *Food Chemistry 3<sup>rd</sup> edition*, O. R. Fennema, Ed.),, Marcel Dekker, Inc. , New York, 157-223.
- Cannas, A. 2001. *Tannins*. <http://www.cornell.edu/plants/toxicagents/tannin> (13 Februari 2009)
- Chanapamokkhot, H. dan M. Thongngam. 2007. The Chemical and Physico-chemical Properties of Sorghum Starch and Flour. *Kasetsart J. (Nat. Sci.)*, 41, 343-349
- Codex Alimentarius Commission. 1995. *Codex Standard for Sorghum Flour. Codex Stan 173-1989 (Rev.1 1995)*. [www.codexalimentarius.net/download/standards/58/CXS\\_173e.pdf](http://www.codexalimentarius.net/download/standards/58/CXS_173e.pdf) (16 Agustus 2008)
- deMan, J.M. 1997. *Kimia Makanan* (edisi ke-2). Bandung: Penerbit Institut Teknologi Bandung.
- Dicko, M. H., H. Gruppen, A. S. Traoré, A. G. J. Voragen dan W. J. H. van Berkel. 2006. Sorghum Grain as Human Food in Africa: Relevance of Content of Starch and Amylase Activities. *African Journal of Biotechnology*, Vol. 5(5), 384-395.
- Doggett, H. 1988. *Sorghum. Tropical Agriculture Series* (2<sup>nd</sup> edition). England: Longman Group UK Limited
- Figoni, P. 2004. *How Baking Works*. Canada: John Willey and Sons, Inc.

Food and Agriculture Organization (FAO). 1994. *Primary Processing: A Comprehensive Sourcebook*. New York: VCH

Food and Agriculture Organization (FAO). 1995. *Sorghum and Millets in Human Nutrition*. Rome: Food and Agriculture Organization of The United Nations.

Frederick, E. J., 2007. Effect of Sorghum Flour Composition and Particle Size on Quality of Gluten-Free Bread, *Thesis*, Kansas State University.

Ganjyal, G, M.A. Hanna, P. Supprong, A. Noomhorm dan D. Jones. 2006 Modeling Selected Properties of Extruded Rice Flour and Rice Starch by Neural Networks and Statistics. *Cereal Chemistry*, 83(3), 223-227.

Hagerman, A. E. 2002. *Tannin Chemistry*. Oxford: Department of Chemistry and Biochemistry. <http://www.users.muohio.edu/hagermae/tannin.pdf> (2 Februari 2009).

Houssou, P. dan G.S. Ayernor. 2002. Appropriate Processing and Food Functional Properties of Maize Flour. *African Journal of Science and Technology (AJST) Science and Engineering Series*, 3(1), 126-131

Hui, Y. H. 2006. *Bakery Products. Science and Technology*. Oxford: Blackwell Publishing.

Hulse, J. H., Evangeline M. L., dan Odette E. P. 1980. *Sorghum and The Millets: Their Compostion and Nutritive Value*. London: Academic Press.

Ikegwu, O.J, Nwobasi V.N., Odoh MO. dan Oledinma, N.U. 2009. Evaluation of The Pasting and Some Functional Properties of Starch Isolated from Some Improved Cassava Varieties in Nigeria. *Electric Journal of Environmental, Agricultural, and Food Chemistry*, 8(8), 647-665

- Juliana, K. R. dan C. Zhengxing.. 2008. Effects of Processing Methods on the Physico-Functional Properties of Peanut Flour (*Arachis hypogaea L.*). *Biotechnology* (7), 168-174.
- Kartika, B., P. Hastuti, dan W. Supartono. 1988. Yogyakarta: Pusat Antar Universitas Pangan dan Gizi Universitas Gadjah Mada Yogyakarta
- Leonard, W.H. dan J. H. Martin. 1963. *Cereal Crops*. New York: McMillan Publishing Co., Inc.
- Makfoeld, D., D. M. Marseno, P. Hastuti, S. Anggrahini, S. Raharjo, S. Sastrosuwignyo, Suhardi, S. Martoharsono, S. Hadiwiyoto, Tranggono. 2002. *Kamus Istilah Pangan dan Nutrisi*. Yogyakarta: Kanisius.
- Natural Resources Institute. 2009. *Chapter VII Sorghum: Post-harvest Operations*. <http://www.fao.org/inpho/content/compend/text/ch07.htm> (19 Maret 2009)
- Natural Resources Conservation Service United States Department of Agriculture. 2009. *Plant Profile. Sorghum bicolor (L.) Moench ssp. bicolor*. <http://plants.usda.gov/java/charProfile?Symbol=SOBIB> (14 November 2008)
- Nielsen, S. Z., 1998. *Food Analysis* (2<sup>nd</sup> edition). Gaithersburg, Maryland: Aspen Publishers, Inc.
- Rooney, L. 2005. Ten Myths About Tannins in Sorghums. *SAT eJournal*, Volume 1, Issue 1, Desember, 1-3
- Rustandi, D. 2002. *Tips*. <http://www.wacanamitra.com/wm228/tips.htm>
- Shimelis, E. A., M. Meaza dan S. K. Rakhsit. 2006. Physico-chemical Properties, Pasting Behavior and Functional Characteristics of Flours and Starches from Improved Bean (*Phaseolus vulgaris L.*) Varieties Grown in East Africa. *Agricultural Engineering*

*International: the CIGR Ejournal. Manuscript FP 05 015, Vol. VIII, February , 1-19.*

- Singh, N., Kulwinder K., Hardeep S., dan Harmeet S., 2000. Effect of Starch-lipids Inclusion Complex Formation on Functional Properties of Flour in Tandoori Roti. *Food Chemistry*, 69, 129-133.
- Sirappa, M.P. 2003. Prospek Pengembangan Sorgum di Indonesia sebagai Komoditas Alternatif untuk Pangan, Pakan, dan Industri. *Jurnal Litbang Pertanian*, 22 (4), 133-140.
- Slade, L. dan H. Levine. 1991. Beyond Water Activity: Recent Advances Based on an Alternative Approach to the Assessment of Food Quality and Safety. *Critical Reviews in Food Science and Nutrition*, Volume 30, Issues 2-3, 115-360
- Suarni. 2004. Pemanfaatan Sorgum untuk Produk Olahan. *Jurnal Litbang Pertanian*, 23 (4), 145-151
- Sudarmadjie, S., B. Haryono dan Suhardi. 1997. *Prosedur Analisa untuk Bahan Makanan dan Pertanian*. Yogyakarta: Liberty
- Sultan, W. J. 1969. *Practical Baking* (revised 3<sup>rd</sup> edition). Westport, Connecticut: The Avi Publishing Company, Inc.
- Taggart, P. 2004. Starch as An Ingredient: Manufacture and Applications, (dalam *Starch in Food. Structure, Function, and Applications*, Eliasson, A. C.,Ed.), CRC Press, Cambridge, 363-392.
- United States Department of Agriculture (USDA). 2007. *Commercial Item Description. Cookies*. (20 April 2009)
- U. S. Grain Council. 2008. *White Sorghum, The New Food Grain. Sorghum Handbook. All About White Sorghum*. [http://www.agmrc.org/media/cms/Sorghum\\_Handbook\\_B5FE1C2\\_B5DBCF.pdf](http://www.agmrc.org/media/cms/Sorghum_Handbook_B5FE1C2_B5DBCF.pdf) (30 Agustus 2008)

Whistler, R. L. dan Daniel. 1985. Carbohydrates, (dalam *Food Chemistry 2<sup>nd</sup> edition*, Fennema, O.R., Ed.), Marcel Dekker, Inc., New York.

