

## DAFTAR PUSTAKA

- Ademiluyi, A.O., Oboh, G., Boligon, A.A. and Athayde, M.L., 2014. Effect of fermented soybean condiment supplemented diet on  $\alpha$ -amylase and  $\alpha$ -glucosidase activities in Streptozotocin-induced diabetic rats. *Journal of Functional Foods*, 9, pp.1-9.
- Ahmed, F., Sairam, S. and Urooj, A., 2011. In vitro hypoglycemic effects of selected dietary fiber sources. *Journal of food science and technology*, 48(3), pp.285-289.
- Ahn, H.Y., Kim, M., Seo, C.R., Yoo, H.J., Lee, S.H. and Lee, J.H., 2018. The effects of Jerusalem artichoke and fermented soybean powder mixture supplementation on blood glucose and oxidative stress in subjects with prediabetes or newly diagnosed type 2 diabetes. *Nutrition & diabetes*, 8(1), p.42.
- American Diabetes Association, 2014. Diagnosis and classification of diabetes mellitus. *Diabetes care*, 37(Supplement 1), pp.S81-S90.
- Arif, A. and Budiyanto, A., 2014. Nilai Indeks Glikemik Produk Pangan dan Faktor-faktor yang Memengaruhinya. *Jurnal Penelitian dan Pengembangan Pertanian*, 32(3), pp.91-99.
- Astuti, P., Falah, S. and Faridah, D.N., 2015. Bacillus subtilis natto fermentation to improve aglycone isoflavones content of black soybean varieties detam 2. *International Food Research Journal*, 22(6).
- Badan Pusat Statistik 2015, Statistik Produksi Hortikultura, Diktorat Jendral Hortikultura Kementerian Pertanian. Jakarta.
- Baynes, H.W., 2015. Classification, pathophysiology, diagnosis and management of diabetes mellitus. *J diabetes metab*, 6(5), pp.1-9.
- Bhagwat, S., Haytowitz, D.B. and Holden, J.M., 2015. USDA database for the isoflavone content of selected foods, release 2.0. *Maryland: US Department of Agriculture*, 15.
- Byrne, C.S., Chambers, E.S., Morrison, D.J. and Frost, G., 2015. The role of short chain fatty acids in appetite regulation and energy homeostasis. *International journal of obesity*, 39(9), p.1331.
- Dehghan, P., Gargari, B.P. and Asgharijafarabadi, M., 2013. Effects of high performance inulin supplementation on glycemic status and lipid profile in women with type 2 diabetes: a randomized, placebo-controlled clinical trial. *Health promotion perspectives*, 3(1), p.55.
- den Besten, G., van Eunen, K., Groen, A.K., Venema, K., Reijngoud, D.J. and Bakker, B.M., 2013. The role of short-chain fatty acids in the interplay between diet, gut microbiota, and host energy metabolism. *Journal of lipid research*, 54(9), pp.2325-2340.
- DepKes, R.I., 2008. Pedoman pengendalian diabetes melitus dan penyakit metabolik. *Dirjen Pengendalian Penyakit dan Penyehatan Lingkungan. Jakarta*.
- Dueñas, M., Hernández, T., Lamparski, G., Estrella, I. and Muñoz, R., 2012. Bioactive phenolic compounds of soybean (*Glycine max* cv. Merit): modifications by different microbiological fermentations. *Polish journal of food and nutrition sciences*, 62(4), pp.241-250.
- Federer, W.T. (1977) *Experimental Design Theory And Application, Third Edition*. New Delhi : Oxford and IBH Publishing Co

- Franz, M.J., Powers, M.A., Leontos, C., Holzmeister, L.A., Kulkarni, K., Monk, A., Wedel, N. and Gradwell, E., 2010. The evidence for medical nutrition therapy for type 1 and type 2 diabetes in adults. *Journal of the American Dietetic Association*, 110(12), pp.1852-1889.
- Furman, B.L., 2015. Streptozotocin-induced diabetic models in mice and rats. *Current protocols in pharmacology*, 70(1), pp.5-47.
- Ganesan, K. and Xu, B., 2017. Polyphenol-rich dry common beans (*Phaseolus vulgaris* L.) and their health benefits. *International journal of molecular sciences*, 18(11), p.2331.
- Ghasemi, A., Khalifi, S. and Jedi, S., 2014. Streptozotocin-nicotinamide-induced rat model of type 2 diabetes. *Acta Physiologica Hungarica*, 101(4), pp.408-420.
- Ghorbani, A., Rashidi, R. and Shafiee-Nick, R., 2019. Flavonoids for preserving pancreatic beta cell survival and function: A mechanistic review. *Biomedicine & Pharmacotherapy*, 111, pp.947-957.
- Giacco, F. and Brownlee, M., 2010. Oxidative stress and diabetic complications. *Circulation research*, 107(9), pp.1058-1070.
- Granito, M., Frias, J., Doblado, R., Guerra, M., Champ, M. and Vidal-Valverde, C., 2002. Nutritional improvement of beans (*Phaseolus vulgaris*) by natural fermentation. *European Food Research and Technology*, 214(3), pp.226-231.
- Gupta, K.K., Attri, J.P., Singh, A., Kaur, H. and Kaur, G., 2016. Basic concepts for sample size calculation: Critical step for any clinical trials!. *Saudi journal of anaesthesia*, 10(3), p.328.
- Harborne, J.B., 1987. Metode Fitokimia, diterjemahkan oleh Kokasih Padmawinata dan Iwang Soediro. *Institut Teknologi Bandung Press, Bandung*, pp.69-94.
- Hu, Y., Ge, C., Yuan, W., Zhu, R., Zhang, W., Du, L. and Xue, J., 2010. Characterization of fermented black soybean natto inoculated with *Bacillus natto* during fermentation. *Journal of the Science of Food and Agriculture*, 90(7), pp.1194-1202.
- Islam, M.S. and Wilson, R.D., 2012. Experimentally induced rodent models of type 2 diabetes. In *Animal Models in Diabetes Research* (pp. 161-174). Humana Press, Totowa, NJ.
- Kemkes : Pusat Data dan Informasi. 2014. Situasi dan Analisis Diabetes.
- Kim, Y., Keogh, J. and Clifton, P., 2016. Polyphenols and glycemic control. *Nutrients*, 8(1), p.17.
- Knott, R.M., Grant, G., Bardocz, S., Pusztai, A., de Carvalho, A.F. and Hesketh, J.E., 1992. Alterations in the level of insulin receptor and GLUT-4 mRNA in skeletal muscle from rats fed a kidney bean (*Phaseolus vulgaris*) diet. *International journal of biochemistry*, 24(6), pp.897-902.
- Kosasih, W., Pudjaraharti, S., Ratnaningrum, D. and Priatni, S., 2015. Preparation of inulin from dahlia tubers. *Procedia Chemistry*, 16, pp.190-194.
- Kriukova, Y., Jakubiak-Augustyn, A., Ilyinska, N., Krotkiewski, H., Gontova, T., Evtifeyeva, O., Özcelik, T. and Matkowski, A., 2017. Chain length distribution of inulin from dahlia tubers as influenced by the extraction method. *International Journal of Food Properties*, 20(sup3), pp.S3112-S3122.
- Lightowler, H., Thondre, S., Holz, A. and Theis, S., 2018. Replacement of glycaemic carbohydrates by inulin-type fructans from chicory (oligofructose, inulin) reduces the postprandial blood glucose and insulin response to foods: report of two double-blind, randomized, controlled trials. *European journal of nutrition*, 57(3), pp.1259-1268.

- Limón, R.I., Peñas, E., Torino, M.I., Martínez-Villaluenga, C., Dueñas, M. and Frias, J., 2015. Fermentation enhances the content of bioactive compounds in kidney bean extracts. *Food chemistry*, 172, pp.343-352.
- Liu, F., Prabhakar, M., Ju, J., Long, H. and Zhou, H.W., 2017. Effect of inulin-type fructans on blood lipid profile and glucose level: a systematic review and meta-analysis of randomized controlled trials. *European journal of clinical nutrition*, 71(1), p.9.
- Lu, Y., Fan, C., Li, P., Lu, Y., Chang, X. and Qi, K., 2016. Short chain fatty acids prevent high-fat-diet-induced obesity in mice by regulating G protein-coupled receptors and gut microbiota. *Scientific reports*, 6, p.37589.
- Mangunwidjaja, D., Rahayuningsih, M. and Suparwati, R., 2015. Pengaruh konsentrasi enzim dan waktu hidrolisis enzimatis terhadap mutu frukto-oligosakarida dari inulin umbi Dahlia (*Dahlia pinnata*). *E-jurnal Agro-Industri Indonesia*, 3(2).
- Marsono, Y., Noor, Z. and Rahmawati, F., 2003. Pengaruh Diet Kacang Merah Terhadap Kadar Gula Darah Tikus Diabetik Induksi Alloxan [Effect of Red Bean Diet on Blood Glucose Concentration of Alloxan-Induced Diabetic Rats]. *Jurnal Teknologi dan Industri Pangan*, 14(1), pp.1-6.
- Marsono, Y., Wiyono, P. and Noor, Z., 2002. Indeks Glisemik Kacang-Kacangan [Glycemic Index of Selected Legumes]. *Jurnal Teknologi dan Industri Pangan*, 13(3), p.211.
- Masiello, P., Broca, C., Gross, R., Roye, M., Manteghetti, M., Hillaire-Buys, D., Novelli, M. and Ribes, G., 1998. Experimental NIDDM: development of a new model in adult rats administered streptozotocin and nicotinamide. *Diabetes*, 47(2), pp.224-229.
- Morita, T., Kasaoka, S., Oh-hashii, A., Ikai, M., Numasaki, Y. and Kiriya, S., 1998. Resistant proteins alter cecal short-chain fatty acid profiles in rats fed high amylose cornstarch. *The Journal of nutrition*, 128(7), pp.1156-1164.
- Nair, A.B. and Jacob, S., 2016. A simple practice guide for dose conversion between animals and human. *Journal of basic and clinical pharmacy*, 7(2), p.27.
- Nakamura, Y., Yabe, K., Shimada, K.I., Sasaki, K., Han, K.H., Okada, T., Sekikawa, M., Ohba, K., Ito, N., Horiuchi, K. and Kawakami, S., 2009. Effect of fermented bean paste on serum lipids in rats fed a cholesterol-free diet. *Bioscience, biotechnology, and biochemistry*, 73(11), pp.2506-2512.
- Nam, H., Jung, H., Karuppasamy, S., Park, Y.S., Cho, Y.S., Lee, J.Y., Seong, S.I. and Suh, J.G., 2012. Anti-diabetic effect of the soybean extract fermented by *Bacillus subtilis* MORI in db/db mice. *Food Science and Biotechnology*, 21(6), pp.1669-1676.
- Prasad, V.S.S., Adapa, D., Vana, D.R., Choudhury, A., Asadutullah, J. and Chatterjee, A., 2018. Nutritional Components Relevant to Type-2-Diabetes: Dietary Sources, Metabolic Functions and Glycaemic Effects. *Journal of Research in Medical and Dental Science*, 6(5), pp.52-75.
- Rivière, A., Selak, M., Lantin, D., Leroy, F. and De Vuyst, L., 2016. Bifidobacteria and butyrate-producing colon bacteria: importance and strategies for their stimulation in the human gut. *Frontiers in microbiology*, 7, p.979.
- Rohajati, U., Estiasih, T. and Sriwahyuni, E., 2018. Bitter Melon (*Momordica Charantia* L) Fruit Decreased Blood Glucose Level and Improved Lipid Profile of Streptozotocin Induced Hyperglycemia Rats. *Current Research in Nutrition and Food Science Journal*, 6(2), pp.359-370.

- Sarian, M.N., Ahmed, Q.U., So'ad, M., Zaiton, S., Alhassan, A.M., Murugesu, S., Perumal, V., Mohamad, S., Akilah, S.N., Khatib, A. and Latip, J., 2017. Antioxidant and antidiabetic effects of flavonoids: A structure-activity relationship based study. *BioMed research international*, 2017.
- Shehzad, A & Masood Chander, Umer & Sharif, Mian & Rakha, Allah & Ansari, Anam & Zuhair Shuja, Muhammad. (2015). Nutritional, functional and health promoting attributes of red kidney beans; A Review. 25. 235-246.
- Shrestha, A.K., Dahal, N.R. and Ndungutse, V., 2010. Bacillus fermentation of soybean: A review. *Journal of Food Science and Technology Nepal*, 6, pp.1-9.
- Shoaib, M., Shehzad, A., Omar, M., Rakha, A., Raza, H., Sharif, H.R., Shakeel, A., Ansari, A. and Niazi, S., 2016. Inulin: Properties, health benefits and food applications. *Carbohydrate Polymers*, 147, pp.444-454.
- Sikumbang, S. dan Hindersah, R. 2009. *Tanaman Dahlia*. Pekanbaru: Penerbit UNRI Press.
- Stephen, A.M. and Phillips, G.O., 2016. *Food polysaccharides and their applications*. CRC press.
- Suartha, I.N., Swantara, I.M.D. and Rita, W.S., 2016. Ekstrak Etanol dan Fraksi Heksan Buah Pare (*Momordica charantia*) Sebagai Penurun Kadar Glukosa Darah Tikus Diabetes (Ethanol Extract And Hexane Fraction Of *Momordica Charantia* Decrease Blood Glucose Level Of Diabetic Rat). *Jurnal Veteriner*, 17(1), pp.30-36.
- Sugiharto, S., Yudiarti, T., Isroli, I., Widiastuti, E., Wahyuni, H.I. and Suprijatna, E., 2018. The potential of Bacillus strains isolated from the rumen content of dairy cows as natural antibacterial and antioxidant agents for broilers. *Journal of the Indonesian Tropical Animal Agriculture*, 43(2), pp.115-123.
- Sunarti. 2014. Riset Nutrigenomik Terkait Diabetes Mellitus. Prosiding Annual Scientific Meeting Peran Makanan Fungsional dalam Penanganan Penyakit Degeneratif dengan Pendekatan Nutrigenomik. Yogyakarta : Bagian Biokimia FK UGM.
- Szkudelski, T., 2012. Streptozotocin–nicotinamide-induced diabetes in the rat. Characteristics of the experimental model. *Experimental biology and medicine*, 237(5), pp.481-490.
- Venkateswaran, S. and Pari, L., 2002. Antioxidant effect of *Phaseolus vulgaris* in streptozotocin-induced diabetic rats. *Asia Pacific Journal of Clinical Nutrition*, 11(3), pp.206-209.
- Wei, Q., Wolf-Hall, C. and Chang, K.C., 2001. Natto characteristics as affected by steaming time, Bacillus strain, and fermentation time. *Journal of food science*, 66(1), pp.167-173.
- WHO (2016a) *Diabetes Mellitus*. Tersedia di : < <http://www.who.int/news-room/fact-sheets/detail/diabetes>> [Diakses pada 28 Agustus 2018]
- WHO (2016b) *Global Report On Diabetes*. Tersedia di : <<http://www.who.int/diabetes/global-report/en/>> [Diakses pada 28 Agustus 2018]
- Widowati, S., 2007. Potensi Inulin Sebagai Komponen Pangan Fungsional Dari Umbi Dahlia (*Dahlia pinnata* L). *JURNAL PANGAN*, 16(1), pp.76-80.
- Widowati, S., Sunarti, T.C. and Zaharani, A., 2005, June. Ekstraksi, karakterisasi, dan kajian potensi prebiotik inulin dari umbi dahlia (*Dahlia pinnata* L.). In *Seminar Rutin Puslitbang Tanaman Pangan, Bogor* (Vol. 16).
- Winarti, S., Harmayani, E. and Nurismanto, R., 2011. Karakteristik dan profil inulin beberapa jenis uwi (*Dioscorea* spp.). *Agritech*, 31(4).

- Wiranata, I.G.A.G., Puspaningrum, D.H.D. and Kusumawati, I.G.A.W., 2017. Formulasi dan karakteristik nutrimat bar berbasis tepung kacang kedelai (*glycine max. L*) dan tepung kacang merah (*phaseolus vulgaris. L*) sebagai makanan pasien kemoterapi. *Jurnal Gizi Indonesia (The Indonesian Journal of Nutrition)*, 5(2), pp.133-139.
- Worku, A. and Sahu, O., 2017. Significance of fermentation process on biochemical properties of *Phaseolus vulgaris* (red beans). *Biotechnology Reports*, 16, pp.5-11.
- Wostmann, B.S., 1975. Nutrition and metabolism of the germfree mammal. In *World review of nutrition and dietetics*(Vol. 22, pp. 40-92). Karger Publishers.
- Yang, H.J., Kwon, D.Y., Kim, M.J., Kang, S., Kim, D.S. and Park, S., 2012. Jerusalem artichoke and chungkookjang additively improve insulin secretion and sensitivity in diabetic rats. *Nutrition & metabolism*, 9(1), p.112.
- Yang, H.J., Park, S., Pak, V., Chung, K.R. and Kwon, D.Y., 2011. Fermented soybean products and their bioactive compounds. In *Soybean and health*. InTech.
- Yen, G.C. and Chen, H.Y., 1995. Antioxidant activity of various tea extracts in relation to their antimutagenicity. *Journal of agricultural and food chemistry*, 43(1), pp.27-32.
- Yoon, H.J., Lee, K.A., Lee, J.H., Jin, H.J., Kim, H.J., Kim, K.T. and Paik, H.D., 2015. Effect of fermentation by *Bacillus subtilis* on antioxidant and cytotoxic activities of black rice bran. *International Journal of Food Science & Technology*, 50(3), pp.612-618.
- Zhang, Q., Yu, H., Xiao, X., Hu, L., Xin, F. and Yu, X., 2018b. Inulin-type fructan improves diabetic phenotype and gut microbiota profiles in rats. *PeerJ*, 6, p.e44446.
- Zhang, Y., Shi, C., Wang, C., Lu, Z., Wang, F., Feng, J. and Wang, Y., 2018a. Effect of soybean meal fermented with *Bacillus subtilis* BS12 on growth performance and small intestinal immune status of piglets. *Food and Agricultural Immunology*, 29(1), pp.133-146.
- Zubaidah, E. and Akhadiana, W., 2013. Comparative study of inulin extracts from dahlia, yam, and gembili tubers as prebiotic. *Food and Nutrition Sciences*, 4(11), p.8.