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# DAFTAR PUSTAKA

Abiodun, O.A. dan Akinoso, R. (2014). Physical and functional properties of trifoliate yam flours as affected by harvesting periods and pre-treatment methods. *Food Processing and Technology* 5(2): 1-5.

Adebowale, K.O. dan Lawal, O.S. (2004). Comparative study of the functional properties of bambara groundnut (*Voandzeia subterranean*), jack bean (*Cavanalia ensiformis*) and mucuna bean (*Mucuna pruriens*). *Food Research International* 37: 355-365.

Aggarwal, D., Sabikhi, L., Lamba, H., Chaudhary, N. dan Kapila, R. (2017). Whole grains and resistant starch rich, reduced-calorie biscuit diet as a hypoglycaemic, hypolipidaemic and insulin stimulator in streptozotocin-induced diabetic rats. *International J. of Food Science and Technology* 52: 118–126.

Almatsier, S. (2008). Penuntun Diet. PT Gramedia Pustaka Utama. Jakarta.

Aman, A.M., Soewondo, P., Soelistijo, S.A, Arsana, P.M., Wismandari, Zufri, H dan Rosandi, R. (2019). Panduan pengelolaan Dislipidemia di Indonesia-2019. PB. Perkeni

Ambigaipalan, P., Hoover, R., Donner, E., Liu, Q., Jaiswal, S. dan Chibbar, R. (2011). Structure of faba bean, black bean and pinto bean starches at different levels of granule organization and their physicochemical properties. *Food Research International* 44: 2962–2974.

Anonim. (1995). *Official methods of analysis of AOAC International*. 2 vols. 16th ed. Association of Analytical Communities. Arlington, VA, USA.

Anonim. (2001). AACC report, 2001. The definition of dietary fibre. Cereal Foods World 46: 112-126.

Anonim. (2009). Badan Standar Nasional Indonesia. *SNI 375-2009. Tepung Terigu Sebagai Bahan Makanan.* Badan Standar Nasional Indonesia, Jakarta.

Anonim. (2020). Kementerian Kesehatan Republik Indonesia.. Hasil Utama Riskesdas 2018. Diakses dari https://www.kemkes.go.id/ resources/download/infoterkini/hasil-riskesdas-2018.pdf. (19 Desember 2019).

Anonim. (2018). World Health Organization. (2018). The top 10 causes of death. Diakses dari https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death. (20 Desember 2019).

Anonim. (2010). *Bureau of Nutritional Sciences*. (2010). *Proposed Policy: Definition and Energy Value for Dietary Fibre*. Food Directorate, Health Products and Food Branch Health Canada.

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Anonim. (2021). Badan Pusat Statistik. Produksi Sayuran di Indonesia. https://www.bps.go.id/indicator/55/61/1/produksi-tanaman-sayuran.html. Diakses 7 Juli 2021.

Anugrahati, N.A. dan Widjanarko, A.M. (2018). Characteristic of autoclaveed, cooled and autoclaved-cooled red kidney bean flour. FaST- Jurnal Sains dan Teknologi e - ISSN 2598-9596. 2:72-79.

Anwar, T.B. (2004). *Manfaat diet pada penanggulangan hiperkolesterolemi.* Digitized by USU digital library. http://library.usu.ac.id/download/fk/gizi-bahri.pdf [25/04/2019].

Aparicio-Saguilan, A.A., Huicochea, E.F., Tovar, J.T., Meraza, F.G. dan Perez, L.A.B. (2005). Resistant starch rich-powders prepared by autoclaving of native and lintnerized banana starch: partial characterization. *Starch/Starke J.* 57: 405-412.

Atchibri O.A., Kouakou T.H., Brou K.D., Kouadio dan Gnakri D.. (2010). Evaluation of bioactive components in seeds of *Phaseolus vulgaris* L. (fabaceae) cultivated in Côte d'Ivoire. J. of Applied Biosciences31: 1928 –1934

Athur, S.L., 2009. Dyslipidemia and risk of coronary heart disease: Role of lifestyle approaches for its management. American J. of Lifestyle Medicine, 3(4):257-273.

Aremu, M.O., Olaofe, O. dan Akintayo, E.T. (2007). Functional properties of some Nigerian varieties of legume seed flours and flour concentration effect on foaming and gelation properties. *J. of Food Tech.* 5 (2): 109-115.

Aryee, F., Oduro, I., Ellis, W. dan Afuakwa, J. (2006). The physicochemical properties of flour samples from the roots of 31 varieties of cassava. *Food Control* 17: 916-922.

Asbar, R. (2014). Peningkatan pati resisten tipe III pada tepung singkong modifikasi (mocaf) dengan perlakuan pemanasan-pendinginan berulang dan aplikasinya pada pembuatan mi kering. *Tesis*. Sekolah Pascasarjana Institut Pertanian Bogor. Bogor.

Ashwar, B.A., Gani, A., Wani, I.A., Shah, A., Masoodi, F.A. dan Saxena, D.C. (2016). Production of resistant starch from rice by dual autoclaving-retrogradation treatment: Invitro digestibility, thermal and structural characterization, *Food Hydrocolloids* 56: 108-117.

Ashwar, B.A., Gani, A., Shah, A., Wani, I.A. and Masoodi, F.A. (2015) Preparation, health benefits, and applications of resistant starch - a review *Starch/Stärke* **67** 1-15.

Asp, N.-G., Johansson, C.-G., Hallmer, H. dan Siljestrom, M. (1983). Rapid enzymatic assay of insoluble and soluble dietary fibre. *J. of Agricultural and Food Chemistry* 31: 476-482.

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Asp, N.-G. dan Bjork, I. (1992). Resistant starch. *Trends in Food Science and Technology* 3: 111–114.

Astawan, M. (2009). Sehat dengan Hidangan Kacang dan Biji-bijian, Penebar Swadaya, Bogor.

Ayu, D.C. dan Yuwono, S.S. (2014). Pengaruh suhu blansing dan lama perendaman terhadap sifat fisik kimia tepung kimpul (*Xanthosoma sagittifolium*). *Jurnal Pangan dan Agroindustri* 2(2): 110-120.

Ayuningtyas, L.P. (2015). Karakterisasi sifat fisik, kimia, dan prebiotik pati ubi jalar *(Ipomoea batatas)* varietas bestak hasil modifikasi autoclaving-cooling dan aplikasinya untuk pembuatan cookies. *Tesis*. S2 Ilmu dan Teknologi Pangan, FTP, UGM.

Babu, A.S. dan Parimalavalli, R. (2012). Functional and chemical properties of starch isolated from tubers. *International J. of Agricultural and Food Science* 2(3):77-80.

Babu, A.S. dan Parimalavalli, R. (2013). Effect of autoclaving on functional, chemical, pasting and morphological properties of sweet potato starch. *J. of Root Crops* 39(1): 78-83.

Bae, I. Y., Lee, S., Kim, S. M. dan Lee, H. G. (2009). Effect of partially hydrolysed oat β- glucan on the weight gain and lipid profile of mice. *Food Hydrocolloids* 23: 2016-2021.

Balasinska, B. (1998). Hypocholesterolemic effect of food dietary evening primerose (*Oenothera paradoxa*) cake extract in rats. *Food Chemistry* 63(4):453-459.

Begum, Z., Ara, I., Shah, ABS. (2011). Association between lipid profile and pre-aclampsia. Ibrahim Card, Med. J., 1(1):41-44.

Behall, K.M., Scholfield, D.J., Hallfrisch, J.G. dan Liljeberg-Elmståhl, H. (2006). Consumption of both resistant starch and glucan improves postprandial plasma glucose and insulin in women. *Diabetes Care* 29: 976–981.

BeMiller, J. N., Whistler, R.. dan Starch, L. (2009). Chemistry and Technology (3rd ed.).New York, USA: Elsevier Academic Press.

Bianchini, F., Cademi, G., Dolara, P. dan Fantetti, L (1989). Effect of Diatary dat, starch and cellulose on fecal bile acids in mice. J. Nut. 119 (11): 1617-1624.

Birt, D.F. & Phillips, G.J. (2013). Diet, genes and microbes; complexities of colon cancer prevention. Toxicol Pathol. in press.

Bjorck, I. dan Asp, N.G. (1994). Controlling the nutritional properties of starch in foods–A challenge to the food industry. *Trends in Food Science and Technology*. 5:213–218.

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Blazek, J. (2008). Role of amylose in structure-function relationship in starches from australian wheat varieties. Thesis. Faculty of Agriculture, Food and Natural Resources, The University of Sydney Blum, C.B. (1994). Comparison of properties of four inhibitors of 3-hydroxy-3- methylglutaryl-coenzyme A reductase. *Am. J. Cardiol*., 73:3D-11D.

Brehm, A, Pfeiler, G, Pacini, G, Vierhapper H, Roden M. (2004). *Relationship between serum lipoprotein ratios and insulin resistance in obesity*. Clin Chem. 50:2316-22.

Brown, I.L., Wang, X., Topping, D.L., Playne, M.J. & Conway, P.L. (1998). High amylose maize starch as a versatile prebiotic for use with probiotic bacteria. Food Australia 50, 602–609.

Cahyono, B. (2003). Kacang Buncis: Teknik Budidaya dan Analisis Usaha Tani. Kanisius, Yogyakarta.

Cedo, L., Metso, J. dan Santos, D. (2015). Consumption of polyunsaturated fat improves the saturated fatty acid-mediated impairment of HDL antioxidant potential. *Molecular Nutrition and Food Research* 59: 1987–1996.

Chandra, S. dan Samsher. (2013). Assessment of functional properties of different flours. *African J. of Agricultural* 8(38): 4849-4852.

Chaplin, M. (2008). Starch. Available From: URL: http://www.lsbu.ac.uk/ water/hysta.html. [28/11/2019].

Chakraborty, S.K., Kumbhar, B.K. dan Sarkar, B.C., (2006). Procces Parameter Optimization For Instant Pigeonpea Dahl Using Response Surface Methodology. J. of Food Engineering 81:171-178.

Chau C.F., Wang Y.T., dan Wen Y.L. (2007). Different micronization methods significantly improve the functionality of carrot insoluble fibre. *Food Chem.,* 100(4): 1402-1408.

Chen, J. J., Lii, C.Y. dan Lu, S. (2003). Physicochemical and morphological analyses on damaged rice starches. *J. of Food and Drug Analysis* 4: 283-289.

Chen, Z., Ma, K.Y., Liang, Y, Peng, C. dan Zuo, Y. (2011). Role and classification of cholesterol –lowering functional food. J. Funct. Food 3: 61-69

Chen, Y., Ye, R., Yin, L. and Zang, N. (2014). Novel blasting extrusion processing improved the physicochemical properties of soluble dietary fiber from soybean residu and in vivo evaluation. J. Food Eng. 120:1-8

Cheng, H.H. and Lai, M.H. (2000). Fermentation of resistant rice starch produces propionate reducing serum and hepatic cholesterol in rats. J. Nutr.: 1991-1995

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Cheng, A., Chen, X., Jin, Q., Wang, W., Shi, J. dan Liu, Y., (2013). Comparison of phenolic content and antioxidant capacity of red and yellow onions. Czech J. of Food Sciences., 31(5): 501-508.

Chou, C., Yen, T. dan Li, C. (2014). Effects of different cooking methods and particle size on resistant starch content and degree of gelatinization of a high amylose rice cultivar in Taiwan. *J. of Food, Agriculture & Environment* 12(2): 6-10.

Chung H, Liu Q. dan Hoover R. (2009). Impact of annealing and heat-moisture treatment on rapidly digestible, slowly digestible and resistant starch levels in native and gelatinized corn, pea and lentil starches. Carbohyd Polym 75:436–47.

Cummings, J.H. (1984). Constipation, Dietary Fiber and The Control of Large Bowel Function. Postgraduate Medical J. , 60, 811-819.

Cummings, J.H dan Bingham S.A. (1987). Dietary fiber, fermentation and large bowel cancer. Cancer surveys 6: 601-621

Cummings, J.H., Beatty, E.R., Kingman, S., Bingham, S.A.dan Englyst, H.N. (1992). Laxative properties of resistant starches. *Gastroenterology*, 102:A548.

Cummings, J.H., Beatty, E.R., dan Kingman, S.H. (1996). Digestion and physiological properties of resistant starch in the human large bowel. *Brit. J. Nutr*. 75(5):733-747

Damat, Y. Marsono, Haryadi, dan Cahyanto, M.N. (2008). Hypocholesterolemic and hypoglicemic effects of butyrylated arrowroot starch on *Sprague Dawley* rats. *Indonesian Pharmacy Magazine*, 19 (3), 2008

Damat. (2009). Sintesis dan karakterisasi fisik, kimia dan fisiologis pati-garut butirat. *Disertasi*. Program pascasarjana. FTP UGM.

Danielsson, H. dan Sjovall, J. (1985). *Sterol and bile acids*. Elsevier Science Publisher Biomedical Division. Amsterdam-New York-Oxford.

Decareau, R.V. (1986). Food processing equipment throughout the world. Food Technology. June (1986): 99-105.

Demigne, C., Morand, C. dan Levrat, M.A. (1995). Effect of propionate on fatty acid and cholesterol synthesis and acetate metabolism in isolated rat hepatocyte. *Br. J. . Nutr*., 74: 209-219

Dhingra, D., Michael, M., Rajput, H. dan Patil, R.T. (2012). Dietary Fibre In Foods: A Review. *J. of Food Science and Technology* (May–June 2012) 49(3):255–266.

Dias, A.R.G., Zavareze, E.D.R, Spier, F., de Castro, L.A.S. dan Gutkoski, L.C. (2010). Effects of annealing on the physicochemical properties and enzymatic susceptibility of rice starches with different amylose contents. *Food Chemistry* 123(3): 711-719.

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Dobiasova, M. dan Frohlich, J. (2001). The plasma parameter log (TG/HDL) as an atherogenic index: correlation with lipoprotein particle size and esterification rate in apoB-lipoprotein-depleted plasma (FER HDL). *Clinical Biochemistry* 34:583-588.

Dobiasova, M. (2006). AIP-atherogenic index of plasma as a significant predictor of cardiovascular risk: from research to practice. *VnitrLek* 52(1):64–71.

Dupuis, J.H., Liu, Q. dan Yada, R.Y. (2014). Methodologies for Increasing the resistant starch content of food starches: A Review. *Comprehensive Reviews in Food Science and Food Safety* 13: 1219-1234.

Eliasson, A.C. (1980) Effect of water content on the gelatinization of wheat starch. *Starch/Stärke* 32:270–272

Eliasson, A.C. (2004). Starch in Food: Structure, Function, and Applications. Woodhead Publishing, CRC Press. Cambridge, England.

El Oufir, L., Flourié, B., Bruley, S., Barry, J.Ll, Cloarec, D., Bornet, F., Galmiche, J.P. (1996). Relations between transit time, fermentation products, and hydrogen consuming flora in healthy humans. Gut. 38:870–7.

Englyst, H.N. dan Cummings, J.H. (1987). Resistant Starch, a newfood component: a classification of starch for nutritional purposes. *Dalam*: Morton, I.D. (Ed.), *Cereals in A European Contex,* hal 221-233. Chichester: First European Conference on Food Science & Technology, Ellis Horwood.

Englyst, H.N., Kingman, S.M. dan Cummings, J.H. (1992). Classification and measurement of nutritionally important starch fractions. *Eur J. Clin Nutr.* 46 (2): S33-50.

Escarpa, A., Gonzalez, M.C., Manas, E., Garcia-Diz, L. dan Saura-Calixto, F. (1996). Resistant starch formation: Standardization of a high-pressure autoclave process. *J. Agr. Food Chem.* 44: 924-928.

Eskin, N.A.M. (1990). Biochemistry of foods. 2nd edition. Academic Press, Inc. California.

Faridah, D.N. (2011). Perubahan karakteristik kristalin pati garut (*maranta arundinaceae* l.) dalam pengembangan pati resisten tipe III. *Disertasi*. Sekolah Pascasarjana Institut Pertanian Bogor.

Faridah, D.N., Rahayu, W.P. dan Apriyadi, M.S. (2013). Modifikasi pati garut (*Marantha arundinacea*) dengan perlakuan hidrolisis asam dan siklus pemanasan-pendinginan untuk menghasilkan pati resisten tipe 3. *Jurnal Teknologi Industri Pertanian* 23 (1): 61-69.

Federer, W.T. (1967). *Experimental design, theory and application*. Oxford and IBH Publishing Co. New Delhi, India.

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Flint, H.J., Duncan, S.H., Scott, K.P., Louis, P. (2007). Interactions and competition within the microbial community of the human colon: links between diet and health. Environ Microbiol. 9:1101–11.

Fushimi , T., Suruga, K., Oshima, Y., Fukiharu, M., Tsukamoto, Y. dan Goda, T. (2006). Dietary acetic acid reduces serum cholesterol and triacylglycerols in rats fed a cholesterol-rich diet. *Br. J. Nutr*. 95: 916-924.

Gaman, P.M & K. B. Sherrington. (1992). The Science of Food, An Introduction to Food Science, Nutrition and Microbiology 2nd Edition. (Terjemahan Pengantar Ilmu Pangan, Nutrisi dan Mikrobiologi. Diterjemahkan oleh Murdijati Gardjito, Sri Naruki, Agnes Murdiati, Sardjono). Gadjah Mada University Press. Yogyakarta.

Gelencser, T. (2009). Comparative study of resistant starches and investigations of their application in starch-based products (bread and pasta). *PhD thesis*. Department of Applied Biotechnology and Food Science, Faculty of Chemical and Bioengineering, Budapest University of Technology and Economics.

Gibson, G.R, and Robertfroid. (1995). Dietary Modulation of human colonic microbiota; Introducing the concept of prebiotics. J. of Nutrition 125: 1401-1412

Gibson, G.R. (2004). Prebiotic. Best Practice & Research Clinical Gastroenterology. 18(2): 287-298. (Chapter in book).

Goni, I., Garcia-Diz, L., Manas, E. dan Saura-Calixto, F. (1996). Analysis of resistant starch: method for foods and food products. J. Food Chemistry 56 (4): 445-449

Grundy, S.M., Cleeman, J.I., Merz., C.N.B., Brewer, H.B., Clark, L.T., Hunninghake, D.B., Pasternak, R.C., Smith, S.C. dan Stone, N.J. (2004). Implications of recent clinical trial for the National Cholesterol Education Program Adult Treatment Panel III guidelines. Coordinating Committee of the National Cholesterol Education Program. Arterioscler. *Thromb. Vasc. Biol.*, 24:e149-161

Ha, A.W., Han, G.J. dan Kim, W.K. (2012). Effect of retrograded rice on weight control, gut function, and lipid concentrations in rats. *Nutrition Research and Practice* 6(1): 16-20.

Hamilton, R. L. (1972). Synthesis and secretion of plasma lipoproteins. Advanc. exp. med. Biol., 26, 7.

Han, K., Sekikawa, M., Shimada, K., Sasaki, K., Ohba, K. dan Fukushima, M. (2004). Resistant starch fraction prepared from kintoki bean affects gene expression of genes associated with cholesterol metabolism in rats. *Exp. Biol. Med.* 229: 787–792.

Haralampu, S.G. (2000). Resistant starch-a review of the physical properties and biological impact of RS3. *Carbohydr Polym.* 41(3): 285–292.

Harris, R. S. dan E. Karmas. (1989). Evaluasi Gizi pada Pengolahan Bahan Pangan. Penerjemah: S. Achmadi. ITB – Press, Bandung.

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT
FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Harmayani, E., Kumalasari, I.D. dan Marsono, Y. (2011). Effect of arrowroot (*Maranta arundinacea* L.) diet on the selected bacterial population and chemical properties of caecal digesta of Sprague Dawley rats. *International Research J. of Microbiology* 2(8): 278-284.

Hasbullah, R. dan Riskia, P. (2013). Pengaruh lama perendaman terhadap mutu beras pratanak pada padi varietas IR64. *Jurnal Keteknikan Pertanian* 27(1): 53-60.

Hennigsson, A.M., Bjorck, I.M.E. and Nyman, M.G.I. (2002). Combinations of Indigestible Carbohydrates Affect Short-Chain Fatty Acid Formation in theHindgut of Rats. *The J. Nutr*ition. 0022-3166:3098-3104.

Hernawati. (2009). Peranan Berbagai Sumber Serat Dalam Dinamika Kolesterol PadaIndividu Hiperkolesterolemia dan Normokolesterolemia. Laporan Penelitian Proyek LIPI. http://elib.pdii.lipi.go.id. [13 Agustus 2019].

Heslet, L. (2002). Kolesterol. Dialihbahasakan oleh Anton Adiwiyoto. Kesaint Blanc. Jakarta.

Higgins, J.A., Higbee, D.R., Donahoo, W.T., Brown, I.L., Bell, M.L. dan Bessesen, D.H. (2004). Resistant starch consumption promotes lipid oxidation. *Nutr. Metabolism* 1: 8.

Hoover, R., Swamidas, G. dan Vasanthan, T. (1993). Studies on the physicochemical properties of native, defatted, and heat moisture treated pigeon pea (Cijanus cajan T) starch. *Carbohydr. Res*. 246:185–203

Hoover, R. (2001). Composition, molecular structure, and physicochemical properties of tuber and root starches: a review. *Carbohydr. Polym*. 45: 253-267

Hoover, R., Hughes, T., Chung, H. J. dan Liu, Q. (2010). Composition, molecular structure, properties, and modification of pulse starches: A review. *Food Research International* 43: 399-413.

Huang, P. (2009). A comprehensive definition for metabolic syndrome. Disease Models and Mechanisms 2 : 231-237.

Hutching, J.B. (1999). *Food colour and appearance*. 2nd edition. An Aspen Publ. Inc., Gaithersburg, Maryland.

Ihedioha, J.I., Noel-Uneke, Q.A., Ihedioha, T.E. (2013). Reference values for the serum lipid profile of albino rats (*Ratus norvegicus*) of varied ages snd sexes. Comp Clin Pathol 22: 93-99.

Iorgyer, M.I., I.A. Adeka, N.D. Ikondo, dan J.J. Okoh. (2009). The Impact of Boiling Periods on the Proximate Composition and Level of Some Anti-Nutritional Factors in Pigeon Pea (*Cajanus cajan*) Seeds. PAT 2009; 5(1): 92-102 ISSN: 0794-5213.

Iswari, R.S. (2017). *Perbaikan fraksi lipid serum tikus putih hiperkolesterolemi setelah pemberian jus dari berbagai olahan tomat*. Jurusan Biologi Fakultas MIPA, Universitas Negeri Semarang. http://download.portalgaruda. org/article.php?article [27 Febr 2019].

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT
FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
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Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Jagannadham, K., Parimalavalli, R. dan Babu, A.S. (2014). Effect of autoclaving on chemical, functional and morphological properties of chickpea (*Cicer arietinum* L.) starch. *Online International Interdisciplinary Research J.* 4(Special issue): 287-294

Jagannadham, K. dan Parimalavalli, R. (2016). In-vitro digestibility and functional properties of chickpea resistant starch. *Indian J. of Science* 23(77): 42-49.

Jagannadham, K., Parimalavalli, R. dan Babu, S.A. (2017). Effect of triple retrogradation treatment on chickpea resistant starch formation and its characterization. *J Food Sci Technol*. 54(4): 901:908.

Jane, J.L. dan J.F. Robyt. (1984). Struture studies of amylose complexes and retrograded amylose by action of alpha amylases and a new method for prapering amylodextrins. Carbohydrateb Res., 132:105-118.

Juliano, B.O. (1971). A simplified assay for milled rice amylose. *Cereal Science Today* 16: 334-338

Kale, C.K., Kotecha P.M. , Chavan, J.K. dan Kadam, S.S.(2002). Effect of processing conditions of backery product on formation of resistant starch. J. of Food Science Tecnology. 5: 520-524.

Karim A.A., Norziah M.H. dan Seow, C.C. (2000). Methods for study of starch retrogradation. *Food Chem.* 71: 9-36.

Kaur, M. dan Singh, N. (2007). Characterization of protein isolates from different Indian chickpea (Cicer arietinum L.) cultivars. *Food Chem.* 102(1): 366-374.

Kaur, M. dan Sandhu, K.S. (2010). In vitro digestibility, structural and functional properties of starch from pigeon pea (*Cajanus cajan*) cultivars grown in India. *Food Research International* 43: 263-268.

Kinsella, L. E. (1976). Functional properties of the protein in foods: A survey. *J. of Food Science and Nutrition* 7: 219-280.

Kristensen, Jensen, MM.G., Aarestrup, J Kristina EN Petersen, K.E., Søndergaard,L Mikkelsen, M.S dan Astrup, A. (2012). Flaxseed dietary fibers lower cholesterol and increase fecal fat excretion, but magnitude of effect depend on food type. *Nutrition & Metabolism* 9:8

Lai, H.M. (2001). Effects of hydrothermal treatment on the physicochemical properties of pre-gelatinized rice flour. *Food Chemistry* 72: 455-463.

Lamberts, L., Gomand, S.V., Derycke, V. dan Delcour, J.A. (2009). Presence of amylose crystallities in parboiled rice. *J. Agric. Food Chem.* 57(8): 3210-3216.

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Lee, J.H., Ah-Ra, C., Joo, Y.H., Dong, J.P. dan Seung, T.L. (2012). Physical properties of wheat flour composites dry-coated with microparticulated soybean hulls and rice flour and their use for low-fat doughnut preparation. *J. Cereal Sci.* 56: 636-643.

Lehninger, A. L. (1982). *Principles of biochemistry*. 2nd edition. Worth Publishers, Inc. New York, US.

Lewis, S.J & Heaton, K.W. (1997). Increasing butyrate concentration in the distal colon by accelerating intestinal transit. Gut. 1997;41:245–51.

Liong, M.T. dan Shah, N.P. (2005). Optimization of cholesterol removal, growth and fermentation patterns of Lactobacillus acidophilus ATCC 4962 in the presence of mannitol, fructooligosaccharide and inulin: a response surface methodology approach. Applied Microbiology 98(5): 1115-1126.

Liu, H.L, Chen, B.Y., Lan, Y.W. dan Cheng, Y.C. (2003). SEM and AFM images of pyrite surfaces after bioleaching by the indigenous Thiobacillus thiooxidans. Appl Microbiol Biotechnol (2003) 62: 414–420.

Louis, P., Scott, K.P., Duncan, S.H., Flint, H.J. (2007). Understanding the effects of diet on bacterial metabolism in the large intestine. J Appl Microbiol.102:1197–208.

Macfarlane S. dan Macfarlane G.T. (2003). Regulation of short-chain fatty acid production. Proceedings of the Nutrition Society, 62: 67-72.

Marlett, J.A. (1997). Sites and mechanisms for the hypocholesterolemic actions of soluble dietary fiber sources. *Adv. Exp. Med.Biol*. 427: 109-121

Marsono, Y. dan Topping, D.L. (1993). Complex carbohidrates in Australian rice products. *Food Science and Tehcnology (LWT)* 26: 364-370.

Marsono, Y., Illman, R.J., Clarke, J,M., Trimble, R,P. dan Topping, D,L. (1993). Plasma lipids and large bowel volatile fatty acids in pigs fed on white rice, brown rice and rice bran. *British J. of Nutrition*, 70, 503-5 13

Marsono, Y. (1998). Resistant starch: pembentukan, metabolisme dan aspek gizi-nya. *Agritech* 18(4): 29-35.

Marsono, Y. (1999). Perubahan kadar resistant starch (RS) dan komposisi kimia beberapa pangan kaya karbohidrat dalam pengolahan. *Agritech* 19(3): 124-127

Marsono, Y., (2001). Resistant Starch : Pembentukan, metabolisme dan aspekgizinya (Review). *Agritech.* 18(4) : 29 – 35

Marsono, Y. (2004). *Serat pangan dalam perspektif ilmu gizi*. Pidato Pengukuhan Guru Besar. UGM, Yogyakarta.

Maskan, M. (2001). Kinetics of colour change of kiwi fruits during hot air and microwave drying. *J. of Food Engineering* 48: 169-175

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT
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WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Mbaeyi-Nwaoha, I.E dan Onweluzo, J.C. (2013). Functional properties of sorghum (*S. Bicolour* L.)-pigeon pea (*Cajanus cajan*) flour blends and storage stability of a flaked breakfast formulated from blends. *Pak. J. Nutr.*. 12(4): 382-397.

Meng, HT, Johan, D, Glazer, NB. (2004). *Pioglitazone reduces atherogenic index of plasma in patients with type 2 diabetes*. Clinical Chemistry. 50(7):1184-8.

Miao, M., Zhang, T. dan Jiang, B. (2009). Characterizations of kabuli and desi chickpea starches cultivated in China. *Food Chemistry* 113: 1025–1032.

Michael, A. A. dan Wilson, P.W. (1997). Relationship between hunter colour values and b-carotene contents in white-fleshed African sweet potatoes (*Ipomoea batatas* Lam). *J. of the Sci. of Food and Agric.* 73: 301-306.

Mishra, P.K., Tripathi, J., Gupta, S., Variyar, P.S. (2015). Effect of cooking on aroma profile of red kidney beans (*Phaseolus vulgaris*) and correlation with sensory quality. Food Chemistry. 215:401–409

Moreira, R., Chenlo, F., Torres, M.D., Rama, B. dan Arufe, S. (2015). Air drying of chopped chestnuts at several conditions: effect on colour and chemical characteristics of chestnut flour. *Int. Food Res. J.* . 22(1): 407-413.

Moore, G.J. Phillips, M. Rowling, K. Schalinske, M.P. Scott, dan Whitley, E.M.. (2015). Resistant Starch: Promise for Improving Human Health. American Society for Nutrition. Adv. Nutr. 4:587– 601.

Mudgett, R.E. (1989). Microwave food processing. *Food technology (USA) J*. 43(1): 117-126.

Muzdalifah, D. (2009). Pengaruh pratanak terhadap RS dan sifat hipoglikemik kacang merah pada tikus SD. Tesis. Pascasarjana FTP Universitas Gadjah Mada. Yogyakarta.

Nair D, Carrigan TP, Curtin RJ, Popovic ZB, Kuzmiak S. dan Schoenhagen P. (2009). Association of total cholesterol/high-density lipoprotein cholesterol ratio with proximal coronary atherosclerosis detected by multislice computed tomography. Prev Cardiol, 12(1):19-26.

Niroumand, S.H., Khajedaluee, M., Khadem-Rezaiyan, M., Abrishami, M., Juya, M., Khodaee, G.H. dan Dadgarmoghaddam, M. (2015). Atherogenic Index of Plasma (AIP): a marker of cardiovascular disease. *Med J Islam Repub Iran* 29: 1-9.

Njintang, Y.N. dan Mbofung, C.M.F. (2006). Effect of precooking time and drying temperature on the physicochemical characteristics and in-vitro carbohydrate digestibility of taro flour. *LWT–Food Science Technology* 39: 684 –691.

Noviasari, S., Kusnandar, F., Setiyono, A. dan Budijanto, S. (2015). Beras analog sebagai pangan fungsional dengan indeks glikemik rendah. *J. Gizi Pangan* 10(3): 225-232.

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT
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WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Nugent, A.P. (2005). Health properties of resistant starch. *Br. Nutr. Foundation Nutr. Bull.* 30: 27–54.

Nurhayati, Jenie, B.S.L., Widowati, S. dan Kusumaningrum, H.D. (2014). Komposisi kimia dan kristalinitas tepung pisang termodifikasi secara fermentasi spontan dan siklus pemanasan bertekanan-pendinginan. *Agritech* 34(2): 146-150.

Ooi, L.G. dan Liong, M.T. (2010). Cholesterol-lowering effects of probiotics and prebiotics: A Review of in vivo and in vitro findings. International J. of Molecular Sciences 11: 2499-2522.

Ozturk, S., Koksel, H., dan Kahraman, K. (2009). Effect of debranching and heat treatments on formation and functional properties of resistant starch from high-amylose corn starches. *European Food Research and Technology* 229: 115-125.

Palupi, HT., Zainul, A. dan Nugroho, A.M. (2011). Pengaruh pre gelatinisasi terhadap karakteristik tepung singkong. *Teknologi Pangan* 1(1): 1-14.

Pangastuti, H.A., Afafandi, D.R. dan Ishartani, D.(2013). Physical and chemical properties characterization of red kidney bean (*Phaseolus vulgaris* L.) flour by some prcessing treatment. Jurnal Teknosains Pangan. 2(1): 20-29.

Pelpolage S.W., Han K., Koaze H., Hamamoto T., Hoshizawa M. dan Fukushima, M. (2019). Influence of enzyme-resistant fraction of sorghum (*Sorghum bicolor L.*) flour on gut microflora composition, short chain fatty acid production and toxic substance metabolism. J. of Food and Nutrition Research. 58 (2): 135-145.

Perry, P.A. dan Donald, A.M. (2002) The effect of sugars on the gelatinisation of starch. *Carbohydrate Polymers* 49: 155–165.

Phillips, J., Muir, J.G., Birkett, A., Lu, Z.X., Jones, G.P., O'Dea, K. dan Young, G.P. (1995). Effect of resistant starch on fecal bulk and fermentation-dependent events in humans. Am J Clin Nutr. 62:121–30.

Pompei, A., Cordisco, L., Raimondi, S., Amaretti, A. dan Pagnoni, U.M. (2008). In vitro comparation of the Prebiotic Effect of two inulin type fructans. Anaerobe 14:280-286.

Poul, L.E., Loison, C., Struy, S., Springael, J., Decobecq, M., Brezillon, S., Dupriez, V., Vassart, G., Damme, J.V., Parmentier, M., dan Detheux, M. (2003). Functional characterization of human receptors for short chain fatty acids and their role in polymorphonuclear cell activation. *The J. of Biological Chemistry* 278(28): 25481–25489.

Rabie'ah, Charlos, F., Johana Griselda, S.J., Sari, W.P. (2014). Tata laksana Terkini Dislipidemia. J. Kedokteran Meditek 20(54):28-33.

Rahim, A., Haryadi, Cahyanto, M.N. dan Pranoto, Y. (2012). Structure and functional properties of resistant starch from butyrylated arenga starches. *African J. of Food Science* 6(12): 335-343.

UNIVERSITAS GADJAH MADA
TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/

Rachmawanti, A.D. (2006). Kemampuan Antioksidatif Ekstrak Etanol Kacang Panjang (Vigna sinensis) dan Kacang Merah (*Phaseolus vulgaris*) Pada Tikus Diabetes-Hiperkolesterolemia. Thesis. Program Studi Ilmu dan Teknologi Pangan. Universitas Gadjah Mada, Yogyakarta.

Raja, M.K.C. and Shindu, P. (2000). Properties of starch-treated arrowroot (*Marantha arundinacea*) starch. *J. Starch.* 52: 471-476

Ratnayake, W. S., dan Jackson, D. S. (2006). Gelatinization and solubility of corn starch during heating in excess water: new insights. *J. of Agricultural and Food Chemistry* 54(10): 3712-3716.

Roberfroid, M.B. (2007). Inulin-type fructans: functional food ingredients. The J. of Nutrition. 137(11): 2493S-2502S.

Rosida dan Yulistiani, R. (2011). Pengaruh Proses Pengolahan terhadap Kadar Pati Resisten Sukun (*Artocarpus altilis* Park). *Rekapangan* 5(1): 55-63.

Richana, N. dan Sunarti, T.C. (2004). Karakterisasi sifat fisikokimiatepung umbi dan tepung pati dari umbi ganyong, suweg, ubikelapa dan gembili. *Jurnal Pasca Panen* 1(1): 29-37.

Reddy, C.K., Suriya, M. dan Haripriya, S. (2013). Physico-chemical and functional properties of resistant starch prepared from red kidney beans (*phaseolus vulgaris.* L) starch by enzymatic method. *Carbohydrate Polymers* 95:220- 226.

Reeves, P.G., Nielsen, F.H. dan Fahey Jr, G.C. (1993). AIN-93 purified diets for laboratory rodents: final report of the American Institute of Nutrition Ad Hoc Writing Committee on the reformulation of the AIN-76A rodent diet. *J. of Nutrition, Committee Report*: 1939-1951

Rehman, Z., Salariya, A. M., & Zafar, S. I. (2001). Effect of processing on available carbohydrate content and starch digestibility of kidney beans (*Phaseolus vulgaris* L.). Food Chemistry. 73: 351–353.

Reyes-Moreno, C., & Paredes-Lopez, O. (1993). Hard-to-cook phenomenon in common beans – A review. Critical Review in Food Science and Nutrition. 33: 227–286.

Sajilata, M.G., Singhai, R.S. dan Kulkani, P.R. (2006). Resistant Starch–a Review. *CRFSFS: Comprehensive Reviews in Food Science and Food Safety* 5:6-17.

Sankhon, A., Yao, W.R., Wang, H., Qian, H. dan Sangare, M. (2012). The yield improvement of resistant starches from Africa locust (*Parkia biglobosa*): the influence of heat-moisture, autoclaving-cooling and cross-linking treatments. *American J. of Food Technology* 7(7): 386-397.

Sasanam, S., Paseephol, T. dan Moongngarm, A. (2011). Comparison of Proximate Compositions, Resistant Starch Content, and Pasting Properties of Different Colored Cowpeas (*Vigna unguiculata*) and Red Kidney Bean (*Phaseolus vulgaris*). International J. of Biological, Biomolecular, Agricultural, Food and Biotechnological Engineering. 5(9): 227–286

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Sayago-ayerdi, Mateos, R., Ortiz-Basurto, R.I., Largo,C., Serrano, J., Granado- Serrano, A.B., Sarria, B., Bravo, L. dan Tabernero, M. (2014). Effects of Consuming Diets Containing Agave Tequilana Dietary Fibre and Jamaica Food Chemistry 148: 54-59.

Setiarto, R.H.B., Jenie, B.S.L., Faridah, D.N. dan Saskiawan, I. (2015). Kajian peningkatan pati resisten yang terkandung dalam bahan pangan sebagai sumber prebiotik. *Jurnal Ilmu Pertanian Indonesia* 20(3): 191-200.

Schiffmann, R.F. (1986). Food product development for microwave processing. Food technology (USA). J. 40(6):94-98.

Schneeman, B.O. and Janet, T. (1994). Dietary fiber. *Dalam*: Shils, M.E., James. A.O., Moshe. S. (Eds). *Modern nutrition in health and disease*. 8th edition volume 1. Lea and Febiger, Philadelphia.

Sekirov, I., Russell, S.L., Antunes, L.C. and Finlay, B.B. (2010). Gut microbiota in health and disease *Physiol Rev* **90**(3) 859-904.

Sembor, S.M., Marsono, Y. dan Noor, Z. (1999). Effects of soy pulp and fermented soy pulp fiber on Short Chain Fatty Acid profile in The digesta of wistar Rats. *Agritech* .19(4) : 160-164

Serougne, C., Felgines, C., Ferezou, J., Hajri, T., Bertin, C., dan Mazur, A. (1995). Hypercholesterolemia Induced by Cholesterol- or Cystine- Enriched.Diets is Charaterized by Different Plasma Lipoprotein and Apolipoprotein Concentrations in Rats. *J. Nut* 125: 35-41

Shahzadi, N., Butt, M.S., Rehman, S.U. dan Sharif, K. (2005). Chemical characteristics of various composite flours. *International J. of Agriculture and Biology* 7(1): 105-108.

Shin, M., Woo, K. dan Seib, P. A. (2003). Hot-water solubilities and water sorptions of resistant starch at 25°C. *Cereal Chemistry* 80: 564–566.

Singh, J., Singh, N., Sharma, T. dan Saxena, S. (2003). Physicochemical, rheological and cookie making properties of corn and potato flours. *Food Chemistry* 83 (3): 387-393.

Sievert, D. dan Y. Pomeronz.(1989). Enzym-resistant starch I. Characterization and evaluation by enzymatic, thermoanalitical and microscopic methods. Chereal Chemistry. 66(4): 342-347.

Snyder, H.E. dan Kwon, T.W. (1987). Soybean Utilization An. Avi Book Published by Van Nostrand Reinhold Company: New York.

Sone, H., Nakagami, T., Nishimura, R., Tajima, N. dan MEGA Study Group. (2016). Comparison of lipid parameters to predict cardiovascular events in Japanese mild-to-moderate hypercholesterolemic patients with and without type 2 diabetes: Subanalysis of the MEGA study. *Diabetes Research and Clinical Practice* 113: 14–22.

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Soral-Smietana, M., Wronkowska, M. dan Amarowicz, R. (2000). Health-promoting function of wheat or potato resistant starch preparations obtained by physico-biochemical process. *Dalam*: Barsby T.L., Donald A.M., and Frazier P.J. (Eds). *Starch advances in structure and function*. Churchill College, Cambridge

Soto, R.A.G., Escobedo, R.M., Sanchez, H.H., Rivera, M.S. dan Perez, L.A.B. (2007). The influence of time and storage temperature on resistant starch formation from autoclaved debranched banana starch. *International Food Research J.* 40: 304-310.

Srichuwong, S., Sunarti, T.C., Mishima, T., Isono, N. dan Hisamatsu, M. (2005). Starches from different botanical sources I: contribution of amylopectin fine structure to thermal properties and enzyme digestibility. *Carbohydrate Polymers* 60(4): 529-538.

Stamler, J., Vaccaro, O. dan Neaton, J. D. (1993). Diabetes, other risk factors, and 12-gr cardiovascular mortality for men screened in the multiple risk factor intervention trial. *Diabetes care* 16: 434-444.

Sudha, M.R., Prashant, Kalpana, Sekhar, dan Kaiser. (2009). Review: probiotics as complementary therapy for hypercholesterolemia. Biology and Medicine 1(4): 1-13.

Surampudi, P., Enkhmaa, B., Anuurad, E., dan Berglund L. (2016). Lipid lowering with soluble dietary fiber. *Curr Atheroscler Rep* (2016) 18:75-84.

Surono, I.S. (2016). Probiotik, Mikrobiome dan Pangan Fungsional. Ed.1, Cet. 1--Yogyakarta: Deepublish, September 2016. viii, 243 hlm.; Uk:17.5x25 cm ISBN 978-602-401-482-7.

Tharanathan, R.N. dan Mahadevamma, S. (2003). Grain legumes - a boon to human nutrition. *Trends Food Sci Technol* 14:507-518.

Tester, R.F. dan Morrison, W.R. (2004). Swelling gelatinization of cereal starches. I. Effect of amylopectin, amylose and lipids. *Cereal Chemistry* 67: 551-557.

Tenorio, MD., Espinosa-Martos, I., Prestamoo, G. dan Ruperez, P. (2010). "Soybean Whey Enhance Mineral Balance and Cecal Fermentation in Rats", Eur. *J. Nutr*. 49 (3): 155-163.

The British Nutrition Foundation (BNF). (1990). *Complex carbohydrates in foods*. The report of the British Nutrition Foundation's Task Force. Chapman and Hall, London.

Thomas, D.J. dan Atwell, W.A. (1999). *Starches*. Eagan press, St. Paul Minnesota USA.

Tomlin, J. & Read, N.W. (1990). The effect of resistant starch on colon function in humans. Br J Nutr. 1990;64:589–95.

Usoro C.A., Adikwuru C.C., Usoro I.N. dan Nsonwu A.C.. (2006). Lipid profile of postmenopausal women in calabar, Nigeria. *Pak. J. Nutr.* , 5:79-82.

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Vijayaraghavan, K. (2010). Treatment of dyslipidemia in patients with type 2 diabetes. *Lipids in Health and Disease* 9: 1-12.

Waliszewski, K.N., Aparicio, M.A., Perez, L.A.B. dan Monroy, J.A. (2003). Changes of banana starch by chemical and physical modification. *Carbohydrate Polymers* 52: 237-242.

Wahjuningsih, S.B., Marsono, Y., Paseptiangga, D. dan Haryanto, B. (2016). Resistant starch content and glycaemix index of sago (*Metroxylon spp*.) starch and red bean (*Phaseolus vulgaris*) based analogue rice. *Pakistan J. of Nutrition* 15 (7): 667-672.

Wandansari. (2016). Karakterisasi fisik, kimia, dan fungsional tepung komposit dari ganyong (*Canna edulis*) dan kara pedang (*Canavalia ensiformis*). *Skripsi*. Program Studi Ilmu dan Teknologi Pangan. Fakultas Pertanian. Universitas Sebelas Maret, Surakarta.

Wang, Y., Zhang, L., Li, X. dan Gao, W. (2011). Physicochemical Properties of Starches from Two Different Yam (*Dioscorea Opposita* Thunb.) Residues. *Brazilian Archives of Biology and Technology* 54(2): 243-251.

Wang, S., Li, C., Copeland, L., Niu, Q. dan Wang, S. (2015). Starch Retrogradation: A Comprehensive Review. *Comprehensive Reviews in Food Science and Food Safety* (14): 568-585

Weitkunat, K., Schumann, S., Petzke, K.J., Blaut, M., Loh, G. dan Klaus, S. (2015). Effects of dietary inulin on bacterial growth, short-chain fatty acid production and hepatic lipid metabolism in gnotobiotic mice. *The J. of Nutritional Biochemistry* 26: 929-937.

Widowati, S., Herawati, H., Mulyani, E.S., Yuliwardi, F. dan Muhandri, T. (2014). Pengaruh perlakuan *heat moisture treatment* (hmt) terhadap sifat fisiko kimia dan fungsional tepung beras dan aplikasinya dalam pembuatan bihun berindeks glikemik rendah. *J. Pascapanen* 11(2): 59-66

Wijanarka, A. (2017). Tepung gayam (*inocarfus fagifer forst*.): indeks glikemik,sifat fungsional, modifikasi siklus autoclaving-cooling serta sifat gizi in vitro dan in vivo. Disertasi. FTP UGM, Yogyakarta.

Winarti, S., Harmayani. E, Marsono, Y and Pranto, Y. (2013). Effect of inulin isolated from lesser yam (*Dioscorea esculenta*) on the growth of probiotik bacteria and SCFA formation during fermentation. IRJM, 4(2): 53-63

Wong, J.M., de Souza, R., R., Kendall, C.W., Emam, A. dan Jenkins, D.J. (2006), Colonic health: Fermentation and short chain fatty acids. J. Clin. Gastro. 40:235-243

Wurzburg, O.B. (1986). *Modified Starches: Properties and Uses*. CRC Press, Boca Raton, Florida.

UNIVERSITAS GADJAH MADA
**TEPUNG KACANG MERAH (Phaseolus vulgaris L.) PRATANAK: PENINGKATAN PATI RESISTEN, KARAKTERISASI SIFAT FUNGSIONAL DAN PENGARUHNYA TERHADAP PROFIL LIPID SERTA BAKTERI KOLON PADA MODEL HEWAN COBA**
WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
**Universitas Gadjah Mada, 2021 | Diunduh dari http://etd.repository.ugm.ac.id/**

Yadav, B.S., Sharma, A. dan Yadav, R.B. (2009). Studies on effect of multiple heating/cooling cycles on the resistant starch formation in cereals, legumes and tubers. *International J. of Food Sciences and Nutrition* 60:1: 258-272.

Yadav, B.S., Yadav, R.B. dan Kumar, M. (2011). Suitability of pegion pea and rice starch and their blends for noodle making. *LWT-Food Sci and Techn.* 44(6): 1415-1421.

Yoshida, H. dan S. Takagi. 1997. Microwave roasting and positional distribution of fatty acids of phospholipids in soybean (*Glycine max L*) at different moisture contents. JAOCS 2:117-124.

Yuanita, L., Suyono dan Sanjaya, I.G.M. (2011). The binding of cholic acid by hemicellulose and pectin of yard-long bean [*Vigna sesquipedalis* (L.) Fruhw]. *J. of Food Science and Engineering* 1: 348-353.

Yuliwardi, F., Syamsira, E., Hariyadi, P. dan Widowati, S. (2014). Pengaruh dua siklus *autoclaving-cooling* terhadap kadar pati resisten tepung beras dan bihun yang dihasilkannya. *Pangan* 23(1): 43-52.

Zabar, S., Shimoni, E. dan Peled, H.B. (2008). Development of nanostructure in resistant starch type III during thermal treatments and cycling. *J macromol Biosci.* 8: 163-170.

Zaragoza, E.F., Navarrete, M.J.R., Zapata, E.S. dan Álvarez, J.A.P. (2010). Resistant starch as functional ingredient: A review. *Food Research International* 43: 931-942.

Zavareze, E.R., Stock, C.R., Castro, L.A.S, dan Schirmer, M.A. (2010). Effect of heat-moisture treatment on rice starch of varying amylose content. J.foodchem. 121(2):358-365.

Zeng, J., Li, G., Gao, H. dan Ru, Z. (2011). Comparison of A and B starch granules from three wheat varietas. Molecules. 16:10570-10591.

Zeuthen, P., Cheftel, J.C., Erikson, C., Jul, M., Leniger, H., Linko, P., Varela, G. dan Vos, G. (1984). Thermal Processing and quality of foods. Elsevier Applied Science publ., London.

Zhao, X.H. dan Lin, Y. (2009). The impact of coupled acid or pullulanase debranching on the formation of resistant starch from maize starch with autoclaving–cooling cycles. *Eur. Food Res. Technol.* 230:179–184

Zhu, Q., Jin, Z., Wu, W., Gao, R., Guo, B., Gao, Z., Yang, Y., and Qin, H. (2014). Analysis of the intestinal lumen microbiota in an animal model of colorectal cancer *PLoS One* **9**(3)e90849.

Zhuang, G., Xiao, M., Qiu-X, Zhan, F.W., Hao, Z., He-PZ. dan Wei, C. (2012). Review: Research advances with regards to clinical outcome and potential mechanisms of the cholesterol-lowering effects of probiotics. Clinical Lipidology 7(5): 501-507.

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WALUYO, Prof. Dr. Ir. Y. Marsono, MS.
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Zi-Ni, T., Rosma, A., Karim, A. A. dan Liong, M.T. (2015). Functional properties of resistant starch type-III from *Metroxylon sagu* as affected by processing conditions. *Pertanika J. Trop. Agric. Sci.* 38(3): 399-412.

Zuwariah, I. dan Aziah, A.A.N. (2009). Physicochemical properties of wheat breads substituted with banana flour and modified banana flour (Ciri-ciri fizikokimia roti gandum yang diganti dengan tepung pisang dan tepung pisang terubah suai). *J. Trop. Agric. and Fd. Sc.* 37(1): 33-42.