UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Abdel Mohdy, F.A., Abdel-Halim, E.S., Abu-Ayana, Y.M., dan El-Sawy, S.M. 2008. *Rice Straw as A New Resource for Some Beneficial Uses*. Carbohydrate Polymers. 75: 44-51

Abdul Khalil, H.P.S., Siti Alwani, M., Ridzuan, M., Kamarudin, H. dan Khairul, A. 2008. Chemical Composition, Morphologycal Characteristics, and Cell Wall Structure of Malaysian Oil Palm Fibers. Polymer-Plastics Technology and Engeneering 47 : 273-280.

Achmadi, E. R. 2016. Sintesis dan Karakterisasi *Hydroxy Propyl Cellulose* (HPC) dari Biji Salak (*Salacca edulis* Reinw) Pondoh Super. Tesis. FTP UGM.

Adel, A.M., El-Wahab, Z.H.A., Ibrahim, A.A., dan Al Shemy, M.T. 2010. Characterization of Microcrystalline Cellulose Prepared from Lignocellulosic Materials. Part I. Acid Catalyzed Hydrolysis. Bioresources Technology 101 : 4446-4455.

Adimarta, T. 2016. Isolasi dan Karakterisasi Selulosa dari Tandan Kosong Kelapa Sawit Dengan Menggunakan Campuran NaOH dan NaOCl. Tesis. FMIPA : UGM. Yogyakarta.

Adinugraha, M. P., Marseno, D. W. dan Haryadi. 2005. Synthesis and Characterization of Sodium Carboxymethylcellulose from Cavendish Banana Pseudo Stem (*Musa cavendishii* LAMBERT). Carbohydrate Polymers. 62: 164-169.

Alemdar, A dan Sain, M. 2008 Isolation and Characterization Of Nanofibers From Agricultural Residues, Wheat Straw and Soy Hulls. Bioresourses Technology. 99 : 1664-1671

Andoko, Agus dan Widodoro. 2013. Berkebun Kelapa Sawit si Emas Cair. Agro Media Pustaka. Jakarta.

Anonim. 2013. Statistik Perkebunan Indonesia 2013-2015 : Kelapa sawit. Direktorat Jenderal Perkebunan. Jakarta.

Ambriz, S.L.R., Hernandes, J.J.L., Acevedo, E.A., Tovar, J., dan Perez, L.A.B. 2008. Characterization of a fibre-rich powder prepared by liquefaction of unripe banana flour. *Journal of Food Chemistry* 107, pp. 1515-1521.

Aurelia, C. 2016. Pengaruh Konsentrasi Sodium Hidroksida dan Sodium Hipoklorit terhadap Sifat Fisik dan Kimia Selulosa dari Kulit Koro Pedang Putih (*Canavalia ensiformis*). *Skripsi*. Yogyakarta : FTP UGM.

UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Ballesteros, I, Olivia, J.M., Navarro, A.A., Gonzales, A., Carrasco J., dan Ballesteros, M. 2000. Effect of Chip Size On *Steam explosion* Pretreatment of Softwood. Journal Applied Biochemistry and Biotechnology Vol. 84 Issue 1-9 : 97-110.

Barai, B. K., Singhal, R. S. dan Kulkarni, P. R. 1997. Optimization of A Process for Preparing Carboxymethyl Cellulosa from Water Hyacinth *(Eichornia crassipes)*. Carbohydrate Polymers. 32: 229-231.

Bicu dan Mustata. 2013. Optimization of Isolation of Cellulose from orange peel using Sodium Hydroxide and Chelating Agents. http://dx.doi.org/10.1016/ j.carbpol.2013.06.009.

Bismarck, A., Mishra, S., dan Lampke, T., 2005. Plant Fibers as Reinforcement for Green Composites. In: Mohanty, A.K., Misra, M., and Drzal, L.T. (Ed.), Natural Fibers, Biopolymer, and Biocomposites. CRC Press Tailor and Francis group, Boca Raton.

Brownell, H.H. dan Sadler, J.N. 1986. Steam Pretreatment of Lignocellulosic Material for Enhanced Enzymatic Hydrolysis. Biotechnology and Bioengeneering XXIX : 228-235.

Browning, B.L.1987. Methods of Wood Chemistry. Vol 2. Interscience Publishers, John Wiley dan Sons, USA. Pp. 387-427.

Carvalheiro, F., Esteves, M.P., Parajo, J.C., Pereira, H., dan Girio, F.M. 2004. Production of Polysaccarides by Autohydrolysis of Brewery's Spent Grain. Bioresources Technology 91 (1) : 93-100

Carvalheiro, F., Duarte, L. C., & Girio, F. M. 2008. Hemicellulose biorefineries: A review on biomass pretreatment. Journal of Scientific and Industrial Research 67 : 849–864.

.

Carvalheiro, F., Duarte, S.C., Girio, F. Dan Moniz, P. 2016. Hydrothermal/Liquid Hot Water Pretreatment (Autohydrolysis) : A Multipurpose Process for Biomass Upgrading dalam Biomass Fractionation Technologies for a Lignocellulosic Feedstock Based Biorefinery. 315-347.

Chen, I., Hong, F., Yang, X.-X., dan Han, S.-F. 2013. Biotransformation of Wheat Straw to Bacterial Cellulose and Its Mechanism. Bioresources Technology 135 : 464-468.

Chen, Hongzhang dan Wenjie Sui. 2015. Water Transfer in *Steam explosion Process on Corn Stalk.* Journal of Industrial Crops and Products Vol 76 : 977-986.

UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Chiaramonte, D., Prussi, M., Ferrero, S., Oriani, L., Ottonello, P., Torre, P., Cherchi, F., 2012. Review of Pretreatment Processes for Lignocellulosic Ethanol Production, and Development of An Innovative Method. Biomass Bioenergy 46, 25–35.

Ciolacu, D, Ciolacu, F., dan Popa, V.I. 2010. Amorphous Cellulose – Structure And Characterization. Cellulose Chem. Technol., 45 (1-2), 13-21.

Cui, L., Liu, Z., Si, C., Hui, L., Kang, N. dan Zhao, T. 2012. Influence of Steam Explosion on The Composition and Structure Wheat Straw. Journal of Bioresources 7 (3) : 4202-4213.

Datta, R. 1981. Acidogenic Fermentation of Lignocellulose. *Biotechnology and Bioengineering*. 23 : 2167-2170.

Durgin, A.G. 1957. The Alkaline Process. In : Calkin, J.B. and G.S. Witham, Sr (editor) Modern Pulp and Paper Making. 3ed. Reinhold Publishing Corp., New York, USA, pp. 121-156.

Duff, S dan Murray, W. 1996. Bioconversion of Forest Products Industry Waste Cellulosics to fuel ethanol: a review. *Bioresource Technol* **55**:1–33

Fan, S., Zhang, P., Li, F., Jin, S., Wang, S., dan Zhou S. 2016. A Review of Lignocellulose Change During Hydrothermal Pretreatment for Bioenergi Production. Current Organic Chemistry 20 : 1-11.

Fengel, D. dan Wegener, G. 1995. Kayu: Kimia Ultrastruktur, Reaksi-Reaksi. Terjemahan Hardjono Sastrohamidjojo dan Soenardi Prawirohatmodjo. Yogyakarta : Gadjah Mada University Press.

Ferdiansyah, M. K. 2013. Isolasi Selulosa dan Sintesis *Carboxy Methyl Cellulose (CMC)* dari pelepah Kelapa sawit. Tesis. Yogyakarta : FTP UGM.

Fazriani, A. 2016. Optimasi Sintesis dan Karakterisasi Metil Selulosa dari Kulit Biji Kakao (*Theobroma Cacao* L.). Tesis. Yogyakarta : FTP UGM.

Giligan, J.J. 1974. *The Organic Chemical Industry. Dalam J.L Pyle. Chemistry and the Thenological Backlash.* Prentice-Hall, Inc. New Jersey.

Gunam, I.B.W., N. Wartini, A.A.M.D. Anggreni, dan P.M. Suparyana. 2011. "Delignifikasi Ampas Tebu dengan Larutan Natrium Hidroksida Sebelum Proses Sakarifikasi Secara Enzimatis Menggunakan Enzim Selulase Kasar dari Aspergillus niger FNU 6018." *LIPI Press. Vol:34* (L) 24-32.

UNIVERSITAS GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Harmsen, P.F.H., Huijgen, W.J.J, Berudes Lopez, L.M., dan Bakker, R.R.C. 2010. Literature Review of Physical and Chemical Pretreatment Process for Lignocellulosic Biomass. Energy Research Center of Netherlands.

Harni, M.R., Iryani, A., dan Affandi, A. 2015.Pemanfaatan Serbuk Gergaji Jati (*Tectona grandis* L.f.) sebagai Adsorbent Logam Timbal (Pb). E-journal diakses dari https://www.researchgate.net/publication/316463237.

Hermiati, E., Mangunwidjaya, D., Sunarti, T., dan Prasetyo, B. 2010. Pemanfaatan Biomassa Lignoselulosa Ampas Tebu untuk Produksi Bioetanol. Jurnal Litbang Pertanian 29 (4) : 121-130.

Hidayat, M. R. 2013. Teknologi Pretreatment Bahan Lignoselulosa Dalam Proses Produksi Bioethanol. Biopropal Industri 4,1 : 33-48.

Hidayati, S. 1999. Pemutihan Pulp Ampas Tebu untuk Bahan Dasar Pembuatan CMC. Tesis. Yogyakarta. FTP : UGM.

Hidayati, S., Rahayu, K., dan Haryadi. 2000. Pemutihan Pulp Ampas Tebu untuk Bahan Dasar Pembuatan CMC. Agro Sains XIII (1) : 59-77.

Holtzapple, M. T. 2003. Hemicelluloses. In Encyclopedia of Food Sciences and Nutrition. pp : 3060-3071. Academic Press.

https://adiducation.com/manfaat-pembuangan-bunga-pada-kelapa-sawit kastrasi/#Wo2DEogxXIU

Hutomo, G.S.; Marseno, D.W.; Anggrahini, S. dan Supriyanto. 2012. Ekstraksi Selulosa dari *Pod Husk* Kakao Menggunakan Sodium Hidroksida. *Agritech.*32 (3): 223-229.

Ibrahim, M.M, Agblevor, F.A., dan El-Zawawy W.K. 2010. Isolation and Characterization of Cellulose and Lignin From Steam Exploded Lignocellulosic Biomass. *Journal of BioResources* 5(1) : 397- 418.

Intara, Yazid Ismi dan Dyah P, Banun. 2012. Studi Sifat Fisik dan Mekanik Parenkhim Pelepah Daun Kelapa sawit Untuk Pemanfaaat Sebagai Bahan Anyaman. Jurnal Agrointek 6 (1) : 36-44.

Jamilah. 2009. Kualitas Papan Komposit dari Limbah Batang Kelapa sawit (*Elaeis gueneensis* Jacq) dan Polyethilen (PE) Daur Ulang. Skripsi.

Jaquet, N, Maniet G. Vanderghem, C. Delvine F., dan Richel A. 2015. Application of *Steam explosion* As Pretreatment On Lignocellulosic Material : A Review. Ind. Eng. Che. Res.2015,54, 2593-2598.

UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Jonoobi, M., Khazaeian, A., Tahir, P.M., Azry, S.S. dan Oksman, K.. 2011. Characteristics of cellulose nanofibers isolated from rubberwood and empty fruit bunches of oil palm using chemo-mechanical process. Cellulose, 18: 1085-1095.

Kesuma, R.F. *et.al.* 2013. Karakteristik pori adsorben Berbahan baku Kaolin Capkala dan Zeolit Dealiminasi. Pontianak. Universitas Tanjung Pura.

Kun, W., Fang, W., Jian-Xin, J., Li-wei, Z., dan Hong-zhuai, F. 2007. Structure, Composition and Enzymatic Hydrolysis of Steam-exploded Lespedeza Stalk. For Stud. China 9 (2) : 137-141.

Kuo, C. dan Lee, C. 2008. Enhanced Enzymatic Hydrolysis of Sugarcane Bagasse by N-methylmorpholine-N-oxide Pretreatment. *Journal of Bioresources Technology*. 866-871.

Kuys, C., dan Abbort, J. 1996. Bleaching of Mechanical Pulps with Sodium bisulfit. Appita journal 49 (4). TAPPI journal 19 : 347-352.

Ladisch, M.R., 1989. Hydrolysis. In: Hall, C.W., Kitani, O. (Eds.), Biomass Hand Book.Gordon and Breach, London, pp. 434–451.

Lee, H.V., Hamid, S.B.A., dan Zain, S.K. 2014. Conversion of Lignocellulosic Biomass to Nanocellulose: Structure and Chemical Process. The Scientific World Journal Volume 2014. Article ID 631013. 20 pages.

Lehninger, A.L. 1993. *Dasar-dasar biokimia*. Jilid 1, 2, 3. Erlangga, Jakarta.

Lii, C., Tomasik, P., Zaleska, H., Liauw, H. dan Lai, V.M.F. 2002. Carboxymethylcellulose – Gelatin Complexes. *Carbohydrate Polymers*. 50 : 19-26.

Liu, W., Yuan, Z.R., Mao, C.B., Hou, Q.X., Li, K.C., 2012. Extracting hemicelluloses prior to aspen chemi-thermomechanical pulping: effects of pre-extraction on pulp properties. Carbohydr. Polym. 87, 322–327.

Liu, Z., Qin, L., Pang, F., Jin, M., Li, B., Kang, Y., Dalec, B.E., dan Yuan, Y. 2013. Effects of Biomass Particle Size On Steam Explosion Pretreatment Performance For Improving The Enzyme Digestibility of Corn Stover. Industrial Crops and Products 44 : 176– 184.

Lund, K., Sjostrom, K dan Brelid, H. 2012. Alkali Extraction of Kraft Pulp Fibers: Influence on Fiber and Fluff Pulp Properties. Journal of Engineered Fibers and Fabrics 7 : 30-39.

UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Menon V dan Rao M. 2012. Trends in bioconversion of lignocellulose: Biofuels, platform chemicals & biorefinery concept. *Progress in Energi and Combustion Science* 8(4): 522–550.

Menakshi, P., Noorjahan, S.E., Rajini, R., Venkatesvalu, U., Rose, C., dan Sastry, T.P. 2002. Mechanical anda Microstructure Study On The modification of Cellulose Acetat (CA) Film By Bleding With Polystiren. Buletin Material Science 25 (1) : 25-29.

Mussatto, S.I., dan J.A. Teixeira. 2010. "Lignocellulose as Raw Material in Fermentation Process." Technology and Education Topics in Applied Microbiology and Microbial Biotechnology 897-907.

Mutepe, R.D. 2012. Ethanol Production From Sweet Sorghum. Dissertation. North West University.

Ohgren, K., Bura., R., Saddler., dan Zacchi, G. 2007. Effect of Hemicellulose and Lignin Removal on Enzymatic Hydrolysis of Steam Pretreated Corn Stover. Bioresources Technology 98 : 2503-2510.

Overend, R.P dan Chornet, E. 1987. Fractionation of Lignocellulosic By Steam Aqueous Steam Explosion. Phil.Trans.R.Soc.Land A 321 :532-536.

Olesen, P., Plackett, D., 1999. Perspectives on the Performance of Natural Plant Fibres. In: Natural Fibres Performance Forum, Copenhagen. p. Copenhagen 27th-28th May 1999.

Padil. 2010. Proses Pembuatan Nitroselulosa Berbahan Baku Biomassa Sawit, Pengembangan dan Keberlanjutan Energi di Indonesia. ISBN 978-602-96729-0-9, 2A03.

Pujakaroni, A.S. 2014. Isolasi Selulosa dan Sintesis Sodium Karboksilmetil Selulosa dari Sabut Kelapa Sawit. *Tesis*. Program pasca sarjana UGM. Yogyakarta.

Pushpamalar, V., Langford, S.J., Ahmad, M. dan Lim, Y.Y. 2006. Optimization of Reaction Conditions for Preparing Carboxymethil Cellulose from Sago Waste**. C**arbohydrate Polymers**.** 64 : 312-318**.**

Rachmaniah, O., Krisnanta W, A. dan Ricardo, D. 2009. Acid Hydrolysis Perlakuan pendahuluan of Bagasse Lignocellulosic Material for Bioethanol Production. ITS : Surabaya.

Ramos, L. P. 2003. The Chemistry Involved in The Steam Treatment of Lignocellulosic Materials. Quin Nova 26 (6) : 863-871.

UNIVERSITAS GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Risza, Suyatno. 1994. Kelapa Sawit (Upaya Peningkatan Produkstivitas). Kanisius. Yogyakarta.

Rossel, C.M., Santos, E., dan Collar, C. 2009. Physico-chemical Properties of Commercial Fibers from Different Sources : A Comparative Approach. *Journal of Food Research International.* 42: 176-184.

Rowell, Roger M. 2012. *Handbook of Wood Chemistry and Wood Composites.* London: CRC Press.

Ruiz, H.A., Rodriguesz-Jasso, R.M., Fernandes, B.D., Vicente, A.A. dan Teixeira, J.A. 2013. Hydrothermal Processing as an alternative for upgrading agriculture residues and marine biomass accarding to the Biorefinery Concept : A review. Renewable and Sustainable Revies 21 : 35-51.

Sahmadi, 2006. Pengaruh Intensitas pencahayaan Terhadap Arah Pertumbuhan Kelapa Sawit. Departemen Pertanian Fakultas Pertanian Universitas Sumatera Utara Medan.

Saka, S., Munusamy, M.V., Shibata, M., Tono, Y. Dan Miyafugi, H. 2008. Chemical Constituents of The Different Anatomical Parts of The Oil Palm (*Elaeis gueneensis* Jacq) for Their Sustainable Utilization. Semonar Proceeding Natural Resources and Energy Environmental 24-25 November 2008 Halaman 19-24.

Sari, T. A. 2017. Optimasi Sintesis Dan Karakterisasi Metil Selulosa Dari Kulit Koro Pedang Putih (*Canavalia ensiformis* L. (DC). Tesis. Yogyakarta : FTP UGM.

Satriani, I. 2017. *Response Surface Methodology* (RSM) pada Sintesis *Carboxymethyl Cellulose* Dari Kulit Koro Pedang Putih (*Canavalia ensiformis l.*) : Variasi Konsentrasi NaoH Dan NaMCA. Skripsi. Yogyakarta. FTP : UGM.

Sebestyen, Z., Jakab, E., May, Z., Sipos, B dan Reczey, K. 2013. Thermal Behaviour of Native, Washed and Steam exploded Lignocellulosic Biomass Samples. Journal of Analytical and Applied Pyrolisis (2013) : 61-71.

Seidel, C.M., Pielhop, T., Studer, M.H. dan Von Rohr, P.R. 2017. The influence of The Explosive Decompression in steam Explosion Pretreatment On The Enzymatic Digestibility of Different Biomasses. Journal of Royal Society of Chemistry. Faraday Discussion.

Simatupang, H.M., Mohd Noor, M.A. dan Harun Bin Sarip. 1995. *Microcrystalline Cellulose* (MCC) dari Batang Kelapa Sawit dengan Menggunakan Ledakan Steam (*Steam explosion*). Makalah Simposium Nasional Polimer 1995. Jakarta.

UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Simatupang, H., Nata, A. Dan Herlina, N. 2012. Studi Isolasi dan Rendemen Lignin dari Tandan Kosong Kelapa sawit (TKKS). Jurnal Teknik Kimia USU 1 (1) : 20-24.

Sjostrom, E. 1981. Wood Chemistry: Fundamentals and Application. Academic Press, New York

Sjöström, E. 1998. Kimia Kayu. Dasar-dasar dan Penggunaan. Terjemahan Hardjono Sastrohamidjojo dan Soenardi Prawirohatmodjo. Yogyakarta : Gadjah Mada Universty Press.

Sudiani, Y, Waluyo, J., Riandy, A.P., Primandaru, P. Dan Novia. 2015. Pengaruh dan Waktu Tinggal pada Perlakuan Awal Bagas Sorgum dengan Metode Steam Explosion. Jurnal Teknik Kimia 4 (21) : 47-56.

Sun, Y.; Cheng, J. (2002). Hydrolysis of Lignocellulosic Materials for Ethanol Production : A Review. *Bioresource technology Y* 83 (1) : 1-11.

Sun, X.F., Xu, F., Sun, R.C., Fowler, P., dan Baird, M.S. 2005. Characteristics of Degraded Cellulose Obtained From Steam-exploded Wheat Straw. Carbohydrate Research 340 : 97-106.

Sun, T.S., Wang, K., Yang, G.H., Yang, H.Y., dan Xu, F. 2014. Hydrothermal treatment and enzymatic Saccharification of Corn Cob. Bioresources 9 (2) : 3000-3013.

Sumada, K., Tamara, P.E., dan Alkani, F. 2011. Isolation Study Of A Cellulose From Waste Plant Stem *Manihot esculenta Crantz.* Jurnal Teknik Kimia UPN Veteran Jawa Timur 5 (2) : 434-438.

Susana. 2011. Ekstrasi Selulosa dari Limbah Mahkota Nanas. Jurnal Vokasi 7 (1) : 87-94.

Suyanto, Heru. 2016. Review Serat : Komposisi, Struktur dan Sifat Mekanis. https://www.researchgate.net/publication/309421383. Diakses tanggal 16 Oktober 2017.

Syafii, W. 2000. Sifat Pulp Daun Kayu Lebar dengan Proses Organosolv. Jurnal Teknik Industri Pertanian.

Togrul, H dan Arslan, N. 2003. Flow Properties of Sugar Beet Pulp Cellulose and Intrinsic Viscosity – Molecular Weight Relationship**.** Carbohydrate Polymers Journal. 54 : 63-71.

UNIVERSITAS GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Umiyasih, Uum dan Anggraeny, Yeny Nur. 2003. Keterpaduan Sistem Usaha Perkebunan Dengan Ternak: Tinjauan Tentang Ketersediaan Hijauan Pakan Untuk Sapi Potong di Kawasan Perkebunan Kelapa Sawit. Lokakarya Sistem Integrasi Kelapa Sawit-Sapi. http://peternakan.litbang.pertanian.go.id/ fullteks/lokakarya/probklu0316.pdf?secure=1. Diakses tanggal 8 Aril 2016.

Valencia. N.V., Perez, E.G., Acevedo, E.A., Tovar, J., Ruales, J., dan Perez, L.A.B., (2007), Fibre Concentrate from Mango Fruit : Characterization, Associated Antioxidant Capacity and Application as a Bakery Product Ingredient. *Journal of LWT* 40 : 722-729.

Ventola, S.C. 2013. Isolasi Selulosa dan Sintesis Carboxymethyl Cellulose dari Tangkai Enceng Gondok (*Eichornia crassipes* Solm). Tesis. Yogyakarta : FTP UGM.

Wahyuningtyas, A. 2016. Sintesis dan Karakterisasi Methyl Cellulose (MC) dari Biji Salak (*Salacca edulis* Reinw) Pondoh Super. Tesis. Fakultas Teknologi Pertanian. Universitas Gadjah Mada. Yogyakarta.

Witayakran, S., dan Tanpichai, S. 2016. Properties of Cellulose Microfibers Extracted from Pineapple Leaves by Steam Explosion. Advanced Materials Research. Trans Tech Publication. Pp : 231-235.

Wustenberg, T. 2012. Cellulose and Cellulose Derivatives in the Food Industry: Fundamentals dan Applications. Wiley-VCH Verlag GmbH dan Co KGaA. Weinheim. Germany.

Xiao, X., Bian, J., Peng, X.P., Xu, H., Xiao, B., dan Sun, R.C. 2013. Autohydrolysis of Bamboo (*Dendrocalamus giganteus* Munro) culm for The production of xylo-oligosaccharides. Bioresources Technology 117 : 7-12.

Yu, P., Block, H., Niu, Z., dan Doiron, K. 2007. Rapid Characterization of Mollecular Chemistry Nutrient Make-up and Microlocation of Internal Seed tissue. Journal of Synchrontron Radiation 14 : 382-390.

Yu, Zhengdao., Bailiang Zhang, Fuqiang Yu, Guizhuan Xu, Andong Song. 2012. A Real Explosion : The Requirement of *Steam explosion Pretreatment.* Journal Bioresource Technology 121 : 335 – 341.

Zhang, Y. 2010. Hydrothermal Liquefaction to Convert Biomass into Crude Oil in Biofuels from Agricultural from Agricultural Wastes and By-products. Blackwell Publishing.

Zhang, S.Y., C.G. Wang, B.H. Fei, Y. Yu, H.T. Cheng, dan G.L. Tian. 2013. Mechanical Function of Lignin and Hemicelluloses in Wood Cell Wall

UNIVERSITAS
GADJAH MADA
STEAM EXPLOSION SEBAGAI PERLAKUAN PENDAHULUAN PADA ISOLASI SELULOSA PELEPAH KELAPA SAWIT (Elaeis gueneensis Jacq) MENGGUNAKAN METODE ALKALI
HELGA N. URSULA, Dr. Ir. Supriyadi, MSc; Prof. Dr. Ir. Supriyanto, MS
Universitas Gadjah Mada, 2018 | Diunduh dari http://etd.repository.ugm.ac.id/

Revealed with Microtension of Single Wood Fiber. *BioResources 8(2)* 2376-2385.

Zhou, C. dan Wu, Q. 2012. Recent Development in Applications of CelluloseNanocrystals for Advanced Polymer-Based Nanocomposites by Novel Fabrication Strategies. Intech. Croatia.

Zhu, J.Y., Pan, X.J., Wang, G.S., Gleisner, R., 2009. Sulfite pretreatment for robust enzymatic saccharification of spruce and red pine. Bioresour. Technol. 100, 2411–2418.