UNIVERSITAS
GADJAH MADA
**KAJIAN KARAKTERISTIK MEKANIK NANOFIBER POLYVINYL ALCOHOL/KITOSAN YANG DISTABILISASI DENGAN
PEMANASAN TERHADAP POTENSINYA SEBAGAI BIOMATERIAL**
RETNO NAMIRA W, Dr. Eng. Ahmad Kusumaatmaja, S.Si, M.Sc
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Ahn, Y. C., Park, S. K., Kim, G. T., Hwang, Y. J., Lee, C. G., Shin, H. S., dan Lee, J. K., 2006, Development of high efficiency nanofilters made of nanofibers. *Current Applied Physics*, 6(6 SPEC. ISS.), 1030–1035.

Agrawal, P., dan Pramanik, K., 2016. Chitosan-poly (vinyl alcohol) nanofibers by free surface electrospinning for tissue engineering applications. Tissue engineering and regenerative medicine, 13(5), 485-497

Alves, N. M., dan Mano, J. F., 2008, Chitosan derivatives obtained by chemical modifications for biomedical and environmental applications. *International Journal of Biological Macromolecules*, 43(5), 401–414.

Baji, A., Mai, Y., Wong, S., Abtahi, M. dan Chen, P., 2010, Electrospinning of Polymer Nanofibers: Effects on Oriented Morphology, Structures and Tensile Properties, Composites Science and Technology, 70, 703–718.

Bhattarai,N., Edmodson,D.,Veiseh,O.,Matsen,F.A.dan Zhang,M., 2005, Electrospun chitosan-based nanofibers and their cellular compatibility. *Biomaterials*, 26(31), 6176–6184.

Bhardwaj, N., dan Kundu, S. C. 2010, Electrospinning: A fascinating fiber fabrication technique. *Biotechnology Advances*, 28(3), 325–347.

Butler, R. J., 2007, The Effect of a Subject-Specific Amount of Lateral Wedge on Knee, *Journal of Orthopaedic Research September*, 25(6), 1121–1127.

Cay, A., Miraftab, M., dan Perrin Akçakoca Kumbasar, E., 2014, Characterization and swelling performance of physically stabilized electrospun poly(vinyl alcohol)/chitosan nanofibres. *European Polymer Journal*, 61, 253–262.

Daryanto, Ari., 2007, Eksperimen dan Analisis Pemodelan Uji Tarik Plat Logam (Sheet Metal) dengan Standar ASTM E 8M, Tesis, Universitas Muhammadiyah Surakarta, Surakarta.

Dhandayuthapani, B., Yoshida, Y., Maekawa, T. dan Kumar, D.S., 2011. Polymeric scaffolds in tissue engineering application: a review. *International journal of polymer science*, 1-19.

Ebewele, R. O., 2000, Polymer Science and Technology, CRC Press, New York.

El-Hefian, E.A., Nasef, M.M. and Yahaya, A.H., 2011. Preparation and characterization of chitosan/poly (vinyl alcohol) blended films: mechanical, thermal and surface investigations. *E-Journal of Chemistry*, *8*(1), pp. 91-96

.

UNIVERSITAS
GADJAH MADA
**KAJIAN KARAKTERISTIK MEKANIK NANOFIBER POLYVINYL ALCOHOL/KITOSAN YANG DISTABILISASI DENGAN
PEMANASAN TERHADAP POTENSINYA SEBAGAI BIOMATERIAL**
RETNO NAMIRA W, Dr. Eng. Ahmad Kusumaatmaja, S.Si, M.Sc
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Gad, S. E., 2014, *Polymers*, Encyclopedia of Toxicology, pp. 1045-1050.

GholipourK., A., Bahrami, S. H., dan Nouri, M., 2009. Chitosan-poly(vinyl alcohol) blend nanofibers: Morphology, biological and antimicrobial properties. *E-Polymers*, (133), 1–12.

Horikoshi, T., 2006, Properties of polyvinyl alcohol fiber as reinforcing materials for cementitious composites. *International RILEM Workshop on High Performance Fiber Reinforced Cementitious Composites in Structural Applications*, (1), 145–153.

Huang, J. J., Tian, Y., Wang, R., Tian, M., dan Liao, Y., 2020, Fabrication of bead-on-string Polyacrylonitrile Nanofibrous Air Filters with Superior Filtration Efficiency and Ultralow Pressure Drop. *Separation and Purification Technology*, 237.

Ignatova M, Starbova K, Markova N, Manolova N, Rashkov I. Electrospun nano-fibre mats with antibacterial properties from quater- nised chitosan and poly(vinyl alcohol). Carbohydr Res. 2006;341(12): 2098–2107.

Inkson, B. J., 2016, Scanning Electron Microscopy (SEM) and Transmission Electron Microscopy (TEM) for Materials Characterization, *Materials Characterization Using Nondestructive Evaluation (NDE) Methods*, pp. 17-43.

Jain, R., Shetty, S. dan Yadav, K. S., 2020, Unfolding the electrospinning potential of biopolymers for preparation of nanofibers. *Journal of Drug Delivery Science and Technology*, 57(1), 101-604.

Jia, Y.T., Gong,J., Gu,X.H., Kim,H.Y., Dong,J. dan Shen,X.Y., 2007, Fabrication and characterization of poly (vinyl alcohol)/chitosan blend nanofibers produced by electrospinning method, *Carbohydrate Polymers*, 67(3), 403–409.

Khairurrijal, Munir, M.M., Saehana, S., Iskandar, I., dan Abdullah, M., 2009, Teknik Pemintalan Elektrik untuk Pembuatan Nanoserat : dari Pemodelan hingga Eksperimen. *Jurnal Nanosains dan Nanoteknologi*, (c), 1–8.

Kheradmandi, M., 2016, Skeletal muscle regeneration via engineered tissue culture over electrospun nanofibrous chitosan/PVA scaffold. *Journal of Biomedical Materials Research - Part A*, 104(7), 1720–1727.

Koosha, M. dan Mirzadeh, H., 2015. Electrospinning, mechanical properties, and cell behavior study of chitosan/PVA nanofibers. *Journal of Biomedical Materials Research Part A*, *103*(9), pp. 3081-3093.

UNIVERSITAS
GADJAH MADA
**KAJIAN KARAKTERISTIK MEKANIK NANOFIBER POLYVINYL ALCOHOL/KITOSAN YANG DISTABILISASI DENGAN
PEMANASAN TERHADAP POTENSINYA SEBAGAI BIOMATERIAL**
RETNO NAMIRA W, Dr. Eng. Ahmad Kusumaatmaja, S.Si, M.Sc
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Koski, A., Yim, K., dan Shivkumar, S., 2004, Effect of molecular weight on fibrous PVA produced by electrospinning. *Materials Letters*, 58(3–4), 493–497.

Kumar, N., dan Kumbhat, S., 2016, *Essentials in Nanoscience and Nanotechnology*. *Essentials in Nanoscience and Nanotechnology*., 310-313.

Laurencin, C. T. dan Nair, L. S., 2008, *Nanotechnology and tissue engineering: The scaffold*, *Nanotechnology and Tissue Engineering: The Scaffold*. 329-351.

Lewandowska, K., 2009., Miscibility and thermal stability of poly (vinyl alcohol)/chitosan mixtures. *Thermochimica Acta*, *493*(1-2), 42-48.

Li, D., dan Xia, Y., 2004, Electrospinning of nanofibers: Reinventing the wheel?. *Advanced Materials*, 16(14), 1151–1170.

Lin, T., Fang J., Wang H., Cheng T., Wang X., 2006, Using chitosan as a thickener for electrospinning dilute PVA solutions to improve fibre uniformity. *Nanotechnology*, 17(15), 3718–3723.

Marín Cardona, E., Saint, Rojas Camargo, J., dan Ciro Monsalve, Y. A., 2014, A review of polyvinyl alcohol derivatives: promising materials for pharmaceutical dan biomedical applications. *African journal of pharmacy and pharmacology*, 8(24), pp. 674–684.

Mezzana, P., 2008. Clinical efficacy of a new chitin nanofibrils-based gel in wound healing. *Acta chirurgiae plasticae*, *50*(3), pp.81-84.

Miraftab, M., Saifullah, A. N., dan Cay, A., 2015. Physical Stabilisation of electrospun Poly(vinyl alcohol) nanofibers: comparative study on methanol and heat-based crosslinking. *J Mater Sci,* Volume 50, pp. 1943-1957.

Morgado, P.I., Miguel, S.P., Correia, I.J. dan Aguiar-Ricardo, A., 2017. Ibuprofen loaded PVA/chitosan membranes: A highly efficient strategy towards an improved skin wound healing. *Carbohydrate polymers*, *159*, pp. 136-145.

Mourya, V.K. and Inamdar, N.N., 2008, Chitosan-modifications and applications: Opportunities galore. *Reactive and Functional polymers*, *68*(6), pp.1013-1051.

Mozafari, M., 2012, Synthesis and characterization of electrospun polyvinyl alcohol nanofibrous scaffolds modified by blending with chitosan for neural tissue engineering. *International Journal of Nanomedicine*, 25.

Murugan, R., Ramakrishna, S., 2007, *Nanophase Biomaterials for Tissue Engineering*. *Nanotechnologies for the Life Sciences*. Singapore: World Scientific Publishing, 56-63.

UNIVERSITAS
GADJAH MADA
**KAJIAN KARAKTERISTIK MEKANIK NANOFIBER POLYVINYL ALCOHOL/KITOSAN YANG DISTABILISASI DENGAN
PEMANASAN TERHADAP POTENSINYA SEBAGAI BIOMATERIAL**
RETNO NAMIRA W, Dr. Eng. Ahmad Kusumaatmaja, S.Si, M.Sc
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Nair, L.S. dan Laurencin, C.T., 2007. Biodegradable polymers as biomaterials. *Progress in polymer science*, *32*(8-9), pp.762-798.

Paipitak, K., Pornpra, T., Mongkontalang, P., Techitdheer, W., dan Pecharapa, W., 2011, Characterization of PVA-chitosan nanofibers prepared by electrospinning', *Procedia Engineering*, 8, 101–105.

Părpăriţă, E., Cheaburu, C.N., Paţachia, S.F. dan Vasile, C., 2014. Polyvinyl alcohol/chitosan/montmorillonite nanocomposites preparation by freeze/thaw cycles and characterization. *Acta Chemica Iasi*, *22*(2), pp.75-96.

Puspitasari, I., 2017, Efek Rasio PVA/kitosan Terhadap Morfologi dan Karakteristik Swelling Nanofibernya, *Skripsi*, Fisika FMIPA Universitas Gadjah Mada.

Salihah, H., 2016, Pengoptimalan Konsentrasi Nanofiber Membran Kitosan/PVA dan Aplikasinya sebagai Filter Asap Rokok, Skripsi, FMIPA Fisika Universitas Gadjah Mada.

Sastranegara, A., 2009, Mengenal Uji Tarik dan Sifat-Sifat Mekanik Logam, pp. 1–3. Available at: http://www.infometrik.com/2009/09/mengenal-uji-tarik-dan-sifat-sifat-mekanik-logam/.

Shalumon, K., T., 2013, Effect of incorporation of nanoscale bioactive glass and hydroxyapatite in PCL/chitosan nanofibers for bone and periodontal tissue engineering', *Journal of Biomedical Nanotechnology*, 9(3), 430–440.

Shi, R., Bi, J., Zhang, Z., Zhu, A., Chen, D., Zhou, X., Zhang, L. and Tian, W., 2008, The effect of citric acid on the structural properties and cytotoxicity of the polyvinyl alcohol/starch films when molding at high temperature. *Carbohydrate polymers*, *74*(4), pp.763-770.

Sun, K., dan Li, Z., H., 2011, Preparations, properties and applications of chitosan based nanofibers fabricated by electrospinning. *Express Polymer Letters*, 5(4), 342–361.

Teo, W., E., dan Ramakrishna, S., 2006, A review on electrospinning design and nanofibre assemblies. *Nanotechnology*, 17(14), R89.

Tijing, L., Woo, Y., Yao, M., Ren, J., dan Shon, H., 2017, Electrospinning for Membrane Fabrication: Strategies and Applications. *Comprehensive Membrane Science and Engineering*, 418-444

Tyas A.Ari Wahyu.,2015,Efek Pemanasan pada Morfologi dan Kristalinitas Nanofiber *Poly(vinyl alcohol*, *Skripsi,* Jurusan Fisika FMIPA UGM, Yogyakarta.

UNIVERSITAS
GADJAH MADA
**KAJIAN KARAKTERISTIK MEKANIK NANOFIBER POLYVINYL ALCOHOL/KITOSAN YANG DISTABILISASI DENGAN
PEMANASAN TERHADAP POTENSINYA SEBAGAI BIOMATERIAL**
RETNO NAMIRA W, Dr. Eng. Ahmad Kusumaatmaja, S.Si, M.Sc
Universitas Gadjah Mada, 2022 | Diunduh dari http://etd.repository.ugm.ac.id/

Wardiningsih, D., 2019, Morfologi dan Sifat Mekanik Membran Polisulfon-Poliakrilonitril (PSF-PAN) Hasil Elektrospining, *Skripsi,* Fisika FMIPA Universitas Gadjah Mada.

Wong, K. K. H., Zinke-Allmang, M., dan Wan, W., 2010. Effect of annealing on aqueous stability and elastic modulus of electrospun poly(vinyl alcohol) fibers. *J Mater Sci,* Volume 2456-2465, p. 45.

Xie, X., Chen, Y., Wang, X., Xu, X., Shen, Y., Aldalbahi, A., Fetz, A.E., Bowlin, G.L., El-Newehy, M. and Mo, X., 2020. Electrospinning nanofiber scaffolds for soft and hard tissue regeneration. *Journal of Materials Science dan Technology*, *59*, pp.243-261.

Yang, Z., Peng, H., Wang, W., dan Liu, T., 2010, Crystallization behavior of poly(ε-caprolactone)/layered double hydroxide nanocomposites. *Journal of Applied Polymer Science*, 116(5), 2658-2667.

Yusuf, Y., Almukarrama., Permatasari, H. A., Januariyasa, I. K., Muarif, M. F., Anggraini, R. M., dan Wati, R., 2021, Karbonat Hidroksiapatit dari Bahan Alam, Gadjah Mada University Press: Yogyakarta.

Zhou, Y.S., Yang, D.Z. & Nie, J., 2007, Preparation and characterization of crosslinked chitosan-based nanofibers, Chinese Chemical Letters, 18(1),118– 120.