



DAFTAR PUSTAKA

- Abdulrachman, S., Witt, C., dan Buresh, R., 2002, *Pengembangan Metoda Pengelolaan Hara Spesifik Lokasi dan Pengelolaan Hara P dan K Pada Padi Sawah*, Balai Penelitian dan Pengembangan Pertanian, Bogor.
- Adam, G. D., Cook, I., and Ward, K. R., 2015, The principles of Freeze Drying, *Methods. Mol. Biol.*, 121-143.
- Al-Zaahrani, S. M., 2000, Utilization of Polyethylene and Paraffin Waxes as Controlled Delivery Systems for Different Fertilizers, *Ind. Eng. Chem. Res.*, 39, 367-371.
- Astiana, S., 2004, Penggunaan Bahan Mineral Zeolit Sebagai Campuran Pupuk Zeolit-Urea Tablet, *Skripsi*, Departemen Ilmu Tanah dan Sumberdaya Lahan, Fakultas Pertanian IPB, Bogor.
- Belitz, H.D., Grosch, W., and Schieberle, P., 2008, *Food Chemistry 4th Ed.*, Springer-Verlag, Berlin.
- Byung-Su, K., Young-Sang, C and Hyun-Ku, H, 1996, Controlled release of urea from rosin-coated fertilizer particles, *Ind. Eng. Chem. Res.*, 35, 250-257.
- Chaplin, M., 2005, *Alginat, Water Structure and Behavior Applied Science*, London South Bank University, London.
- Ciurzyńska, A and Lenart, A., 2011, Freeze-Drying – Application in Food Processing and Biotechnology – A Review Pol, *J. Food Nutr. Sci.*, 61 (3), 165-171.
- Costa, P. and Lobo, J. M. S., 2001, Modeling and Comparison of Dissolution Profiles-Review, *Eur. J. Pharm. Sci.*, 13, 123-133.
- Dash, S., Chowdhury, P., Murthy, P. N. and Nath, L., 2010, Kinetic Modeling on Drug Release from Controlled Drug Delivery System, *Acta. Pol. Pharm*, 67(3), 217-223.
- Day, J. G., and Stacey, G., 2007, *Cryopreservation and Freeze-drying Protocols*, Springer Science and Business Media, Berlin.
- Draget, K., Smidsrod, O., and Skjak-Braek, B., 2005, Alginates from Algae, *J. Biopolym.*, 1-30.
- Du, 2006, Release Characterisation of Nutrients from Polymer-Coated Compound Controlled Release Fertilizer, *J. Polym. Environ.*, 14, 223-230



- Fehragucci, H., 2012, Pengaruh Penambahan Plasticizer dan Kitosan terhadap Karakter Edibel Film Ca-Alginat, *Skripsi*, Departemen Kimia FMIPA UNS, Surakarta.
- George, M., and Abraham, T. E., 2006, Polyionic Hydrocolloids for the Intestinal Delivery of Protein Drugs: Alginate and Chitosan-a Review, *J. Control. Release.*, 114 (1), 1-14.
- Guo, M., Liu, M., Hu, Z., Zhan, F., and Wu, L., 2005, Preparation and properties of a slow release NP compound fertilizer with superabsorbent and moisture preservation, *Inc. J. Appl. Polym. Sci.*, 96, 2132–2138.
- Gouda. R., and Baisya. H., and Qing. Z., 2017, Application of Mathematical Models in Drug Release Kinetics of Carbidspu and Levodopa ER Tablet, *J. Develop Drug*, 6 (2), 1-8.
- Gregorich, Edward. G., Turchenek, L.W., Carter, M.R., Angers, and Denis A., 2001, *Soil and Environmental Science Dictionary*, CRC press, Amerika Serikat.
- Hakim, N., Nyakpa, M.Y., Lubis, A. M., Nugroho, S.G., Saul, M. A., Diha, M.A., Hong, G. B., dan Bailey, H.H., 1986, *Dasar-Dasar Ilmu Tanah*, Universitas Lampung, Lampung.
- Hardjowigeno, S, 2003, *Ilmu Tanah*, Akademi Pressindo, Jakarta.
- Hilman, Y dan Noordiyati, I., 1988, Pengujian Pemupukan P dan K Berimbang Pada Tanaman Bawang Putih di Tanah Sawah, *Bul. Penel. Hort.*, 1(16), 48-54.
- Ibrahim, A.S dan Kasno, A., 2008, *Interaksi pemberian kapur pada pemupukan urea Terhadap kadar N tanah dan serapan N tanaman Jagung (Zea mays. L)*, Balai Penelitian Tanaman Pangan, Semarang.
- Inukai, M and Yonese, M., 1999, Effect of Charge Density on Drug Permeability Through Alginate Gel Membranes, *Chem. Pharm. Bull.*, 8 (47), 1059-1069.
- Jang, L.K., Nguyen, D and Geesey, G.G., 1995, Selectivity of alginate gel for Cu vs Co, *Water Research*, 29 (1), 307-313.
- Jones, U.S., 1982, *Fertilizers and Soil Fertility*, 2nd Ed. Reston Publ. Co. Reston, Virginia.
- Jork, A., Thurmer, F., Cramer, H., Zimmermann, G., Gessner, P., Hamel, K., Hofmann, G., Kuttler, B., Hahn, H.J., Josimovic Alasevic, O., Fritsch, K.G., and Zimmermann, U., 2000, Biocompatible alginate from freshly collected *Laminaria pallida* for implantation, *Appl. Microbiol. Biotechnol.*, 53, 224– 229.



- Kalam, M.A., Humayun, M., Parvez, N., Yadav, S., Garg, A., Amin, S., and Ali, A., 2007, Release Kinetics of Modified Pharmaceutical Dosage Forms : A Review, *J. Pharm. Sci.*, 42, 1609.
- Kastono dan Dody, 2005, Pengaruh Nomor Ruas Stek dan Dosis Pupuk Urea terhadap Pertumbuhan dan Hasil Kumis Kucing, *J. Ilmu Pertanian*, 1(12), 56-64.
- Kenawy, E and Sakran, M.A., 1996, Controlled Release Formulations of Agrochemicals from Calcium Alginate, *Ind. Eng. Chem. Res.*, 35 (10) 3726-3729.
- Klech, C.M and Simonelli, A.P., 1989, Examination of the moving boundaries associated with non-Fickian water swelling of glassy gelatin beads: Effect of solution pH, *J. Membr. Sci.*, 43, 87-101.
- Korsmeyer, R.W., Gurny, R., Doelker, E.M., Buri, P., and Peppas, N.A., 1983, Mechanism of Solute Release from Porous Hydrophilic Polymers, *Int. J. Pharm.*, 15(1), 25-35.
- Kyzas, G.Z., dan Deliyanni, E.A., 2013, Mercury (II) Removal with Modified Magnetic Chitosan Adsorbents, *J. Molecules.*, 18(6), 6193-6214.
- Liu, Y.H., Wang, T.J., Qin. L., and Jin, Y., 2008, Urea particle coating for controlled release by using DCPD modified sulfur, *Powder Technology*, 183, 88-93.
- Leiwakabessy, F.M., dan Sutandi, A., 2004, *Diktat Kuliah Pupuk dan Pemupukan*, Departemen Tanah Fakultas Pertanian IPB, Bogor.
- Loper, S. and Shober, A. L., 2012, Soils and Fertilizers for Master Gardeners: Glossary of Soil and Fertilizer Terms SL 277, *Thesis*, Gainesville University of Florida Institute of Food and Agricultural Sciences, Florida.
- Mahbub, A. G., 2012, Studi Ekstraksi Alginat dari Biomassa Rumput Laut Coklat (*Sargassum Crassivolum*) sebagai Adsorben dalam Biosorpsi Ion Logam Cadmium (II), *Skripsi*, Departemen Kimia FMIPA, UI.
- McHugh, D.J., 2003, *A Guide To The Seaweed Industry. FAO Fisheries Technical Paper 44*, Food and Agriculture Organization Of The United Nation, Rome.
- Mishra, M. M., Yadav, M., Sand, A., Tripathy, J., and Behari, K., 2010, Water soluble graft copolymer (κ -carrageenan-g-N-vinyl formamide): Preparation, characterization and application, *Carbohydrate Polymers*, 80(1), 235-241.
- Morch, A.Y., 2008, Novel Alginate Microcapsules For Cell Therapy-A Study Of The Structure-Function Relationships in Native and Structurally Engineered Alginates, *Thesis*, Department of Biotechnology Faculty of Natural



- Sciences and Technology, University of Science and Technology, Norwegian.
- Nurtika, N dan Sumarni, N., 1992, Pengaruh sumber, dosis dan waktu aplikasi pupuk kalium terhadap pertumbuhan dan hasil tomat, *Bul Penel. Hort.*,1(22), 96-101.
- Novizan, 2002, *Petunjuk Pemupukan yang Efektif*, Agromedia Pustaka, Jakarta.
- Oates, C. G., and Ledward, D. A., 1990, Studies on the effect of heat on alginates, *Food Hydrocolloids*, 4(3), 215-220.
- Pamies, R., Ricardo, R. S., Maria, C. L. M., and Jose, G. T., 2010, The Influence of Mono and Divalent Cations on Dilute and Non-Dilute Aqueous Solutions of Sodium Alginates, *Carbohyd. Polym.*, 80, 248-253.
- Pattanayak, D. K., Divya, P., Upadhyay, S., Prasad, R.C., Rao, B. T., dan Mohan, T. R. R., 2005, *Synthesis and Evaluation of Hydroxyapatite Ceramics*, Trends Biomater Artif Organs, 2(18).
- Purbayanti, E. D., Lukiwati, D. R., dan Trimulatsih. R., 1998, *Dasar- Dasar Ilmu Tanah* (diterjemahkan dari Foth and Donald, H., 1984, Fundamentals of Soil Science, 7th Ed., Wiley, New York), Gajah Mada University Press, Yogyakarta.
- Purwiyatno, H., 2013, Freezing Drying Technology: For Better Quality dan Flavor of Dried Products. *Food Review Indonesia*, 2(8), 52-56.
- Rehm and Bernard, H.A., 2009, *Alginates: Biology and Applications*, Springer-Verlag Berlin Heidelberg, Berlin.
- Ridlo, K., 2016, Pengaruh Konsentrasi Ion K⁺ terhadap Pelepasan Fe(III) dalam Komposit Alginat/Zeolit/Fe/K, *Skripsi*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Rindler, V., Lu^{ne}berger, S., Schwindke, P., Heschel, I and Rau, G., Freeze-Drying of Red Blood Cells at Ultra-Low Temperatures, *Cryobiology*, 38(1), 2-15.
- Rocher, V., Siaugue J., Cabuil V., and Agne`s B., 2008, Removal of Organic Dyes by Magnetic Alginate Beads, *Water Research*, 42 (5), 1290-1298.
- Salikin, K.A., 2003, *Sistem Pertanian Berkelanjutan*, Kanisius, Yogyakarta.
- Sari, V.I., 2013, Peran Pupuk Organik Dalam Meningkatkan Efektivitas Pupuk NPK Pada Bibit Kelapa Sawit (*Elaeis Guineensis* Jacq), di Pembibitan Utama, *Tesis*, Departemen Pertanian IPB, Bogor.
- Shaviv, A., dan Mikkelsen, R.L., 1993, Controlled-Release Fertilizers to Increase Efficiency of Nutrient Use and Minimize Environmental Degradation a Review, *Fertilizer Research*, 35, 1-12.



- Shukla, S., 2011, Freeze Drying Process: A Review, *Int. J. Self. Propag.*, 2(12), 3061-3068.
- Sumiati, E., 1983, Pengaruh Zat Pengatur Tumbuh dan Pupuk Daun, Biokimia terhadap Hasil Tanaman Tomat (*Lycopersicum esculentum Mill L.*), *Bul. Penel. Hort.*, 3(10), 21-7.
- Susilo. H., 1991, *Fisiologi Tanaman Budidaya* (diterjemahkan dari Gardner, F. P., Pearce, R. B dan Mitchell, R. L., 1985, *Physiology of Crop Plants*, Iowa State University Press, USA), UI Press, Jakarta.
- Suwandi dan Nurtika, N., 1997, Pengaruh Pupuk Cair Biokimia “Sari Humus” pada Tanaman Kubis, *Bul. Penel. Hort.*, 15(20), 213-218.
- Soegiman., 1982, *Ilmu Tanah* (diterjemahkan dari Buckman, H. O., and Brady, N. C, 1966, *The Nature and Properties of Soils*, 6th Ed., Nabu Press, New York), Bhratara Karya Aksara, Jakarta.
- Sonia, T., and Sharma, C., 2011, Chitosan and Its Derivatives for Drug Delivery Perspective, *Adv. Polym. Sci.*, 243, 23-54.
- Trenkle, M. E., 2010, *Slow-and Controlled Release and Stabilized Fertilizer: An Option for Enhancing Nutrient Use Efficiency in Agriculture*, International Fertilizer Industry Association, Paris.
- Trinh, T.H and Kushaari, K., 2016, Dynamic of water absorption in controlled release fertilizer and its relationship with the release of nutrient, *Proc. Eng.*, 148, 319-326.
- Velez, G., Fernandez, M. A., and Munoz, J., 2003, Role of Hydrocolloids in the Creaming of Oil in Water Emulsions, *J. Agric. Food Chem.*, 51, 265–269.
- Wang, Q., Dong, Z., dan Du, Y., 2006, Alginate/Gelatin Films and Their Properties for Drug Controlled Release, *J. Membr. Sci.*, 1, 37-44.
- Wang, X., Chang, P.R., Li, Z., Wang, H., Liang, H., Cao, X., and Chen., Y., 2011, Chitosan-Coated Cellulose/Soy Protein Membranes with Improved Physical Properties and Hemocompatibility, *BioResources*, 6(2), 1392-1413.
- Widjono, A., 2007, *Padi Panduan Praktis Pengelolaan Hara* (diterjemahkan dari Fairhurst, T. C., Buresh W and Doberman, A., *Nutrient Disorders and Nutrient Management*, 2000, 1st Ed., IRRI Oxford Graphic Printers Pte Ltd, Singapore), IRRI, Jakarta.
- Woodward, J., 1985, *Immobilized Cells and Enzymes*, IRL Press, Oxford.
- Wu, Lan., Mingzhu, L., and Rui, L., (2008), Preparation and Properties of Double Coated Slower-Release NPK Compound Fertilizer with Superabsorbent and Water Retention, *Bioresour. Technol.*, 99, 547-554.