

## DAFTAR PUSTAKA

- Agarwal, M., Agarwal, M.K., Shrivastav, N., Pandey, S., Das, R., dan Gaur, P., 2018, Preparation of Chitosan Nanoparticles and their In-vitro Characterization, *Int. J. Life-Sciences Sci. Res.*, 4, 1713–1720.
- Agustina, S., Swantara, I., dan Suartha, I., 2015, Isolasi Kitin, Karakterisasi, dan Sintesis Kitosan Dari Kulit Udang, *J. Kim.*, 9, 271–278.
- Aider, M., 2010, Chitosan Application for Active Bio-based Films Production and Potential in the Food Industry: Review, *LWT - Food Sci. Technol.*, 43, 837–842.
- Al Shaqsi, N.H.K., Al Hoqani, H.A.S., Hossain, M.A., dan Al Sibani, M.A., 2020, Isolation, Characterization and Standardization of Demineralization Process for Chitin Polymer and Minerals from the Crabs Waste of Portunidae Segnis, *Adv. Biomark. Sci. Technol.*, 2, 45–58.
- Amin, A., Khairi, N., dan Allo, E., 2019, Sintesis dan Karakterisasi Kitosan dari Limbah Cangkang Udang Sebagai Stabilizer Terhadap Ag Nanopartikel, *Fuller. J. Chem.*, 4, 86.
- Anonim, 2020, *Statistik Ekspor Hasil Perikanan Tahun 2015-2019*, Kementerian Kelautan dan Perikanan, Jakarta.
- Bezerra, M.A., Santelli, R.E., Oliveira, E.P., Villar, L.S., dan Escaleira, L.A., 2008, *Response Surface Methodology (RSM) as a Tool for Optimization in Analytical Chemistry*, *Talanta*, 76, 965–977.
- Cardenas, G., Cabrera, G., Taboada, E., dan Miranda, S.P., 2004, Chitin Characterization by SEM, FTIR XRD, and <sup>13</sup>C Cross Polarization/Mass Angle Spinning NMR, *J. Appl. Polym. Sci.*, 93, 1876-1885.
- Chaudhary, S., Kumar, S., Kumar, V., dan Sharma, R., 2020, Chitosan Nanoemulsions as Advanced Edible Coatings for Fruits and Vegetables: Composition, Fabrication and Developments in Last Decade, *Int. J. Biol. Macromol.*, 152, 154–170.
- Chen, H., Khemtong, C., Yang, X., Chang, X., dan Gao, J., 2011, Nanonization Strategies for Poorly Water-soluble Drugs, *Drug Discov. Today*, 16, 354–360.
- Divya, K., Rebello, S., dan Jisha, M.S., 2014, A Simple and Effective Method for Extraction of High Purity Chitosan from Shrimp Shell Waste, *Int. Conf. Adv. Appl. Sci. Environ. Eng.*, 141–145.

- Dompeipen, E.J., Kaimudin, M., Dewa Balai Riset dan Standarisasi Industri Ambon, R.P., Cengkeh, J., dan Merah Ambon, B., 2016, Isolasi Kitin dan Kitosan Dari Limbah Kulit Udang, *Maj. BIAM*, 12, 32–39.
- Ernes, A., Ratnawati, L., Wardani, A.K., dan Kusnadi, J., 2014, Optimasi Fermentasi Bagas Tebu oleh *Zymomonas mobilis* CP4 (NRRL B-14023) Untuk Produksi Bioetanol, *J. Agritech*, 34, 247.
- Fachry, A.R. dan Sartika, A., 2012, Pemanfaatan Limbah Kulit Udang dan Limbah Kulit Ari Singkong sebagai Bahan Baku Pembuatan Plastik Biodegradable, *J. Tek. Kim.*, 18, 1–9.
- Gadgey, K.K. dan Dey, S., 2017, Development of Chitin and Chitosan from Narmada Riverside Crab Shells, *Int. J. Mech. Eng. Technol.*, 8, 298–307.
- Gupta, P.K., Pandit, J.K., Kumar, A., Swaroop, P., dan Gupta, S., 2010, Pharmaceutical Nanotechnology Novel Nanoemulsion-High Energy Emulsification Preparation, Evaluation and Application the Pharma Research, a Journal, *Ph. Res. Pharma Res. (T. Ph. Res.)*, 3, 117–138.
- Gurpret, K. dan Singh, S.K., 2018, Review of Nanoemulsion Formulation and Characterization Techniques, *Indian J. Pharm. Sci.*, 80, .
- Jafari, S.M., Assadpoor, E., He, Y., dan Bhandari, B., 2008, Re-coalescence of Emulsion Droplets During High-Energy Emulsification, *Food Hydrocoll.*, 22, 1191–1202.
- Jaworska, M., Sikora, E., dan Ogonowski, J., 2014, The Influence of Glicerides Oil Phase on O/W Nanoemulsion Formation by Pic Method, *Period. Polytech. Chem. Eng.*, 58, 43–48.
- Kale, S.N. dan Deore, S.L., 2016, Emulsion Micro Emulsion and Nano Emulsion: A Review, *Syst. Rev. Pharm.*, 8, 39–47.
- Kalkan, O., Topkafa, M., dan Kara, H., 2021, Determination of effect of some parameters on formation of 2-monochloropropanediol, 3-monochloropropanediol and glycidyl esters in the frying process with sunflower oil, by using central composite design, *J. Food Compos. Anal.*, 96, 103681.
- Kandile, N.G., Zaky, H.T., Mohamed, M.I., Nasr, A.S., dan Ali, Y.G., 2018, Extraction and Characterization of Chitosan from Shrimp Shells (Egypt: Case Study), *J. Sci. Res. Sci.*, 33, 396–407.
- Karimirad, R., Behnamian, M., dan Dezhsetan, S., 2019, Application of Chitosan Nanoparticles Containing Cuminum Cyminum Oil as a Delivery System for Shelf Life Extension of *Agaricus Bisporus*, *Lwt*, 106, 218–228.

- Kommuru, T.R., Gurley, B., Khan, M.A., dan Reddy, I.K., 2001, Self-emulsifying Drug Delivery Systems (SEDDS) of Coenzyme Q10: Formulation Development and Bioavailability Assessment, *Int. J. Pharm.*, 212, 233–246.
- Kusmiati, A.R. dan Hayati, N., 2020, Pemanfaatan Kitosan dari Cangkang Udang sebagai Adsorben Logam Berat Pb pada Limbah Praktikum Kimia Farmasi, *Indones. J. Lab.*, 3, 6.
- Lee, D.W., Lim, H., Chong, H.N., and Shim, W.S., 2009, Advances in Chitosan Material and its Hybrid Derivatives: A Review, *Open Biomater. J.*, 1, 10–20.
- Liu, Y., Liu, C., Zhang, S., Li, J., Zheng, H., Jin, H., dan Xu, J., 2021, Comparison of different Protein Emulsifiers on Physicochemical Properties of  $\beta$ -carotene-loaded Nanoemulsion: Effect on Formation, Stability, and in vitro Digestion, *Nanomaterials*, 11, 1–18.
- Manohar, M. dan Jomy Joseph, T.S., 2013, Application of Box Behnken Design to Optimize the Parameters for Turning Inconel 718 using Coated Carbide Tools, *Int. J. Sci. Eng. Res.*, 4, 620–642.
- Mima, S., Miya, M., Iwamoto, R., dan Yoshikawa, S., 1983, Highly Deacetylated Chitosan and its Properties, *J. Appl. Polym. Sci.*, 28, 1909–1917.
- Montgomery, D.C., 2013, Design and Analysis of Experiments, Eighth. John Wiley and Sons, Inc., Arizona.
- Muzzarelli, R.A.A. dan Peter, M.G., 1997, *Chitin Handbook*, European Chitin Society.
- Myers, R.H., 1971, *Response Surface Methodology*, Allyn & Bacon, Inc, Boston.
- No, H.K. dan Meyers, S.P., 1995, Preparation and Characterization of Chitin and Chitosan-a Review, *J. Aquat. Food Prod. Technol.*, 4, 27–52.
- Nuralam, E., Arbi, B.P., dan Prasetyowati, 2012, Pemanfaatan Limbah Kulit Kepiting Menjadi Kitosan Sebagai Penjernih Air pada Air Rawa dan Air Sungai, *J. Tek. Kim.*, 18, 14–20.
- Nurhikmawati, F., Manurung, M., dan Mayun Laksmiwati, A., 2014, Penggunaan Kitosan dari Limbah Kulit Udang sebagai Inhibitor Keasaman Tuak, *J. Kim.*, 8, 191–197.
- Nurmala, A.N., Budi Susatyo, E., dan Mahatmanti, F.W., 2018, Indonesian Journal of Chemical Science Sintesis Kitosan dari Cangkang Rajungan Terkomposit Lilin Lebah dan Aplikasinya sebagai Edible Coating pada Buah Stroberi, *J. Chem. Sci*, 7, .

- Ongkowijoyo, S., Mulyana, I.J., dan Mulyono, J., 2016, Penentuan Parameter Setting Mesin Pada Proses Corrugating, 11, 22–28.
- Patel, H.C., Parmar, G., Seth, A.K., Patel, J.D., dan Patel, S., 2013, Formulation and Evaluation of O/W Nanoemulsion of Ketoconazole, *Pharma Sci. Monit.*, 4, 338–351.
- Rahayu, P. dan Khabibi, K., 2016, Adsorpsi Ion Logam Nikel (II) oleh Kitosan Termodifikasi Tripolifosfat, *J. Kim. Sains dan Apl.*, 19, 21.
- Rinaudo, M., 2006, Chitin and Chitosan: Properties and Applications, *Prog. Polym. Sci.*, 31, 603–632.
- Rowe, R.C., Sheskey, P.J., dan Quinn, Marian, E., 2009, Handbook of Pharmaceutical Excipients, Pharmaceutical Press.
- Salami, L., 1998, Pemilihan Metode Isolasi Kitin dan Ekstraksi Kitosan dari Limbah Kulit Udang Windu (*Peneraus monodon*) dan Aplikasinya sebagai Bahan Koagulasi Limbah Cair Industri Tekstil, *Skripsi*, Jurusan Kimia FMIPA UI, Jakarta.
- Salvia-Trujillo, L., Qian, C., Martín-Belloso, O., dan McClements, D.J., 2013, Modulating  $\beta$ -carotene Bioaccessibility by controlling Oil Composition and Concentration in Edible Nanoemulsions, *Food Chem.*, 139, 878–884.
- Sarjono, P.R., Ismiyarto, Ngadiwiyan, Adiwibawa Prasetya, N.B., Rosydhaulfa, Ariestiani, B., Kusuma, A.B., Darmastuti, N.E., dan Rohman, J.H.F., 2019, Antioxidant Activity from Limonene Encapsulated by Chitosan, *IOP Conf. Ser. Mater. Sci. Eng.*, 509, .
- Sato, Y., Baba, H., Yoneyama, C., dan Inomata, H., 2019, Development of a Rolling Ball Viscometer for Simultaneous Measurement of Viscosity, Density, Bubble-point Pressure of CO<sub>2</sub>-Expanded Liquids, *Fluid Phase Equilib.*, 487, 71–75.
- Shah, P., Bhalodia, D., dan Shelat, P., 2010, Nanoemulsion: A pharmaceutical review, *Syst. Rev. Pharm.*, 1, 24–32.
- Silalahi, A.M., Fadholah, A., dan Artanti, L.O., 2020, Isolasi dan Identifikasi Kitin dan Kitosan dari Cangkang Susuh Kura (*Sulcospira testudinaria*), *Pharmashipa*, 4, 1–9.
- Son, H.Y., Lee, M.S., Chang, E., Kim, S.Y., Kang, B., Ko, H., Kim, I.H., Zhong, Q., Jo, Y.H., Kim, C.T., dan Kim, Y., 2019, Formulation and Characterization of Quercetin-loaded Oil in Water Nanoemulsion and Evaluation of hypocholesterolemic Activity in Rats, *Nutrients*, 11, .

- Sondari, D. dan Tursiloadi, S., 2018, The Effect of Surfactant on Formulation and Stability of Nanoemulsion Using Extract of *Centella Asiatica* and *Zingiber Officinale*, *AIP Conf. Proc.*, 2049, 5–10.
- Srinivasan, H., Kanayairam, V., dan Ravichandran, R., 2018, Chitin and Chitosan Preparation from Shrimp Shells *Penaeus monodon* and its Human Ovarian Cancer Cell Line, PA-1, *Int. J. Biol. Macromol.*, 107, 662–667.
- Stephanie, 2015, Pengaruh Variasi Fase Minyak Virgin Coconut Oil dan Medium-Chain Triglycerides Oil Terhadap Stabilitas Fisik Nanoemulsi Minyak Biji Delima dengan Kombinasi Surfaktan Tween 80 dan Kosurfaktan PEG 400, *Skripsi*, Fakultas Farmasi, Universitas Sanata Dharma, Yogya.
- Sun, D.X. dan Wu, C.F.J., 1994, Interaction Graphs for Three-level Fractional Factorial Designs, *J. Qual. Technol.*, 26, 297–307.
- Taurina, W., Sari, R., Hafinur, U.C., Wahdaningsih, S., dan Isnindar, 2017, Optimasi Kecepatan dan Lama Pengadukan Terhadap Ukuran Nanopartikel Kitosan-Ekstrak Etanol 70% Kulit Jeruk Siam (*Citrus nobilis L. var Microcarpa*), *Tradit. Med. J.*, 22, 17–19.
- Tesch, S. dan Schubert, H., 2002, Influence of Increasing Viscosity of the Aqueous Phase on the Short-Term Stability of Protein Stabilized Emulsions,.
- Trinh, T.K. dan Kang, L.S., 2011, Response Surface Methodological Approach to Optimize the Coagulation-Flocculation Process in Drinking Water Treatment, *Chem. Eng. Res. Des.*, 89, 1126–1135.
- Volker, A., 2009, *Dynamic Light Scattering, Measuring the Particle Size Distribution*.
- Wahyuningsih, I. dan Putranti, W., 2015, Optimasi Perbandingan Tween-80 dan Polietilenglikol 400 pada Formula Self Nanoemulsifying Drug Delivery System (SNEDDS) Minyak Biji Jinten Hitam, *Pharmacy*, 12, 223–241.
- Yan, N. dan Chen, X., 2015, Don't Waste Seafood Waste: Turning Cast-off Shells into Nitrogen-Rich Chemicals Would Benefit Economics and The Environment, *Nature*, 524, 155-157.
- Younes, I. dan Rinaudo, M., 2015, Chitin and Chitosan Preparation from Marine Sources. Structure, Properties and Applications, *Mar. Drugs*, 13, 1133–1174.
- Yuan, Y., Gao, Y., Zhao, J., dan Mao, L., 2008, Characterization and Stability Evaluation of  $\beta$ -carotene Nanoemulsions Prepared by High Pressure Homogenization Under Various Emulsifying Conditions, *Food Res. Int.*, 41, 61–68.

Yuliani, S.H., Hartini, M., Stephanie, Pudyastuti, B., dan Istyastono, E.P., 2016, Perbandingan Stabilitas Fisis Sediaan Nanoemulsi Minyak Biji Delima dengan Fase Minyak Long-Chain Triglyceride dan Medium Chain Triglyceride, *Tradit. Med. J.*, 21, 3–7.

Yuliusman and P. W., A., 2010, Proses Adsorpsi Logam Nikel dari Larutan  $\text{NiSO}_4$ , *Prosiding Seminar Rekayasa Kimia dan Proses 2010*, pp. 1–7.