

## DAFTAR PUSTAKA

1. Tiyaaboncjai W . Chitosan nanoparticles: A promising system for drug delivery. Naresuan Univ J. 2003;11(3):51–66.
2. Services U. D of H and H. Antibiotic resistance threats in the United States. Centers Dis Control Prev [Internet]. 2013;1–113. Available from: [https://www.cdc.gov/drugresistance/biggest\\_threats.html](https://www.cdc.gov/drugresistance/biggest_threats.html)
3. Wang Q, Hamilton PB, Kang F, Zhu X, Zhang Y, Zhao H. Regional-scale investigation for microbial competition-through-environment interactions modulating antibiotic resistance. Sci Total Environ [Internet]. 2020;734:139341. Available from: <https://doi.org/10.1016/j.scitotenv.2020.139341>
4. Dmour I, Taha MO. Chapter 2. Natural and semisynthetic polymers in pharmaceutical nanotechnology [Internet]. Organic Materials as Smart Nanocarriers for Drug Delivery. Elsevier Inc.; 2018. 35–100 p. Available from: <http://dx.doi.org/10.1016/B978-0-12-813663-8.00002-6>
5. Agnihotri SA, Mallikarjuna NN, Aminabhavi TM. Recent advances on chitosan-based micro- and nanoparticles in drug delivery. J Control Release. 2004;100(1):5–28.
6. Antoniou J, Liu F, Majeed H, Qi J, Yokoyama W, Zhong F. Colloids and Surfaces A : Physicochemical and Engineering Aspects Physicochemical and morphological properties of size-controlled chitosan – tripolyphosphate nanoparticles. Colloids Surfaces A Physicochem Eng Asp [Internet].

2015;465:137–46. Available from:  
<http://dx.doi.org/10.1016/j.colsurfa.2014.10.040>

7. Fan W, Yan W, Xu Z, Ni H. Formation mechanism of monodisperse, low molecular weight chitosan nanoparticles by ionic gelation technique. *Colloids Surfaces B Biointerfaces* [Internet]. 2012;90(1):21–7. Available from: <http://dx.doi.org/10.1016/j.colsurfb.2011.09.042>
8. Gao H, Matyjaszewski K. Synthesis of low-polydispersity miktoarm star copolymers via a simple “arm-first” Method: macromonomers as arm precursors. *Macromolecules*. 2008;41(12):4250–7.
9. Mohanraj VJ, Chen Y. Nanoparticles - A review. *Trop J Pharm Res*. 2007;5(1):561–73.
10. Dwistika R. Karakteristik Nanopartikel Perak Hasil Produksi Dengan Teknik Elektrolisis Berdasarkan Uji Spektrofotometer UV-VIS Dan Particle Size Analyzer (PSA). Skripsi. 2018;1–76.
11. Fàbregas A, Miñarro M, García-Montoya E, Pérez-Lozano P, Carrillo C, Sarrate R, et al. Impact of physical parameters on particle size and reaction yield when using the ionic gelation method to obtain cationic polymeric chitosan-tripolyphosphate nanoparticles. *Int J Pharm*. 2013;446(1–2):199–204.
12. Neubert R. Drugs and the Pharmaceutical Sciences. *Eur J Pharm Biopharm*. 2002;53(3):361.
13. Mao S, Sun W, Kissel T. Chitosan-based formulations for delivery of DNA and siRNA. *Adv Drug Deliv Rev* [Internet]. 2010;62(1):12–27. Available

from: <http://dx.doi.org/10.1016/j.addr.2009.08.004>

14. Maria B, Sikawin B, Yamlean PVY, Sudewi S. Formulasi Sediaan Gel Antibakteri Ekstrak Etanol Tanaman Sereh (*Cymbopogon Citratus* (Dc.) Stapf) Dan Uji Aktivitas Antibakteri (*Staphylococcus Aureus*) Secara in Vitro. *Pharmacon*. 2018;7(3):302–10.
15. Pratiwi, Sylvia T. 2008. *Mikrobiologi Farmasi*. Jakarta Erlangga.pdf.
16. Ali A, Ahmed S. A review on chitosan and its nanocomposites in drug delivery. *Int J Biol Macromol* [Internet]. 2018;109:273–86. Available from: <http://dx.doi.org/10.1016/j.ijbiomac.2017.12.078>
17. Qi L, Xu Z, Jiang X, Hu C, Zou X. Preparation and antibacterial activity of chitosan nanoparticles. *Carbohydr Res*. 2004;339(16):2693–700.
18. Csaba N, Köping-Höggård M, Alonso MJ. Ionically crosslinked chitosan/tripolyphosphate nanoparticles for oligonucleotide and plasmid DNA delivery. *Int J Pharm*. 2009;382(1–2):205–14.
19. Wu J, Wang Y, Yang H, Liu X, Lu Z. Preparation and biological activity studies of resveratrol loaded ionically cross-linked chitosan-TPP nanoparticles. *Carbohydr Polym* [Internet]. 2017;175:170–7. Available from: <http://dx.doi.org/10.1016/j.carbpol.2017.07.058>
20. Ibrahim HM, El-Bisi MK, Taha GM, El-Alfy EA. Chitosan nanoparticles loaded antibiotics as drug delivery biomaterial. *J Appl Pharm Sci*. 2015;5(10):85–90.
21. Calvo P, Remunan-Lopez C, Vila-Jato JL, Alonso MJ. Calvo1997 [30].Pdf. Vol. 14, *Pharmaceutical Research*. 1997. p. 1431.

22. Dash M, Chiellini F, Ottenbrite RM, Chiellini E. Chitosan - A versatile semi-synthetic polymer in biomedical applications. *Prog Polym Sci* [Internet]. 2011;36(8):981–1014. Available from: <http://dx.doi.org/10.1016/j.progpolymsci.2011.02.001>
23. López-León T, Carvalho ELS, Seijo B, Ortega-Vinuesa JL, Bastos-González D. Physicochemical characterization of chitosan nanoparticles: Electrokinetic and stability behavior. *J Colloid Interface Sci.* 2005;283(2):344–51.
24. Vauthier C, Cabane B, Labarre D. How to concentrate nanoparticles and avoid aggregation? *Eur J Pharm Biopharm.* 2008;69(2):466–75.
25. Abdelwahed W, Degobert G, Stainmesse S, Fessi H. Freeze-drying of nanoparticles: Formulation, process and storage considerations. *Adv Drug Deliv Rev.* 2006;58(15):1688–713.
26. Morris GA, Castile J, Smith A, Adams GG, Harding SE. The effect of prolonged storage at different temperatures on the particle size distribution of tripolyphosphate (TPP)-chitosan nanoparticles. *Carbohydr Polym* [Internet]. 2011;84(4):1430–4. Available from: <http://dx.doi.org/10.1016/j.carbpol.2011.01.044>
27. Berkland C, King M, Cox A, Kim K, Pack DW. Precise control of PLG microsphere size provides enhanced control of drug release rate. *J Control Release.* 2002;82(1):137–47.
28. Jiang Q, Xu J, Li T, Qiao C, Li Y. Synthesis and antibacterial activities of quaternary ammonium salt of gelatin. *J Macromol Sci Part B Phys.*

- 2014;53(1):133–41.
29. Helander IM, Nurmiäho-Lassila EL, Ahvenainen R, Rhoades J, Roller S. Chitosan disrupts the barrier properties of the outer membrane of Gram-negative bacteria. *Int J Food Microbiol.* 2001;71(2–3):235–44.
  30. Bae K, Jun EJ, Lee SM, Paik DI, Kim JB. Effect of water-soluble reduced chitosan on *Streptococcus mutans*, plaque regrowth and biofilm vitality. *Clin Oral Investig.* 2006;10(2):102–7.
  31. Je JY, Kim SK. Chitosan derivatives killed bacteria by disrupting the outer and inner membrane. *J Agric Food Chem.* 2006;54(18):6629–33.
  32. Vishu Kumar AB, Varadaraj MC, Lalitha RG, Tharanathan RN. Low molecular weight chitosans: Preparation with the aid of papain and characterization. *Biochim Biophys Acta - Gen Subj.* 2004;1670(2):137–46.
  33. Du WL, Niu SS, Xu YL, Xu ZR, Fan CL. Antibacterial activity of chitosan tripolyphosphate nanoparticles loaded with various metal ions. *Carbohydr Polym* [Internet]. 2009;75(3):385–9. Available from: <http://dx.doi.org/10.1016/j.carbpol.2008.07.039>
  34. Sarwar A, Katas H, Zin NM. Antibacterial effects of chitosan-tripolyphosphate nanoparticles: Impact of particle size molecular weight. *J Nanoparticle Res.* 2014;16(7).
  35. Pan C, Qian J, Zhao C, Yang H, Zhao X, Guo H. Study on the relationship between crosslinking degree and properties of TPP crosslinked chitosan nanoparticles. *Carbohydr Polym* [Internet]. 2020;241(February):116349. Available from: <https://doi.org/10.1016/j.carbpol.2020.116349>

36. Liu H, Du Y, Wang X, Sun L. Chitosan kills bacteria through cell membrane damage. 2004;95:147–55.
37. Gendreau L, Loewy ZG. Epidemiology and Etiology of Denture Stomatitis. *J Prosthodont*. 2011;20(4):251–60.
38. Garber GE. Treatment of Oral Candida Mucositis Infections. *Drugs*. 1994;47(5):734–40.
39. Schäfer-Korting M, Blechschmidt J, Korting HC. Clinical use of oral nystatin in the prevention of systemic candidosis in patients at particular risk. *Mycoses*. 1996;39(9–10):329–39.
40. Rençber S, Karavana SY, Yılmaz FF, Eraç B, Nenni M, Özbal S, et al. Development, characterization, and in vivo assessment of mucoadhesive nanoparticles containing fluconazole for the local treatment of oral candidiasis. *Int J Nanomedicine*. 2016;11:2641–53.
41. de Carvalho FG, Magalhães TC, Teixeira NM, Gondim BLC, Carlo HL, dos Santos RL, et al. Synthesis and characterization of TPP/chitosan nanoparticles: Colloidal mechanism of reaction and antifungal effect on *C. albicans* biofilm formation. *Mater Sci Eng C*. 2019;104(June).
42. Wichitnithad W, Nimmannit U, Wacharasindhu S, Rojsitthisak P. Synthesis, characterization and biological evaluation of succinate prodrugs of curcuminoids for colon cancer treatment. *Molecules*. 2011;16(2):1888–900.
43. Bangphumi K, Kittiviriyakul C, Towiwat P, Rojsitthisak P, Khemawoot P. Pharmacokinetics of Curcumin Diethyl Disuccinate, a Prodrug of

- Curcumin, in Wistar Rats. *Eur J Drug Metab Pharmacokinet.* 2016;41(6):777–85.
44. Sorasitthiyanukarn FN, Muangnoi C, Thaweeseest W, Rojsitthisak P, Rojsitthisak P. Enhanced cytotoxic, antioxidant and anti-inflammatory activities of curcumin diethyl disuccinate using chitosan-tripolyphosphate nanoparticles. *J Drug Deliv Sci Technol* [Internet]. 2019;53(June):101118. Available from: <https://doi.org/10.1016/j.jddst.2019.06.015>
45. Guinovart C, Navia MM, Tanner M, Alonso PL. Malaria: Burden of Disease. 2006;137–40.
46. Sharma VP. Battling the malaria iceberg with chloroquine in India. *Malar J.* 2007;6:1–5.
47. Lehane AM, Kirk K. Efflux of a range of antimalarial drugs and “chloroquine resistance reversers” from the digestive vacuole in malaria parasites with mutant PfCRT. *Mol Microbiol.* 2010;77(4):1039–51.
48. Tripathy S, Das S, Chakraborty SP, Sahu SK, Pramanik P, Roy S. Synthesis, characterization of chitosan-tripolyphosphate conjugated chloroquine nanoparticle and its in vivo anti-malarial efficacy against rodent parasite: A dose and duration dependent approach. *Int J Pharm* [Internet]. 2012;434(1–2):292–305. Available from: <http://dx.doi.org/10.1016/j.ijpharm.2012.05.064>
49. Yang F, He J, Lin X, Li Q, Pan D, Zhang X, et al. Complete Genome Sequence of the Shrimp White Spot Bacilliform Virus. *J Virol.* 2001;75(23):11811–20.

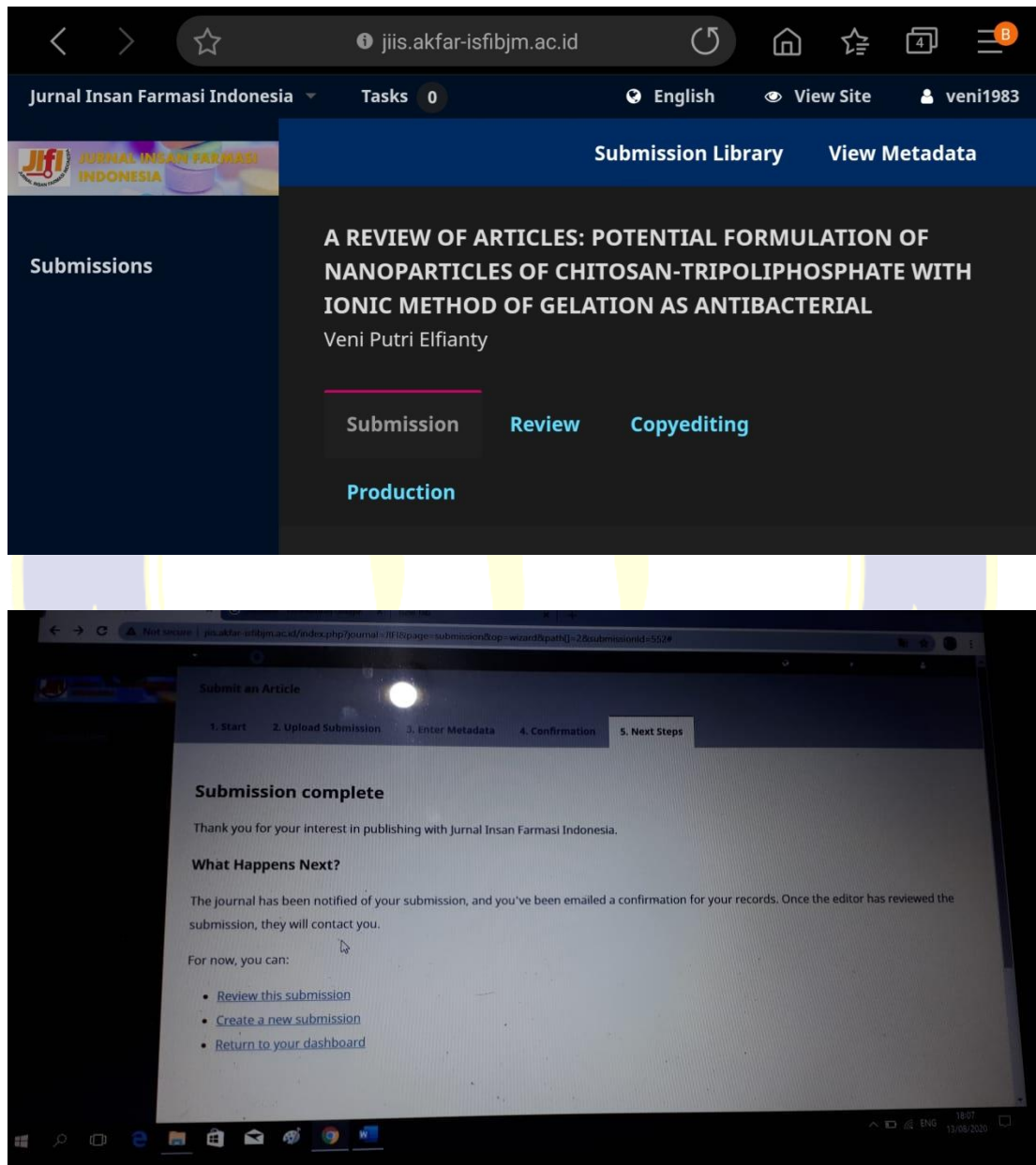


50. Huang C, Zhang X, Lin Q, Xu X, Hu Z, Hew CL. Proteomic analysis of shrimp white spot syndrome viral proteins and characterization of a novel envelope protein VP466. *Mol Cell Proteomics*. 2002;1(3):223–31.
51. Tang S, Huang Z, Zhang H, Wang Y, Hu Q, Jiang H. Design and formulation of trimethylated chitosan-graft-poly( $\epsilon$ - caprolactone) nanoparticles used for gene delivery. *Carbohydr Polym* [Internet]. 2014;101(1):104–12. Available from: <http://dx.doi.org/10.1016/j.carbpol.2013.09.053>
52. Taju G, Kumar DV, Majeed SA, Vimal S, Tamizhvanan S, Kumar SS, et al. Delivery of viral recombinant VP28 protein using chitosan tripolyphosphate nanoparticles to protect the whiteleg shrimp, *Litopenaeus vannamei* from white spot syndrome virus infection. *Int J Biol Macromol* [Internet]. 2018;107(PartA):1131–41. Available from: <http://dx.doi.org/10.1016/j.ijbiomac.2017.09.094>
53. Jiang H, Wu H, Xu Y long, Wang J zhou, Zeng Y. Preparation of galactosylated chitosan/tripolyphosphate nanoparticles and application as a gene carrier for targeting SMMC7721 cells. *J Biosci Bioeng* [Internet]. 2011;111(6):719–24. Available from: <http://dx.doi.org/10.1016/j.jbiosc.2011.01.012>



## LAMPIRAN

### Bukti Submit Artikel Review di Jurnal Insan Farmasi Indonesia Akademi Farmasi Banjarmasin Terindeks SINTA 5



Gambar IV.1 Bukti submit artikel

## DAFTAR RIWAYAT HIDUP



Nama : Veni Putri Elfianty

Temoat, Tanggal lahir : Muara Kaman, 02 Mei 1999

Alamat : Perumahan Graha Mutiara Indah I Blok A20  
H Desa Langensari Kecamatan Tarogong  
Kaler Garut

Agama : Islam

Kewarganegaraan : WNI

Status Pendidikan : Sarjana

Email : [velfianty.2323@gmail.com](mailto:velfianty.2323@gmail.com)

Nomor Handphone : 0812-5005-7388

Keahlian : Teknologi Farmasi

## RIWAYAT PENDIDIKAN

Jenjang Pendidikan	Nama Sekolah/ Perguruan Tinggi	Tahun Masuk	Tahun Lulus
SD	SDN 003 Muara Kaman	2004	2010
SMP	MTs Nurul Iman Muara Kaman	2010	2013
SMA	SMAN 1 Muara Kaman	2013	2016
Sarjana	Universitas Garut	2016	2020