

## DAFTAR PUSTAKA

- [1] D. N. P. Thompson, “Hydrocephalus,” *Surgery*, vol. 27, no. 3, pp. 130–134, 2009, doi: 10.1016/j.mpsur.2009.02.005.
- [2] N. F. Ariyati, I. Gunawan, and F. Sustini, “Profil Klinis dan Faktor Risiko Mortalitas pada Anak dengan Hidrosefalus di RSUD dr. Soetomo Surabaya,” *Sari Pediatri*, vol. 22, no. 6, pp. 364–370, 2021.
- [3] P. I. Gunawan and R. I. Susilo, “Unusual Complication of Abdominal Pseudocyst Following Cystoperitoneal Shunt in Posterior Cranial Fossa Arrachnoid Cyst,” *Medico-legal Update*, vol. 21, no. 4, pp. 292–294, 2021.
- [4] T. J. Madera-Santana, C. H. Herrera-Méndez, and J. R. Rodríguez-Núñez, “An overview of the chemical modifications of chitosan and their advantages,” *Green Mater*, vol. 6, no. 4, pp. 131–142, Oct. 2018, doi: 10.1680/jgrma.18.00053.
- [5] T. Chandy and C. P. Sharma, “Chitosan - as a Biomaterial,” *Biohat., Art. Cells, Art. Org*, vol. 18, no. 1, pp. 1–24, 1990.
- [6] J. S. Donahoo, R. K. Brawley, and V. L. Gott, “The Heparin-coated Vascular Shunt for Thoracic Aortic and Great Vessel Procedures: A Ten-Year Experience,” *Annals of Thoracic Surgery*, vol. 23, no. 6, pp. 507–513, 1977, doi: 10.1016/S0003-4975(10)63692-2.
- [7] N. A. Obaid, A. M. Alzahrani, and B. A. Alaryni, “Effectiveness of Chitosan Coating Catheter in Preventing Catheter- Associated Urinary Tract Infection (CAUTI),” *J Pharm Res Int*, pp. 6–19, Mar. 2022, doi: 10.9734/jpri/2022/v34i19a35800.
- [8] Jaap J. Boelens, Wee-Fu Tan, and Jacob Dankert, “Hydrocephalus (polyvinylpyrrolidone-grafted),” *Journal of Antimicrobial Chemotherapy*, pp. 221–224, 2000.
- [9] F. Çağavi, N. Akalan, and H. Çelik, “Effect of hydrophilic coating on microorganism colonization in silicone tubing,” *Acta Neurochir (Wien)*, vol. 146, no. 6, pp. 603–610, 2004, doi: 10.1007/s00701-004-0262-z.
- [10] J. J. H. Oosterhof, K. J. D. A. Buijsse, H. J. Busscher, B. F. A. M. Van Der Laan, and H. C. Van Der Mei, “Effects of quaternary ammonium silane

- coatings on mixed fungal and bacterial biofilms on tracheoesophageal shunt prostheses,” *Appl Environ Microbiol*, vol. 72, no. 5, pp. 3673–3677, May 2006, doi: 10.1128/AEM.72.5.3673-3677.2006.
- [11] S. Meng, Z. Liu, L. Shen, and Z. Guo, “The effect of a layer-by-layer chitosan-heparin coating on the endothelialization and coagulation properties of a coronary stent system,” *Biomaterials*, vol. 30, no. 12, pp. 2276–2283, Apr. 2009, doi: 10.1016/j.biomaterials.2008.12.075.
  - [12] R. Bayston, N. Grove, J. Siegel, D. Lawellin, and S. Barsham, “Prevention of hydrocephalus shunt catheter colonisation in vitro by impregnation with antimicrobials,” *J Neurol Neurosurg Psychiatry*, vol. 52, pp. 605–609, 1989, [Online]. Available: <http://jnnnp.bmjjournals.org/>
  - [13] R. Shepherd, S. Reader, and A. Falshaw, “Chitosan Functional Properties,” *Glycoconj J*, vol. 14, pp. 535–542, 1997.
  - [14] M. B. Segal, “Transport of nutrients across the choroid plexus,” *Microsc Res Tech*, vol. 52, no. 1, pp. 38–48, Jan. 2001, doi: 10.1002/1097-0029(20010101)52:1<38::AID-JEMT6>3.0.CO;2-J.
  - [15] G. Nagra, “Extracellular fluid systems in the brain and the pathogenesis of hydrocephalus,” *Arkansas College of Osteopathic Medicine*, 2010.
  - [16] H. Davson, K. Welch, and M. B. Segal, “Physiology and Pathophysiology of the Cerebrospinal Fluid,” *Ann Neurol*, vol. 24, no. 1, p. 106, 1987.
  - [17] H. Davson, C. R. Kleeman, and E. Levint, “Quantitative Studies of the Passage of Different Substances Out of the Cerebrospinal Fluid,” *J. Physiol*, vol. 161, pp. 126–142, 1962, doi: 10.1113/jphysiol.1962.sp006877.
  - [18] H. F. Cserr, D. N. Cooper, P. K. Suri, and C. S. Patlak, “Efflux of Radiolabeled Polyethylene Glycols and Albumin from Rat Brain,” *American Journal of Physiology*, vol. 240, pp. F319–F328, Apr. 1981.
  - [19] A. Kurniawan and A. Zulfariansyah, “Tatalaksana Pasien Post Ventriculo Peritoneal (VP) Shunt et causa Meningitis disertai Aspirasi Pneumonia dan Gagal Napas di Ruang Rawat Intensif,” *Jurnal Neuroanastesi Indonesia*, pp. 87–91, 2020.
  - [20] R. Dharmajaya, M. Z. Ihsan Tala, A. Mousa Arsyad, and S. Tandean, “AANHS Journal Abdominal Pseudocyst: A Rare Complication of

- Ventriculoperitoneal Shunting,” *Asian Australasian Neuro and Health Science Journal (AANHS J)*, vol. 01, no. 2, 2019.
- [21] I. K. Pople, “Hydrocephalus and shunts: What the neurologist should know,” *Neurology in Practice*, vol. 73, no. 1, Sep. 2002, doi: 10.1136/jnnp.73.suppl\_1.i17.
  - [22] E. S. de Alvarenga, “Characterization and Properties of Chitosan,” in *Biotechnology of Biopolymers*, InTech, 2011. doi: 10.5772/17020.
  - [23] I. Capila and R. J. Linhardt, “Heparin-Protein Interactions,” *Angewandte Chemie*, pp. 390–412, 2002.
  - [24] A. B. D. Nandyanto, R. Oktiani, and R. Ragadhita, “How to read and interpret ftir spectroscope of organic material,” *Indonesian Journal of Science and Technology*, vol. 4, no. 1, pp. 97–118, 2019, doi: 10.17509/ijost.v4i1.15806.
  - [25] Thermo Nicolet Corp., *Introduction to Fourier Transform Infrared Spectrometry*. 2001.
  - [26] S. S. A. Atmodjo, Yasin, Erwin, M. Hidayat, and D. A. Sari, *Dasar-Dasar Mikrobiologi*. PT Masagena Mandiri Medica, 2023. Accessed: Dec. 26, 2023. [Online]. Available: [https://www.researchgate.net/publication/370871795\\_Dasar-Dasar\\_Mikrobiologi](https://www.researchgate.net/publication/370871795_Dasar-Dasar_Mikrobiologi)
  - [27] Sumarsih, “Uji Daya Hambat Bakteri Escherichia Coli pada Produk Hand Sanitizer,” *Indonesian Journal of Laboratory*, vol. 4, no. 2, pp. 62–66, Aug. 2021.
  - [28] R. Handayani and H. Rusmita, “Uji Daya Hambat Ekstrak Etanol Akar Kelakai (*Stenochlaena palustris* (Burm. f.) Bedd.) Terhadap Bakteri *Escherichia coli*,” *Jurnal Surya Medika*, vol. 2, no. 2, 2017.
  - [29] M. F. Elahi, G. Guan, L. Wang, M. Fazley Elahi, G. Guan, and L. Wang, “Hemocompatibility of Surface Modified Silk Fibroin Materials: a Review,” Shanghai, Jan. 2014.
  - [30] Edwin Ondrick, “ASTM Hemolysis Study,” Northwood, May 2017.
  - [31] Mohammad Zakaria Shahab, “Peta Bakteri dan Kepekaan Antibiotik Pada Pasien Dengan Hidrosefalus Akibat Infeksi Cairan Serebro Spinal di RSUD Dr. Soetomo,” *Respository Universitas Airlangga*, 2016.

- [32] A. W. Paramadini, P. Chinavinijkul, A. Meemai, P. Thongkam, A. Apasuthirat, and N. Nasongkla, “Fabrication and in vitro characterization of zinc oxide nanoparticles and hyaluronic acid-containing carboxymethylcellulose gel for wound healing application,” *Pharm Dev Technol*, vol. 28, no. 1, pp. 95–108, 2023, doi: 10.1080/10837450.2022.2164304.
- [33] G. Sidik, W. Marsigit, D. Syafnil, J. T. Pertanian, F. Pertanian, and U. Bengkulu, “Pengaruh Kitosan Sebagai Edible Coating Terhadap Mutu Fisik dan Kimia Jeruk Rimau Gerga Lebong Selama Penyimpanan,” *Jurnal Argo Industri*, vol. 12, no. 2, pp. 72–85, Nov. 2022, doi: 10.31186/j.agroind.12.2.72-85.
- [34] Risfidian Mohadi, Nurlisa Hidayati, and Melany N.R, “Preparasi dan Karakterisasi Kompleks Kitosan Hidrogel-Tembaga (III),” *Jurnal Kimia*, vol. 2, no. 1, pp. 35–43, 2007.
- [35] P. Mulinti, J. E. Brooks, B. Lervick, J. E. Pullan, and A. E. Brooks, “Strategies to improve the hemocompatibility of biodegradable biomaterials,” in *Hemocompatibility of Biomaterials for Clinical Applications: Blood-Biomaterials Interactions*, Elsevier, 2017, pp. 253–278. doi: 10.1016/B978-0-08-100497-5.00017-3.
- [36] N. M. Puspawati and I. N. Simpen, “Optimasi Deasetilasi Khitin dari Kulit Udang dan Cangkang Kepiting Limbah Restoran Seafood Menjadi Kitosan Melalui Variasi Konsentrasi NaOH,” *Jurnal Kimia*, vol. 4, no. 1, pp. 79–90, Jan. 2010.
- [37] J. Kimia Sains dan Aplikasi and P. Rahayu, “Adsorpsi Ion Logam Nikel(II) oleh Kitosan Termodifikasi Tripolifosfat,” *Jurnal Kimia Sains dan Aplikasi*, vol. 19, no. 1, pp. 21–26, 2016.
- [38] S. Sacar, H. Turgut, and S. Toprak, “A retrospective study of central nervous system shunt infections diagnosed in a university hospital during a 4-year period,” *BMC Infect Dis*, vol. 6, Mar. 2006, doi: 10.1186/1471-2334-6-43.
- [39] A. K. Magani, T. E. Tallei, and B. J. Kolondam, “Uji Antibakteri Nanopartikel Kitosan terhadap Pertumbuhan Bakteri *Staphylococcus aureus* dan *Escherichia coli*. (Antibacterial Test of Chitosan Nanoparticles against

- Staphylococcus aureus and Escherichia coli)," *J Bios Logos*, vol. 10, no. 1, pp. 8–12, 2020.
- [40] L. Muhamad Hazairin Nadia, P. Suptijah, L. Ode Huli, and W. Nilda Arifiana Effendy, "Pemanfaatan Kitosan Sebagai Antibakteri Alternatif Dalam Formulasi Hand Sanitizer Gel," 2022.
  - [41] Entsar S. Abdou, A. S. Osheba, and M. A. Sorour, "Effect of Chitosan and Chitosan-Nanoparticles as Active Coating on Microbiological Characteristics of Fish Fingers," *International Journal of Applied Science and Technology* , vol. 2, no. 7, pp. 158–169, Jul. 2012.
  - [42] N. N. Arifianingsih, T. Istirokhatun, and H. Susanto, "Pengaruh Penambahan Kitosan Sebagai Agen Anti-mikroba Pada Pembuatan Membran Selulosa Asetat Terhadap Biofouling yang Disebabkan Oleh Bakteri Gram Positif," 2014.
  - [43] L. G. Confederat, C. G. Tuchilus, M. Dragan, M. Sha'at, and O. M. Dragostin, "Preparation and Antimicrobial Activity of Chitosan and Its Derivatives: A Concise Review," *Molecules (Basel, Switzerland)*, vol. 26, no. 12. NLM (Medline), Jun. 17, 2021. doi: 10.3390/molecules26123694.
  - [44] L. Meily Kurniawidjaja, Fatma Lestari, Mila Tejamaya, and Doni Hikmat Ramadhan, *Konsep Dasar Toksikologi Industri*. 2021. [Online]. Available: [www.fkm.ui.ac.id](http://www.fkm.ui.ac.id)
  - [45] H. S. Budi, M. C. Setyawati, S. Anitasari, Y. K. Shen, I. Pebriani, and D. E. Ramadan, "Cell detachment rates and confluence of fibroblast and osteoblast cell culture using different washing solutions," *Brazilian Journal of Biology*, vol. 84, 2024, doi: 10.1590/1519-6984.265825.