

DAFTAR PUSTAKA

- Ahn, J., Choi, M., 2023. The pH-induced physical properties of ionic contact lens material. *Heliyon* 9, e12996. <https://doi.org/10.1016/j.heliyon.2023.e12996>
- Azad, M.S., 2024. Influence of Polymer Concentration on the Viscous and (Linear and Non-Linear) Viscoelastic Properties of Hydrolyzed Polyacrylamide Systems in Bulk Shear Field and Porous Media. *Polymers* 16, 2617. <https://doi.org/10.3390/polym16182617>
- Bahr, M.N., Modi, D., Patel, S., Campbell, G., Stockdale, G., 2019. Understanding the Role of Sodium Lauryl Sulfate on the Biorelevant Solubility of a Combination of Poorly Water-Soluble Drugs Using High Throughput Experimentation and Mechanistic Absorption Modeling. *J Pharm Pharm Sci* 22, 221–246. <https://doi.org/10.18433/jpps30347>
- Butylina, S., Geng, S., Laatikainen, K., Oksman, K., 2020. Cellulose Nanocomposite Hydrogels: From Formulation to Material Properties. *Front. Chem.* 8, 655. <https://doi.org/10.3389/fchem.2020.00655>
- Choi, S.W., Kim, J. (2018) 'Lensa Kontak Terapeutik dengan Kendaraan Polimer untuk Pengiriman Obat Okular: Ulasan' *Bahan*. 11: 1125
- Choudhary, R., Koppala, S., Swamiappan, S., 2015. Bioactivity studies of calcium magnesium silicate prepared from eggshell waste by sol-gel combustion synthesis. *Journal of Asian Ceramic Societies* 3, 173–177. <https://doi.org/10.1016/j.jascer.2015.01.002>
- Daemi, H., Barikani, M., 2012. Synthesis and characterization of calcium alginate nanoparticles, sodium homopolymannuronate salt and its calcium nanoparticles. *Scientia Iranica* 19, 2023–2028. <https://doi.org/10.1016/j.scient.2012.10.005>
- Dejeu, I.L., Vicaş, L.G., Vlaia, L.L., Jurca, T., Mureşan, M.E., Pallag, A., Coneac, G.H., Olariu, I.V., Muţ, A.M., Bodea, A.S., Dejeu, G.E., Maghiar, O.A., Marian, E., 2022. Study for Evaluation of Hydrogels after the Incorporation of Liposomes Embedded with Caffeic Acid. *Pharmaceuticals* 15, 175. <https://doi.org/10.3390/ph15020175>
- Elim, D., Fitri, A.M.N., Mahfud, M.A.S., Afika, N., Sultan, N.A.F., Hijrah, Asri, R.M., Permana, A.D., 2023. Hydrogel forming microneedle-mediated transdermal delivery of sildenafil citrate from polyethylene glycol reservoir: An ex vivo proof of concept study. *Colloids and Surfaces B: Biointerfaces* 222, 113018. <https://doi.org/10.1016/j.colsurfb.2022.113018>



s Hidrogel Superabsorben poli (akrilamida-ko-kalium akrilat) ik Radiasi dan Karakterisasinya. *Pusat Aplikasi Teknologi Isotop* Jakarta. 107 108.

- Fathalla, Z., Mustafa, W.W., Abdelkader, H., Moharram, H., Sabry, A.M., Alany, R.G., 2022. Hybrid thermosensitive-mucoadhesive *in situ* forming gels for enhanced corneal wound healing effect of L-carnosine. Drug Delivery 29, 374–385. <https://doi.org/10.1080/10717544.2021.2023236>
- Haminiuk, C.W.I., Maciel, G.M., Plata-Oviedo, M.S.V., Quenehenn, A., Scheer, A.P., 2009. Study of the Rheological Parameters of Honey Using the Mitschka Method. International Journal of Food Engineering 5. <https://doi.org/10.2202/1556-3758.1572>
- Hoffman, J.J., Burton, M.J., Leck, A., 2021. Mycotic Keratitis—A Global Threat from the Filamentous Fungi. JoF 7, 273. <https://doi.org/10.3390/jof7040273>
- Hu, C., Lu, W., Mata, A., Nishinari, K., Fang, Y., 2021. Ions-induced gelation of alginate: Mechanisms and applications. International Journal of Biological Macromolecules 177, 578–588. <https://doi.org/10.1016/j.ijbiomac.2021.02.086>
- Ibrahim, S.M., Abou El Fadl, F.I., El-Naggar, A.A., 2014. Preparation and characterization of crosslinked alginate-CMC beads for controlled release of nitrate salt. J Radioanal Nucl Chem 299, 1531–1537. <https://doi.org/10.1007/s10967-013-2820-4>
- Ioniță, M., Vlăsceanu, G.M., Toader, A.G., Manole, M., 2023. Advances in Therapeutic Contact Lenses for the Management of Different Ocular Conditions. JPM 13, 1571. <https://doi.org/10.3390/jpm13111571>
- Jansook, P., Maw, P.D., Soe, H.M.S.H., Chuangchunsong, R., Saiborisuth, K., Payonitikarn, N., Autthateinchai, R., Prusakorn, P., 2020. Development of amphotericin B nanosuspensions for fungal keratitis therapy: effect of self-assembled γ -cyclodextrin. J. Pharm. Investig. 50, 513–525. <https://doi.org/10.1007/s40005-020-00474-z>
- Kalalo, T., Miatmoko, A., Tanojo, H., Erawati, T., Hariyadi, D.M., Rosita, N., 2022. Effect of Sodium Alginate Concentration on Characteristics, Stability and Drug Release of Inhalation Quercetin Microspheres. JFIKI 9, 107–114. <https://doi.org/10.20473/jfiki.v9i22022.107-114>
- Korogiannaki, M., Guidi, G., Jones, L., Sheardown, H., 2015. Timolol maleate release from hyaluronic acid-containing model silicone hydrogel contact lens materials. J Biomater Appl 30, 361–376. <https://doi.org/10.1177/0885328215581507>
- Lu, H., Butler, J.A., Britten, N.S., Venkatraman, P.D., Rahatekar, S.S., 2021. Natural Antimicrobial Nano Composite Fibres Manufactured from a Combination of Oregano Essential Oil. Nanomaterials 11, 2062. <https://doi.org/10.3390/nano11082062>
- Mirah, N.A., Akram, M., Mahfufah, U., Saputra, M.D., Elim, D., Sultan, N.A.F., Himawan, A., Domínguez-Robles, J., Somkul, B., Mir, M., Permana, A.D., 2023. Solid Dispersion into Dissolving Microneedles for Improved Antifungal Activity of B: *In Vivo* Study in a Fungal Keratitis Model. Mol.



- Pharmaceutics 20, 6246–6261.
<https://doi.org/10.1021/acs.molpharmaceut.3c00647>
- Mishra, A., Bano, M., Bisen, A.C., Verma, S., Sanap, S.N., Kishor, R., Shukla, P.K., Bhatta, R.S., 2020. Topical corneal targeted sustained release amphotericin B liposomal formulation for the treatment of fungal keratitis and its PK-PD evaluation. Journal of Drug Delivery Science and Technology 60, 101944. <https://doi.org/10.1016/j.jddst.2020.101944>
- Mualim, E., Hukman, S.A.F., Siagian, J.R., Mantong, T.A., Dahlan, R.M., Permana, A.D., 2024. UV–Vis spectrophotometry for rapid and specific quantification of amphotericin B: analytical method validation for ex vivo and in vivo studies in the development of nanoemulsion-incorporated thermosensitive gel. ANAL. SCI. 40, 615–631. <https://doi.org/10.1007/s44211-023-00493-4>
- Nan, N.F.C., Zainuddin, N., Ahmad, M., 2019. Nan, N.F.C., Norhazlin Zainuddin, dan Mansor Ahmad. “Preparation and swelling study of CMC hydrogel as potential superabsorbent.” Pertanika Journal of Science and Technology 27 (1 Januari 2019): 489–98. Pertanika Journal of Science and Technology 27, 489–498.
- Nurkhanifah, S.I., Husni, A., 2020. Rasio Natrium Karbonat Dalam Ekstraksi Berpengaruh Pada Mutu Natrium Alginat *Sargassum muticum*. teknosains 10, 10. <https://doi.org/10.22146/teknosains.41982>
- Nurman, S., Yulia, R., Irmayanti, Noor, E., Candra Sunarti, T., 2019. The Optimization of Gel Preparations Using the Active Compounds of Arabica Coffee Ground Nanoparticles. Sci. Pharm. 87, 32. <https://doi.org/10.3390/scipharm87040032>
- Prajapat, V.M., Aalhate, M., Sriram, A., Mahajan, S., Maji, I., Gupta, U., Kumari, D., Singh, K., Kalia, N.P., Dua, K., Singh, S.K., Singh, P.K., 2024. Amphotericin B loaded nanoemulsion: Optimization, characterization and in-vitro activity against L. donovani promastigotes. Parasitology International 100, 102848. <https://doi.org/10.1016/j.parint.2023.102848>
- Priya, A.S., Premanand, R., Ragupathi, I., Bhaviripudi, V.R., Aepuru, R., Kannan, K., Shanmugaraj, K., 2024. Comprehensive Review of Hydrogel Synthesis, Characterization, and Emerging Applications. J. Compos. Sci. 8, 457. <https://doi.org/10.3390/jcs8110457>
- Ramöller, I. et al. (2020) ‘Novel Design Approaches in the Fabrication of Polymeric Microarray Patches via Micromoulding’, Micromachines, 11(6), p. 554. Available at: <https://doi.org/10.3390/mi11060554>.



rić, I.M., Svirčev, Z., 2023. Preparation and Characterization of hydrogels with High Water-Retaining Capacity. Polymers 15, 2592. <https://doi.org/10.3390/polym15122592>

Schwarze, L.A., 2018. Correlation Coefficients: Appropriate Use and Interpretation. Anesthesia & Analgesia 126, 1763–1768. <https://doi.org/10.1213/ANE.0000000000002864>

- Seera, S.D.K., Kundu, D., Banerjee, T., 2020. Physical and chemical crosslinked microcrystalline cellulose-polyvinyl alcohol hydrogel: freeze–thaw mediated synthesis, characterization and in vitro delivery of 5-fluorouracil. *Cellulose* 27, 6521–6535. <https://doi.org/10.1007/s10570-020-03249-9>
- Shi, X., Zhong, Q., Zhang, S., 2025. Starch-calcium inclusion complexes: Optimizing transparency, anti-fogging, and fluorescence in thermoplastic starch. *Carbohydrate Polymers* 348, 122842. <https://doi.org/10.1016/j.carbpol.2024.122842>
- Siepmann, J., Siepmann, F., 2020. Sink conditions do not guarantee the absence of saturation effects. *International Journal of Pharmaceutics* 577, 119009. <https://doi.org/10.1016/j.ijpharm.2019.119009>
- Singh, A., Sharma, S., Yadagiri, G., Parvez, S., Gupta, R., Singhal, N.K., Koratkar, N., Singh, O.P., Sundar, S., Shanmugam, V., Mudavath, S.L., 2020. Sensible graphene oxide differentiates macrophages and *Leishmania*: a bio-nano interplay in attenuating intracellular parasite. *RSC Adv.* 10, 27502–27511. <https://doi.org/10.1039/D0RA04266H>
- Siqueira, E.C.D., França, J.A.A.D., Souza, R.F.M.D., Leotério, D.M.D.S., Cordeiro, J.N., Doboszewski, B., 2023. Recent advances in the development of the physically crosslinked hydrogels and their biomedical applications. *RSD* 12, e18212843073. <https://doi.org/10.33448/rsd-v12i8.43073>
- Stapleton, F., 2023. The epidemiology of infectious keratitis. *The Ocular Surface* 28, 351–363. <https://doi.org/10.1016/j.jtos.2021.08.007>
- Stojkov, G., Niyazov, Z., Picchioni, F., Bose, R.K., 2021. Relationship between Structure and Rheology of Hydrogels for Various Applications. *Gels* 7, 255. <https://doi.org/10.3390/gels7040255>
- Szekalska, M., Sosnowska, K., Czajkowska-Kośnik, A., Winnicka, K., 2018. Calcium Chloride Modified Alginate Microparticles Formulated by the Spray Drying Process: A Strategy to Prolong the Release of Freely Soluble Drugs. *Materials* 11, 1522. <https://doi.org/10.3390/ma11091522>
- Szulc-Musił, B., Siemiradzka, W., Dolińska, B., 2023. Formulation and Evaluation of Hydrogels Based on Sodium Alginate and Cellulose Derivatives with Quercetin for Topical Application. *Applied Sciences* 13, 7826. <https://doi.org/10.3390/app13137826>
- Tan, J., Luo, Y., Guo, Y., Zhou, Y., Liao, X., Li, D., Lai, X., Liu, Y., 2023. Development of alginate-based hydrogels: Crosslinking strategies and biomedical applications. *International Journal of Biological Macromolecules* 239, 33–43. <https://doi.org/10.1016/j.ijbiomac.2023.124275>
- S., Deshmukh, R., Said, D.G., Dua, H.S., 2021. Infectious eye update on epidemiology, causative microorganisms, risk factors, microbial resistance. *Eye* 35, 1084–1101. <https://doi.org/10.1038/s41433-020-01339-3>



- Tran, N.-P.-D., Yang, M.-C., 2020. The Ophthalmic Performance of Hydrogel Contact Lenses Loaded with Silicone Nanoparticles. *Polymers* 12, 1128. <https://doi.org/10.3390/polym12051128>
- Tran, N.-P.-D., Yang, M.-C., Tran-Nguyen, P.L., 2021. Evaluation of silicone hydrogel contact lenses based on poly(dimethylsiloxane) dialkanol and hydrophilic polymers. *Colloids and Surfaces B: Biointerfaces* 206, 111957. <https://doi.org/10.1016/j.colsurfb.2021.111957>
- Wahyuningsih, R., Adawiyah, R., Sjam, R., Prihartono, J., Ayu Tri Wulandari, E., Rozaliyani, A., Ronny, R., Imran, D., Tugiran, M., Siagian, F.E., Denning, D.W., 2021. Serious fungal disease incidence and prevalence in Indonesia. *Mycoses* 64, 1203–1212. <https://doi.org/10.1111/myc.13304>
- Wang, X., Mohammad, I.S., Fan, L., Zhao, Z., Nurunnabi, M., Sallam, M.A., Wu, J., Chen, Z., Yin, L., He, W., 2021. Delivery strategies of amphotericin B for invasive fungal infections. *Acta Pharmaceutica Sinica B* 11, 2585–2604. <https://doi.org/10.1016/j.apsb.2021.04.010>
- Weng, J., Tong, H.H.Y., Chow, S.F., 2020. In Vitro Release Study of the Polymeric Drug Nanoparticles: Development and Validation of a Novel Method. *Pharmaceutics* 12, 732. <https://doi.org/10.3390/pharmaceutics12080732>
- Wu, N., Yu, H., Sun, M., Li, Z., Zhao, F., Ao, Y., Chen, H., 2020. Investigation on the Structure and Mechanical Properties of Highly Tunable Elastomeric Silk Fibroin Hydrogels Cross-Linked by γ -Ray Radiation. *ACS Appl. Bio Mater.* 3, 721–734. <https://doi.org/10.1021/acsabm.9b01062>
- Xu, J., Xue, Y., Hu, G., Lin, T., Gou, J., Yin, T., He, H., Zhang, Y., Tang, X., 2018. A comprehensive review on contact lens for ophthalmic drug delivery. *Journal of Controlled Release* 281, 97–118. <https://doi.org/10.1016/j.jconrel.2018.05.020>
- Yang, X., Dargaville, B., Hutmacher, D., 2021. Elucidating the Molecular Mechanisms for the Interaction of Water with Polyethylene Glycol-Based Hydrogels: Influence of Ionic Strength and Gel Network Structure. *Polymers* 13, 845. <https://doi.org/10.3390/polym13060845>
- Zhang, H., Cheng, J., Ao, Q., 2021. Preparation of Alginate-Based Biomaterials and Their Applications in Biomedicine. *Marine Drugs* 19, 264. <https://doi.org/10.3390/md19050264>



Optimized using
trial version
www.balesio.com