Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis
gigi tiruan
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Abuhajar, E., Ali, K., Zulfiqar, G., Al Ansari, K., Raja, H. Z., Bishti, S., dan Anweigi, L. (2023). Management of Chronic Atrophic Candidiasis (Denture Stomatitis) A Narrative Review. In *International Journal of Environmental Research and Public Health* (Vol. 20, Issue 4). MDPI. https://doi.org/10.3390/ijerph20043029.

Aguiar, M. M. G. B. de, Martinez, R. M., Baby, A. R., dan Serra, C. H. dos R. (2023). Considerations of nystatin roll in oral candidiasis scenario and the COVID-19 pandemic—a review. *Future Pharmacology* , 3 (4), 834–845. https://doi.org/10.3390/futurepharmacol3040050.

Angelia, V., Wahyuni, S., Ritonga, S., dan Amesta, V.R. (2023). Pengaruh penambahan kitosan pada bahan basis gigi tiruan resin akrilik polimerisasi panas terhadap kekasaran permukaan dan jumlah Candida albicans: studi eksperimental laboratoris. *Jurnal Kedokteran Gigi Universitas Padjadjaran*, 35(3): 230–237.

Aranaz, I., Alcántara, A. R., Civera, M. C., Arias, C., Elorza, B., Caballero, A. H., dan Acosta, N. (2021). Chitosan: An overview of its properties and applications. *In Polymers* (Vol. 13, Issue 19). MDPI. https://doi.org/10.3390/polym13193256.

Ariani, D., dan Limanda, N. (2021). Denture Stomatitis Pada Geriatri Terkait Pemakaian Jangka Panjang. *MDERJ*, *1*(1), 13–23. https://journal.moestopo.ac.id/index.php/mderj.

Arora, S., Das, G., Alqarni, M., Grover, V., Manzoor Baba, S., Saluja, P., Hassan, S. A. Bin, Abdulla, A. M., Bavabeedu, S. S., Abullais, S. S., Chahal, G. S., dan Ohri, A. (2023). Role of Chitosan Hydrogels in Clinical Dentistry. *In Gels (Vol. 9, Issue 9). Multidisciplinary Digital Publishing Institute (MDPI).* https://doi.org/10.3390/gels9090698.

Bhatia, A., Saikia, P. P., Dkhar, B., dan Pyngrope, H. (2022). Anesthesia protocol for ear surgery in Wistar rats (animal research). *Animal Models and Experimental Medicine*, *5*(2), 183–188. https://doi.org/10.1002/ame2.12198.

Boucard, N., Viton, C., Agay, D., Mari, E., Roger, T., Chancerelle, Y., dan Domard, A. (2007). The use of physical hydrogels of chitosan for skin regeneration following third-degree burns. *Biomaterials*, *28*(24), 3478–3488. https://doi.org/10.1016/j.biomaterials.2007.04.021.

Che, X., Zhao, T., Hu, J., Yang, K., Ma, N., Li, A., Sun, Q., Ding, C., dan Ding, Q. (2024). Application of Chitosan-Based Hydrogel in Promoting Wound Healing: A Review. *In Polymers* (Vol. 16, Issue 3). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/polym16030344.

Cialdai, F., Risaliti, C., dan Monici, M. (2022). Role of fibroblasts in wound healing and tissue remodeling on Earth and in space. In *Frontiers in Bioengineering*

UNIVERSITAS GADJAH MADA
Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis gigi tiruan
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

and Biotechnology (Vol. 10). Frontiers Media S.A. https://doi.org/10.3389/fbioe.2022.958381.

David dan Munadziroh E., (2005). Perubahan warna lempeng resin akrilik yang direndam dalam larutan desinfektan sodium hipoklorit dan klorhexidin (The color changes of acrylic resins denture base material which are immersed in Sodium hypochlorite and chlorhexidine). *Maj. Ked. Gigi. (Dent. J.), Vol. 38. No. 1 Januari 2005: 36–40.*

D'Dharan, S. R., dan Ganapathy, D. (2016). Medical management of denture stomatitis. *In Asian Journal of Pharmaceutical and Clinical Research* (Vol. 9, Issue 5, pp. 14–16). Innovare Academics Sciences Pvt. Ltd. https://doi.org/10.22159/ajpcr.2016.v9i5.12670.

De Jesus, G., Marques, L., Vale, N., dan Mendes, R. A. (2023). The Effects of Chitosan on the Healing Process of Oral Mucosa: An Observational Cohort Feasibility Split-Mouth Study. *Nanomaterials*, *13*(4). https://doi.org/10.3390/nano13040706.

Elangwe, C. N., Morozkina, S. N., Olekhnovich, R. O., Krasichkov, A., Polyakova, V. O., dan Uspenskaya, M. V. (2022). A Review on Chitosan and Cellulose Hydrogels for Wound Dressings. *In Polymers* (Vol. 14, Issue 23). MDPI. https://doi.org/10.3390/polym14235163.

El Sadik, A.O., El Ghamrawy, T.A., dan Abd El-Galil, T.I. (2015). The effect of mesenchymal stem cells and chitosan gel on full thickness skin wound healing in albino rats: histological, immunohistochemical and fluorescent study. *PLoS ONE,* 10(9): e0137544.

Ervina, I., Audry, T.M.S., Anastasya, V., Thania, A.R., dan Wulandari, P. (2025). Effectiveness of chitosan film on neutrophils and macrophages counts in the healing of gingival incision in wistar rats (Rattus norvegicus). *International Journal of Applied Pharmaceutics,* 17(Special Issue 5): 56–63.

Fatah L. M., Mahmud Saleh, M., S. Khalid, S., dan F. Alzubadee, A. (2024). Prevalence of denture induced oral mucosal lesions in removable denture wearers. *Diyala Journal of Medicine*, *26*(1), 66–78. https://doi.org/10.26505/djm.26017670709.

Feng, P., Luo, Y., Ke, C., Qiu, H., Wang, W., Zhu, Y., Hou, R., Xu, L., dan Wu, S. (2021). Chitosan-based functional materials for skin wound repair: mechanisms and applications. *Frontiers in Bioengineering and Biotechnology,* 9: 650598.

Ferdina, R., Amran, R., Oktofani, R., Prosthodonti, B., dan Baiturrahmah, F. (2023). *Bahan Herbal Mengandung Senyawa Flavonoid Sebagai Pengobatan Denture Stomatitis: Scoping Review Herbal Materials Containing Flavonoid Compounds As The Treatment Of Denture Stomatitis: Scoping Review*. *MENARA Ilmu* Vol. XVII No.02 April 2023.

Ghanbari, M., Salkovskiy, Y., dan Carlson, M. A. (2024). The rat as an animal model in chronic wound research: An update. *Life Sci* . Author manuscript.

UNIVERSITAS
GADJAH MADA
**Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis
gigi tiruan**
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Ghasemi, A., Jeddi, S., dan Kashfi, K. (2021). The Laboratory Rat: Age And Body Weight Matter. *In EXCLI Journal* (Vol. 20, pp. 1431–1445). Leibniz Research Centre for Working Environment and Human Factors. https://doi.org/10.17179/excli2021-4072.

Gladwin, M., dan Bagby, M. (2013). Clinical Aspect of Dental Material Theory, Practice, and Cases. *4th ed. Wolters Kluwer. USA. Hal. 117-200*.

Guge, S.R.S, Lukum, A., dan Kunusa, W.R. (2023). Pembuatan Nano Kitosan Menggunakan Metode Gelasi Ionik. *Jamb.J.Chem.* Vol 6 (1) 1-8.

Gunadi, H. A., Margo, A., Burhan, L., dan Suryatenggara, F. (2017). *Buku ajar prostodonsia sebagian lepasan* (2nd ed., Vols. 1 & 2). Hipokrates.

Guo, W., Ding, X., Zhang, H., Liu, Z., Han, Y., Wei, Q., Okoro, O.V., Shavandi, A., dan Nie, L. (2024). Recent Advances of Chitosan-Based Hydrogels for Skin-Wound Dressings. *Gels*, 10(3), 175. DOI: 10.3390/gels10030175**.**

Gurtner, G.C., Werner, S., Barrandon, Y., dan Longaker, M.T. (2008). Wound repair and regeneration. Nature, 453(7193): 314–321. https://doi.org/10.1038/nature07039.

Hannah, V.E., Robertson, D., O'Donnell, L., dan Ramage, G. (2017). Denture stomatitis: causes, cures and prevention. Primary Dental Journal, 6(4): 46–51.

Hattori, H., dan Ishihara, M. (2015). Changes in blood aggregation with differences in molecular weight and degree of deacetylation of chitosan. *Biomedical Materials (Bristol)*, *10*(1). https://doi.org/10.1088/1748-6041/10/1/015014.

Herawati, E., dan Novani, D. (2017). Penatalaksanaan kasus denture stomatitis Management of denture stomatitis case. *Jurnal Kedokteran Gigi Universitas Padjadjaran*, *29*(3). https://doi.org/10.24198/jkg.v29i3.15945.

Indraswary, R., Amalina, R., dan Firmansyah, A. (2022). Effects of nano chitosan mouth spray on the epithelial thickness in the traumatic ulcer healing process (in vivo). MEDALI Journal, 4(Special Issue 1): 95–103.

Ismiyati, T., Ali Alhasyimi, A., dan Siswomihardjo, W. (2021). The Effect of Chitosan and Acrylate Acid Complex into Acrylic Resin as Denture Material Against Fibroblast and Inflammatory Cells. In *Journal of International Dental and Medical Research* (Vol. 14, Issue 4). http://www.jidmr.com.

Ismiyati, T., Maharani, Adella S., Nuryanti, Achadian. (2025). Rehabilitasi Kehilangan Gigi dengan Gigi Tiruan Sebagian Lepasan. *Gadjah Mada University Press.* Hal. 19-35.

Ismiyati, T., Siswomihardjo, W., Soesatyo, M. H. N. E., dan Rochmadi, R. (2017). Campuran kitosan dengan resin akrilik sebagai bahan gigi tiruan penghambat Candida albicans. *Majalah Kedokteran Gigi Indonesia*, *3*(3), 21. https://doi.org/10.22146/majkedgiind.23721.

UNIVERSITAS GADJAH MADA
Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis gigi tiruan
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Ismiyati, T., dan Widowati, S. (2016). Uji Sitotoksitas Campuran Resin Akrilik Dengan Kitosan Sebagai Bahan Gigi Tiruan Anti Jamur. I*n VOLUME* (Vol. 5, Issue 2).

Jabeen, B., Aslam, K., Kumar, B., dan Ahmed Lone, M. (2023). *Post-Insertion Complaints of Removable Partial Dentures and Their Association with Age and Gender*. https://www.researchgate.net/publication/373901862.

Jiménez-Gómez, C. P., dan Cecilia, J. A. (2020). Chitosan: A Natural Biopolymer with a Wide and Varied Range of Applications. *In Molecules* (Vol. 25, Issue 17). MDPI AG. https://doi.org/10.3390/molecules25173981.

Komariah, Roeslan, M.O., Anggraeni, R., Santosa, D.N., dan Rennata, A.K. (2026). The effect of nano chitosan Xylotrupes gideon on fibroblas proliferation and collagen deposition in the oral mucosa of Rattus norvegicus. *Biology, Medicine, & Natural Product Chemistry,* 15(1): 23–30.

Krzyszczyk, P., Schloss, R., Palmer, A., dan Berthiaume, F. (2018), The role of macrophages in acute and chronic wound healing and interventions to promote pro-wound healing phenotypes. In *Frontiers in Physiology* (Vol. 9, Issue MAY). Frontiers Media S.A. https://doi.org/10.3389/fphys.2018.00419.

Liu, X., Zhuo, J., Chen, Z., Zhang, Y., Jiang, W., dan Guan, R. (2026), Research and application of the polyene macrolide antibiotic nystatin. *Molecules*, 31(2): 330.

Loo, H. L., Goh, B. H., Lee, L. H., dan Chuah, L. H. (2022). Application of chitosan-based nanoparticles in skin wound healing. In *Asian Journal of Pharmaceutical Sciences* (Vol. 17, Issue 3, pp. 299–332). Shenyang Pharmaceutical University. https://doi.org/10.1016/j.ajps.2022.04.001.

Lubis, I., Naziyah, N., dan Helen, M. (2023). Pengaruh Pemberian Zinc Cream Terhadap Luka Kaki Diabetik pada Proses Penyembuhan pada Fase Proliferasi Luka Pasien Ulkus Diabetik di Wocare Center Bogor. *Malahayati Nursing Journal*, *5*(10), 3483–3495. https://doi.org/10.33024/mnj.v5i10.9183.

McCabe, J. F., dan Walls, A. W. G., (2008) *Applied Dental Materials Ninth Edition*.

Mndlovu, H., Kumar, P., du Toit, L.C., dan Choonara, Y.E. (2024). A review of biomaterial degradation assessment approaches employed in wound healing. *npj Materials Degradation*, 8: 66.

Modlinska, K., dan Pisula, W. (2020). The natural history of model organisms the norway rat, from an obnoxious pest to a laboratory pet. *ELife*, *9*. https://doi.org/10.7554/eLife.50651.

Moraes, G. S., Albach, T., Ramos, I. E., Kopacheski, M. G., Cachoeira, V. S., Sugio, C. Y. C., Arrais, C. A. G., Neppelenbroek, K. H., dan Urban, V. M. (2021). A novel acrylic resin palatal device contaminated with candida albicans biofilm for denture stomatitis induction in wistar rats. *Journal of Applied Oral Science*, *29*. https://doi.org/10.1590/1678-7757-2020-0865.

UNIVERSITAS GADJAH MADA
Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis gigi tiruan
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Mousavi, T., Jalali, H., dan Moosazadeh, M. (2024). Hematological parameters in patients with recurrent Aphthous Stomatitis: a systematic review and meta-analysis. *BMC Oral Health*, *24*(1). https://doi.org/10.1186/s12903-024-04072-5.

Mubarak, S., Hmud, A., Chandrasekharan, S., dan Ali, A. (2015). Prevalence of denture-related oral lesions among patients attending College of Dentistry, University of Dammam: A clinico-pathological study. *Journal of International Society of Preventive and Community Dentistry*, *5*(6), 506. https://doi.org/10.4103/2231-0762.170525.

Oktaria, I. (2022). Prevention And Management Of Denture Stomatitis. *Interdental Jurnal Kedokteran Gigi (IJKG)*, *18*(2), 67–73. https://doi.org/10.46862/interdental.v18i2.5404.

Özkan, Y. K. (2018). *Planning and Decision-Making*.

Patel, D.K., Ganguly, K., Hexiu, J., Dutta, S.D., Patil, T.V., dan Lim, K.T. (2022). Functionalized chitosan/spherical nanocellulose-based hydrogel with superior antibacterial efficiency for wound healing. Carbohydrate Polymers, 284: 119202. https://doi.org/10.1016/j.carbpol.2022.119202.

Patel, M. (2022). Oral cavity and Candida albicans: colonisation to the development of infection. Pathogens, 11(3): 335.

Perić, M., Miličić, B., Kuzmanović Pfićer, J., Živković, R., dan Arsić Arsenijević, V. (2024). A Systematic Review of Denture Stomatitis: Predisposing Factors, Clinical Features, Etiology, and Global Candida spp. Distribution. *Journal of Fungi*, *10*(5), 1–16. https://doi.org/10.3390/jof10050328.

Pertiwisari, A. (2023). *Klasifikasi Resin Akrilik untuk Gigi Tiruan*. https://journal.fkg.umi.ac.id/index.php/denthalib/article/view/40/32.

Petrov, L., Stoilova, O., Pramatarov, G., Kanzova, H., Tsvetanova, E., Andreeva, M., Georgieva, A., Atanasova, D., Philipov, S., dan Alexandrova, A. (2023). Effect of Chitosan-Diosgenin Combination on Wound Healing. *International Journal of Molecular Sciences*, *24*(5). https://doi.org/10.3390/ijms24055049.

Queen, A., Singla, L., dan Goyal, R. R. (2021). Denture stomatitis. *International Journal of Health Sciences, 5(S2), 1–5.*, *11*(2), 51–53. https://doi.org/10.53730/ijhs.v5ns2.5130.

Rahayu, Fadriyanti, O., dan Edrizal (2014). Efektivitas pembersih gigi tiruan dengan rebusan daun sirih 25% dan 50% terhadap pertumbuhan Candida albicans pada lempeng resin akrilik polimerisasi panas. Jurnal B.Dent, 1(2), 142-150. *Jurnal B-Dent, Vol 1, No. 2*.

Rajinikanth B, S., Rajkumar, D. S. R., K, K., dan Vijayaragavan, V. (2024). Chitosan-Based Biomaterial in Wound Healing: A Review. *Cureus*. https://doi.org/10.7759/cureus.55193.

UNIVERSITAS GADJAH MADA
Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis gigi tiruan
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Rhea, L.,, dan Dunnwald, M. (2022). Murine Excisional Wound Healing Model and Histological Morphometric Wound Analysis. *J Vis Exp . Author manuscript*; PMC.

Ribeiro, A. B., Pizziolo, P. G., Clemente, L. M., Aguiar, H. C., Poker, B. de C., Silva, A. A. M. e., Makrakis, L. R., Fifolato, M. A., Souza, G. C., Oliveira, V. de C., Watanabe, E., dan Lovato da Silva, C. H. (2024). Strategies for Preventing and Treating Oral Mucosal Infections Associated with Removable Dentures: A Scoping Review. *In Antibiotics* (Vol. 13, Issue 3). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/antibiotics13030273.

Santoso, W. A., Soekobagiono, dan Salim S. (2012). Kekuatan transversa resin akrilik heat-cured yang ditambah ultra high molecular weight polyethylene fiber (Transverse strength of heat-cured acrylic resin enhanced with ultra high molecular weight polyethylene fiber). In *Journal of Prosthodontics* (Vol. 3, Issue 2).

Sayuti, N.A. (2015). Formulasi dan Uji Stabilisasi Fisik Sediaan Gel Ekstrak Daun Ketepeg Cina (*Cassia alata L.)*. *Jurnal Kefarmasian Indonesia*. Vol 45 (2) 74-82.

Schoch, C. L., Ciufo, S., Domrachev, M., Hotton, C. L., Kannan, S., Khovanskaya, R., Leipe, D., McVeigh, R., O'Neill, K., Robbertse, B., Sharma, S., Soussov, V., Sullivan, J. P., Sun, L., Turner, S., dan Karsch-Mizrachi, I. (2020). NCBI Taxonomy: A comprehensive update on curation, resources and tools. In *Database* (Vol. 2020). Oxford University Press. https://doi.org/10.1093/database/baaa062.

Sheng, W., Qin, H., Wang, T., Zhao, J., Fang, C., Zhang, P., Liu, P., Udduttula, A., Zeng, H., dan Chen, Y. (2023). Advanced phosphocreatine-grafted chitosan hydrogel promote wound healing by macrophage modulation. *Frontiers in Bioengineering and Biotechnology*, 11: 1199939.

Soesetijo, F.X.A. (2016). Pertimbangan Laboratoris dan Klinis Nilon Termoplastis sebagai Basis Gigi Tiruan Sebagian Lepasan. Dalam: *Proceedings Book FORKINAS VI FKG UNEJ, 14–15 Oktober 2016*. Jember: Fakultas Kedokteran Gigi Universitas Jember, hlm. 102–110.

Sorg, H., dan Sorg, C. G. G. (2023). Skin Wound Healing: Of Players, Patterns, and Processes. In *European Surgical Research* (Vol. 64, Issue 2, pp. 141–157). S. Karger AG. https://doi.org/10.1159/000528271.

Sularsih dan Rahmitasari, F. (2018). Penggunaan scaffold kitosan-aloe vera terhadap proliferasi sel fibroblas pada penyembuhan luka pasca pencabutan gigi cavia cobaya. *Jurnal Material Kedokteran Gigi,* 7(2): 24–32.

Taleb, R., Hafez, B., El Kassir, N., El Achkar, H., dan Mourad, M. (2022). Role of vitamin B12 in treating recurrent aphthous stomatitis: A review. In *International Journal for Vitamin and Nutrition Research* (Vol. 92, Issues 5–

UNIVERSITAS GADJAH MADA
Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis gigi tiruan
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

6, pp. 423–430). Hogrefe Verlag GmbH dan Co. KG. https://doi.org/10.1024/0300-9831/a000684.

The Glossary of Prosthodontic Terms: Ninth Edition (2017). *The Journal of Prosthetic Dentistry*, *117*(5), e1–e105. https://doi.org/10.1016/j.prosdent.2016.12.001.

Toma, A. I., Fuller, J. M., Willett, N. J., dan Goudy, S. L. (2021). Oral Wound Healing Models and Emerging Regenerative Therapies. *Transl Res* . 236: 17–34. doi:10.1016/j.trsl.2021.06.003.

Tsitou, V.-M., Rallis, D., Tsekova, M., dan Yanev, N. (2024). Denture Stomatitis Complicated By Diabetes And Oral Candidiasis: A Geriatric Case Report. *Journal of IMAB - Annual Proceeding (Scientific Papers)*, *30*(1), 5441–5443. https://doi.org/10.5272/jimab.2024301.5441.

Utama, D.M., Mude, H.A., Ikbal, M., Launardo, V., dan Dachri, A. (2020).The Mucosal Lesions on Removable Denture Wearers : A Systematic Review. *Sys Rev Pharm*, 11(3):10-14. https://doi.org/10.1111/j.1741-2358.2009.00313.

Veeraiyan, D. N. (2017). *Textbook of Prosthodontics* (2nd ed.). *Jaypee Brothers Medical Publishers.*

Vozza, I., Manzon, L., Passarelli, P. C., Pranno, N., Poli, O., dan Grippaudo, C. (2021). The effects of wearing a removable-partial-denture on the bite forces: A cross-sectional study. *International Journal of Environmental Research and Public Health*, *18*(21). https://doi.org/10.3390/ijerph182111401.

Wahjuni, S., dan Mandanie, A. (2017). Fabrication Of Combined Prosthesis With Castable Extracoronal Attachments (Laboratory Procedure) Pembuatan Protesa Kombinasi Dengan Castable Extracoronal Attachments (Prosedur Laboratorium). *Journal of Vocational Health Studies 01* (2017): 75–81.

Wahyuningtyas, E. (2008). Pengaruh Ekstrak Graptophyllum Pictum Terhadap Pertumbuhan Candida Albicans Pada Plat Gigi Tiruan Resin Akrilik. *Journal of Dentistry*, *15*(3), 187–191. http//www.fkg.ui.edu.

Wilkinson, H. N., dan Hardman, M. J. (2023). Wound healing: Cellular mechanisms and pathological outcomes. In *Advances in Surgical and Medical Specialties* (pp. 341–370). Taylor and Francis. https://doi.org/10.1098/rsob.200223.

Yahya, E. B., Setiawan, A., Wibowo, D., dan Danardono, E. (2020). The Effect of Topical Curcumin Extract on Fibroblast Count and Collagen Density as an Indicator on Accelerating Clean Wound Healing Process: A Study on Wistar Rats. *Systematic Reviews in Pharmacy*, *11*(5), 567–570. https://doi.org/10.1002/j.2055.

Yuliharsini, S., dan Syafrinani (2016). Gigi Tiruan Sebagian Lepasan Kerangka Logam Kombinasi Bahan Fleksibel Sebagai Upaya Memenuhi Kebutuhan Estetik Pada Gigi Penyangga Dengan Resesi Gingiva (Laporan Kasus). *Jurnal B-Dent, Vol 3, No. 1*.

UNIVERSITAS
GADJAH MADA
**Efektivitas kitosan gel 2% terhadap jumlah makrofag dan fibroblas pada proses penyembuhan stomatitis
gigi tiruan**
Febia Astiawati Sugiarto, Prof. Dr. drg. Titik Ismiyati, MS., Sp.Pros.(K); Dr. drg. Endang Wahyuningtyas, MS., Sp.Pros
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Yunanto, M. Y. A. , Rosihan Adhani, dan Widodo (2017). *Frekuensi Terjadinya Gingivitis Pada Pemakai Gigi Tiruan Sebagian Lepasan* (Issue 2).

Zheng, Y., Ke, L., Lu, Y., Zuo, Q., Deng, G., Wang, H., dan Zeng, X. (2020). Enhanced healing and antimicrobial efficacy of chitosan-g-polyacrylamide in a rat model of gingival ulcers. *Frontiers in Chemistry,* 8: 273.

Zhou, Y., Cheng, L., Lei, Y.L., Ren, B., dan Zhou, X. (2021). The interactions between Candida albicans and mucosal immunity. *Frontiers in Microbiology,* 12: 652725.

Zhu, M., Ou, J., Chen, Y., Tian, Y., Song, W., Hu, X., Ju, X., Jiang, S., Huang, S., dan Niu, Z. (2024). Programming of macrophage polarization in different stages for accelerating wound healing. *Chemical Engineering Journal,* 491: 152131. DOI: 10.1016/j.cej.2024.152131.

Zomer, H. D., dan Trentin, A. G. (2018). Skin wound healing in humans and mice: Challenges in translational research. *Journal of Dermatological Science*, vol. 90, no. 1, pp. 3–12.