

DAFTAR PUSTAKA

1. RISKESDAS, "Riskesdas Report 2018," vol. 53, no. 9, pp. 181–222, 2018
2. Statistics Indonesia BPS.2022
3. Sumini, Amikasari B, Nurhayati D. The Relationship Between Sweet Food Consumption and the Incidence of Dental Caries Among Preschool Children at TK B RA Muslimat PSM Tegalorejo Village, Semen, Nguntoronadi District, Magetan Regency. *J Delima Harapan* [Internet]. 2014;3(2):20–7.
4. Sutjipto RW, Herawati H, Kuntari S. The prevalences of *early childhood caries* and *severe early childhood caries* in preschool children at Gunung Anyar Surabaya. *Dent J (Majalah Kedokt Gigi)*. 2014;47(4):186.
5. Rompis C, Pangemanan D, Gunawan P. The Relationship Between Maternal Knowledge Regarding Children's Dental Health and the Severity of Dental Caries Among Kindergarten Students in Tahuna City. *e-GIGI*. 2016;4(1).
6. Sidhu S and Nicholson. A Review of Glass-Ionomer Cements for Clinical Dentistry. *MDPI Journal of Functional Biomaterials*.2016.Vol.7 No.16
7. Berg, Croll T. Glass Ionomer Restorative Cement Systems: An Update. *Pediatric Dentistry* . 2015. Vol 37 No.2
8. Indriani L, Balqis F, Achmad F. The Effect of Hydroxyapatite Addition on the Mechanical Strength of *Glass Ionomer Cement*. *Makassar Dental Journal*. 2022
9. Murugan R, Yazid F, Nasruddin N.S and Anuar. Effects of Nanohydroxyapatite Incorporation into Glass Ionomer Cement (GIC). *MDPI Minerals*. 2022. Vol.12 No.9
10. Sharafeddin F, Bahrani S. Effect of Hydroxyapatite on Surface Roughness of Zirconomer, and Conventional and Resin-Modified Glass Ionomers. *Frontiers in Dentistry*. 2020. Vol.17 No.36
11. Murugan R, Yazid F, Nasruddin N.S and Anuar. Effects of Nanohydroxyapatite Incorporation into Glass Ionomer Cement (GIC). *MDPI Minerals*. 2022. Vol.12 No.9
12. Afriani F, Siswoyo, Amelia R, Hudatwi H, Zaitun, and Tiandho Y. Hydroxyapatite from natural sources: methods and its characteristics. 2nd International Conference on Green Energy and Environment. 2020
13. Yoon S, Lee Y, Kim Y, Kim M, Kim K, Kim S, Choi H. The Effects of Hydroxyapatite on Bonding Strength Between Dental Luting Cement and Human Teeth. *Trans Tech Publications, Switzerland. Key Engineering Materials 2005. Vols 284-286*

14. DileepKumar V, Sridhar M, Aramwit P, Krut'ko V, Musskaya O, Glazov I, et al. A review on the synthesis and properties of hydroxyapatite for biomedical applications. *J Biomater Sci Polym Ed* 2021; 33: 229–61.
15. Pu'ad N, Haq R, Noh H, Abdullah H, Idris M, Lee T. Synthesis method of hydroxyapatite: a review. *Mater Today Proc* 2020; 29: 233–9.
16. Reflin Yuliana R, Rahim E, Hardi J. Sintesis Hidroksiapatit Dari Tulang Sapi Dengan Metode Basah Pada Berbagai Waktu Pengadukan Dan Suhu Sintering. *Kovalen Jurnal Riset Kimia*. 2017
17. Syukur V, Rahyuni D, Ayuningtyas E, Triastianti R. Pemanfaatan Tulang Sapi Dan Tulang Ayam Menjadi Arang Aktif. *Jurnal Rekaya Lingkungan*. 2024. Vol.24 No.2
18. Ikhsan, Gunawarman, Yetri Y. Karakteristik Hidroksiapatit (HA) Dari Limbah Tulang Sapi dengan Metode Mekanik-Termal. *Poli Rekayasa*.2018. Vol.13 No.2
19. Yusuf Y, Khasanah, Syafaat, Parawangan, Sari, Mawuntu, Rizkayanti. Hidroksiapatit berbahan dasar biogenik. *Gadjah Mada University Press*. 2024
20. Khalid H, Chaudhry A. Basics Of Hydroxyapatitedstructure, Synthesis, Properties, And Clinical Applications. *Handbook Of Ionic Substituted Hydroxyapatites*. Elsevier Woodhead Publishing.2020
21. Chetty A, Wepener I, Marei M, Kamary Y, Moussa R. *Hydroxyapatite: Synthesis, Properties, and Application*. Nova. Ed.1. 2013
22. Berg, Croll T. *Glass Ionomer Restorative Cement Systems: An Update*. Pediatric Dentistry . 2015. Vol 37 No.2
23. Indriani L, Balqis F, Achmad F. P The Effect of Hydroxyapatite Addition on the Mechanical Strength of *Glass Ionomer Cement*.. *Makassar Dental Journal*. 2022
24. Anusavice, kenneth J. Phillips : *Gigi*. Edition 10.Indonesia : Jakarta. EGC. 2004
25. Hossain, M. S., & Ahmed, S. (2023). FTIR spectrum analysis to predict the crystalline and amorphous phases of hydroxyapatite: a comparison of vibrational motion to reflection. *RSC Advances*, 13(21), 14625–14630. <https://doi.org/10.1039/d3ra02580b>
26. Szterner, P., & Biernat, M. (2022). Sintesis Hidroksiapatit melalui Proses Hidrotermal dengan Kalsium Laktat Pentahidrat: Pengaruh Konsentrasi Reagen, pH, Suhu, dan Tekanan. *Kimia Bioanorganik dan Aplikasi* , 2022 (1). <https://doi.org/10.1155/2022/3481677>
27. Malik S, Ahmed MA, Choudhry Z, Mughal N, Amin M, Lone MA. PELEPASAN FLUORIDA DARI SEMEN IONOMER KACA YANG MENGANDUNG FLUOROAPATIT DAN HIDROKSIAPATIT. *J Ayub Med Coll Abbottabad*

[Internet]. 17 April 2018 [diakses 30 September 2025];30(2):198-202. Tersedia di:
<https://ayubmed.edu.pk/jamc/index.php/jamc/article/view/4518>

28. Bilić-Prčić, M.; Šalinović, I.; Gurgan, S.; Koc Vural, U.; Krmek, S.J.; Miletić, I. Effects of Incorporation of Marine Derived Hydroxyapatite on the Microhardness, Surface Roughness, and Fluoride Release of Two Glass-Ionomer Cements. *Appl. Sci.* **2021**, *11*, 11027. <https://doi.org/10.3390/app112211027>
29. Moheet IA, Luddin N, Ab Rahman I, Masudi SM, Kannan TP, Abd Ghani NRN. Novel nano-hydroxyapatite-silica-added glass ionomer cement for dental application: Evaluation of surface roughness and sol-sorption. *Polymers and Polymer Composites.* 2019;28(5):299-308. doi:[10.1177/0967391119874678](https://doi.org/10.1177/0967391119874678)
30. Wan Jusoh, W.N.; Matori, K.A.; Mohd Zaid, M.H.; Zainuddin, N.; Ahmad Khiri, M.Z.; Abdul Rahman, N.A.; Abdul Jalil, R.; Kul, E. Incorporation of Hydroxyapatite into Glass Ionomer Cement (GIC) Formulated Based on Alumino-Silicate-Fluoride Glass Ceramics from Waste Materials. *Materials* **2021**, *14*, 954. <https://doi.org/10.3390/ma14040954>
31. Martins RA, Marti LM, Mendes ACB, Fragelli C, Cilense M, Zuanon ACC. Brushing Effect on the Properties of Glass Ionomer Cement Modified by Hydroxyapatite Nanoparticles or by Bioactive Glasses. *Int J Dent.* 2022 Feb 21;2022:1641041. doi: [10.1155/2022/1641041](https://doi.org/10.1155/2022/1641041). PMID: 35237327; PMCID: PMC8885199.
32. Kheur, M., Kantharia, N., Iakha, T., Kheur, S., Husain, N. A., & Özcan, M. (2019). Evaluation of mechanical and adhesion properties of glass ionomer cement incorporating nano-sized hydroxyapatite particles. *Odontology*, *108*(1), 66–73. <https://doi.org/10.1007/s10266-019-00427-5>
33. Alatawi, R. A., Elsayed, N. H., & Mohamed, W. S. (2018). Influence of hydroxyapatite nanoparticles on the properties of glass ionomer cement. *Journal of Materials Research and Technology*, *8*(1), 344–349. <https://doi.org/10.1016/j.jmrt.2018.01.010>
34. Manjunath, V., John, R. P., Doddawad, V. G., Gehlot, P. M., Achar, R. R., & Vadiraj, K. T. (2024). Measurement of fluoride ion release from restorative material using an Ion-Selective electrode and Ultraviolet–Visible light spectrophotometer. *Journal of International Society of Preventive and Community Dentistry*, *14*(6), 489–496. https://doi.org/10.4103/jispcd.jispcd_127_24
35. Mahmoud, N., & Metwally, A. (2021). Fluoride release and recharging ability of glass ionomer cement incorporating hydroxyapatite nanoparticles. *Egyptian Dental Journal /Egyptian Dental Journal*, *67*(4), 3741–3749. <https://doi.org/10.21608/edj.2021.89027.1732>

36. Moshaverinia, M., Borzabadi-Farahani, A., Sameni, A., Moshaverinia, A., & Ansari, S. (2016). Effects of incorporation of nano-fluorapatite particles on microhardness, fluoride releasing properties, and biocompatibility of a conventional glass ionomer cement (GIC). *Dental Materials Journal*, 35(5), 817–821.
<https://doi.org/10.4012/dmj.2015-437>