

DAFTAR PUSTAKA

- Agrawal VS, Rajesh M, Sonali K, and Mukesh P, 2014. A contemporary overview of endodontic irrigants—a review. *J Dent App*. 1(6): 105-15.
- Agarwal M, Agarwal MK, Shrivastav N, Pandey S, Das R, and Gaur P, 2018. Preparation of chitosan nanoparticles and their in-vitro characterization. *International journal of life science scientific research*. 4(2): 1713-20.
- Alhadi D, Al-Rawi NH, Jaber FM, Agah M, and Saeed MH, 2016. Smear layer removal and ultramorphological changes of root canal dentin induced by erbium, chromium: Yttrium-scandium-gallium-garnet laser. *Journal of Restorative Dentistry*. 4(2): 48-52.
- Aydin R, and Pulat M, 2012. 5-Fluorouracil encapsulated chitosan nanoparticles for pH-stimulated drug delivery: evaluation of controlled release kinetics. *Journal of Nanomaterials*. 2012: 1-10.
- Bangun H, Tandiono S, and Arianto A, 2018. Preparation and evaluation of chitosan-tripolyphosphate nanoparticles suspensions as an antibacterial agent. *Journal of Applied Pharmaceutical Science*. 8(12): 147-56.
- Bayram HM, Bayram E, Kanber M, Celikten B, and Saklar F, 2017. Effect of different chelating solutions on the push-out bond strength of various root canal sealers. *Biomedical Research-India*: 401-6.
- Berastegui E, Molinos E, and Ortega J, 2017. To comparison of standard and new chelating solutions in endodontics. *J Dental Sci*. 2: 1-8.
- Chauhan S. 2015. Modification of chitosan for sorption of metal ions. *J Chem Pharm Res*. 7(4): 49-55.
- Choudhary OP, and Priyanka. 2017. Scanning electron microscope: advantage and disadvantage in imaging components. *Int J Curr Microbiol App Sci*. 6(5): 1877-82.
- Croisier F, and Jérôme C, 2013. Chitosan-based biomaterials for tissue engineering. *European polymer journal*. 49(4): 780-92.
- del Carpio-Perochena A, Bramante CM, Duarte MAH, de Moura MR, Aouada FA, and Kishen A, 2015. Chelating and antibacterial properties of chitosan

- nanoparticles on dentin. *Restorative dentistry & endodontics*. 40(3): 195-201.
- Dompeipen EJ, Kaimudin M, and Dewa RP, 2016. Isolasi kitin dan kitosan dari limbah kulit udang. *Majalah Biam*. 1: 32-8.
- Fonzar F, Fonzar A, Buttolo P, Worthington HV, and Esposito M, 2009. The prognosis of root canal therapy: a 10-year retrospective cohort study on 411 patients with 1175 endodontically treated teeth. *Eur J Oral Implantol*. 2(3): 201-8.
- Goy RC, Britto DD, and Assis OB, 2009. A review of the antimicrobial activity of chitosan. *Polimeros*. 19(3): 241-7.
- Goy RC, Morais ST, and Assis OB, 2016. Evaluation of the antimicrobial activity of chitosan and its quaternized derivative on E. coli and S. aureus growth. *Revista Brasileira de Farmacognosia*. 26(1): 122-7.
- Hülsmann M, Heckendorff M, and Lennon A, 2003. Chelating agents in root canal treatment: mode of action and indications for their use. *International endodontic journal*. 36(12): 810-30.
- Ibrahim MA, Neo J, Esguerra RJ, and Fawzy AS, 2015. Characterization of antibacterial and adhesion properties of chitosan-modified glass ionomer cement. *Journal of biomaterials applications*. 30(4): 409-19.
- Islam S, Bhuiyan MR, and Islam, M.N., 2017. Chitin and chitosan: structure, properties and applications in biomedical engineering. *Journal of Polymers and the Environment*, 25(3):854-866.
- Jaju S, and Jaju PP, 2011. Newer root canal irrigants in horizon: a review. *International journal of dentistry*. 2011: 1-9.
- Jiang T, Deng M, James R, Nair LS and Laurencin, CT, 2014. Micro-and nanofabrication of chitosan structures for regenerative engineering. *Acta biomaterialia*. 10(4): 1632-45.
- Kandil HE, Labib AH, and Alhadainy HA, 2014. Effect of different irrigant solutions on microhardness and smear layer removal of root canal dentin. *Tanta Dental Journal*. 11(1):1-11.
- Keyur PC, Narendra UM, Manoj GC, Jyoti L, and Sneha RC, 2014. Effect of chelating agents and irrigants on mineral content of root canal dentin: an

in vitro study. *International Journal of Clinical Preventive Dentistry*. 10(3):135-8.

- Khanmohammadi, M., Elmizadeh, H. and Ghasemi, K., 2015. Investigation of size and morphology of chitosan nanoparticles used in drug delivery system employing chemometric technique. *Iranian journal of pharmaceutical research: IJPR*, 14(3), pp.665-675.
- Mathew ST, 2015. Risks and management of sodium hypochlorite in endodontics. *Journal of Oral Hygiene & Health*. 3:178.
- Mohammadi Z, 2008. Sodium hypochlorite in endodontics: an update review. *International dental journal*. 58(6): 329-341.
- Mohammadi Z, Shalavi S. and Jafarzadeh H, 2013. Ethylenediaminetetraacetic acid in endodontics. *European journal of dentistry*. 7(S 01): S135-42.
- Nadia LMH, Suptijah P, and Ibrahim B, 2014. Produksi dan karakterisasi nano kitosan cangkang udang windu dengan metode gelasi ionik. *JPHPI*. 17(2): 119-26.
- Neuhaus KW, Liebi M, Stauffacher S, Eick S, and Lussi A, 2016. Antibacterial efficacy of a new sonic irrigation device for root canal disinfection. *Journal of endodontics*. 42(12):1799-803.
- Nurliza C, Dennis, and Abidin T, 2014. Prinsip-prinsip dasar preparasi saluran akar secara khemomekanis. *Dentika Dental Journal*. 18(2): 177-84.
- Parthiban F, Balasundari S, Gopalakannan A, Rathnakumar K, and Felix S, 2017. Comparison of the quality of chitin and chitosan from shrimp, crab and squilla waste. *Current World Environment*. 12(3): 672-9.
- Pereira ESJ, Peixoto IFC, Nakagawa RKL, Buono VTL, and Bahia MGA, 2012. Cleaning the apical third of curved canals after different irrigation protocols. *Braz Dent J*. 23(4): 351-6.
- Plotino G, Cortese T, Grande NM, Leonardi DP, Giorgio GD, Testarelli L, and Gambarini G, 2016. New Technologies to Improve Root Canal Disinfection. *Braz Dent J*. 27(1): 3-8.
- Purwanti, A, 2014. Evaluasi Proses Pengolahan Limbah Kulit Udang Untuk Meningkatkan Mutu Kitosan yang Dihasilkan. *Jurnal Teknologi*. 7(1): 83-90.

- Qi L, Xu Z, Jiang X, Hu C, and Zou X, 2004. Preparation and antibacterial activity of chitosan nanoparticles. *Carbohydrate Research*. 339: 2693-700.
- Rhazi M, Desbrieres J, Tolaimate A, Rinaudo M, Vottero P, Alagui A, Meray ME. 2002. Influence of the nature of the metal ions on the complexation with chitosan. Application to the treatment of liquid waste. *European Polymer Journal*. 38: 1523-30.
- Ruddle C. 2008. Endodontic disinfection – Tsunami Irrigation. Accessed at: http://www.endoexperience.com/userfiles/file/Clinical%20Endodontics/Irrigation/EndoDisinfect_Feb2008.pdf on 4th February 2019.
- Schaudinn C, Carr G, Gorur A, Jaramillo D, Costerton JW, and Webster P, 2009. Imaging of endodontic biofilms by combined microscopy (FISH/cLSM–SEM). *Journal of microscopy*. 235(2): 124-7.
- Sharma G, Kakkar P, and Vats A, 2015. A comparative SEM investigation of smear layer remaining on dentinal walls by three rotary NiTi files with different cross sectional designs in moderately curved canals. *Journal of clinical and diagnostic research: JCDR*. 9(3): ZC43.
- Silva PV, Guedes DFC, Pécora JD, and Cruz-Filho, AMD, 2012. Time-dependent effects of chitosan on dentin structures. *Brazilian dental journal*. 23(4): 357-61.
- Silva PV, Guedes DFC, Nakadi FV, Pecora JD, Cruz-Filho AM, 2013. Chitosan: a new solution for removal of smear layer after root canal instrumentation. *International Endodontic Journal*: 46(4), pp.332-338.
- Spencer HR, Ike V, and Brennan PA, 2007. The use of sodium hypochlorite in endodontics—potential complications and their management. *British dental journal*. 202(9):555.
- Suzuki S, Masuda Y, Morisaki H, Yamada Y, Kuwata H, and Miyazaki T, 2014. The study of chitosan-citrate solution as a root canal irrigant: A preliminary report. *Oral Hyg Health*. 2(142): 2332-0702.
- Tabassum S, and Khan FR, 2016. Failure of endodontic treatment: The usual suspects. *European journal of dentistry*. 10(01): 144-7.
- Violich DR, and Chandler NP, 2010. The smear layer in endodontics—a review. *International endodontic journal*. 43(1): 2-15.

Wardani G, and Sudjarwo SA, 2018. In vitro antibacterial activity of chitosan nanoparticles against Mycobacterium tuberculosis. *Pharmacognosy Journal*. 10(1): 162-6.

Zakarea NA, Mohamad TH, Taqa AA, Chumbley S, Al-Juaid S, and Balto H, 2014. A newly prepared solution for the removal of the smear layer. *International Journal*. 2(1):19-26.