

## DAFTAR PUSTAKA

- Al-Khanati, N. M. & Al-Moudallal, Y., 2019. Effect of Intra socket Application of Manuka Honey on Postsurgical Pain of Impacted Mandibula Third Molars Surgery: Split-Mouth Randomized Controlled Trial. *J Maxillofac Oral Surg.* 18(1):147-152. DOI: 10.1007/s12663-018-1142-z.
- Alfadil, L. & Almajed, E., 2020. Prevalence of impacted third molars and the reason for extraction in Saudi Arabia. *Saudi Dent J.* Jul;32(5):262-268. DOI: 10.1016/j.sdentj.2020.01.002.
- American Association of Oral and Maxillofacial Surgeons., 2016. Supporting Information to the Management of Patients with Third Molar Teeth. *Aaoms*;1-3.[https://www.aaoms.org/images/uploads/pdfs/management\\_third\\_molar\\_supporting\\_information.pdf](https://www.aaoms.org/images/uploads/pdfs/management_third_molar_supporting_information.pdf). [12 November 2023].
- Bailey, E. et al., 2020. Surgical techniques for the removal of mandibula wisdom teeth. *Cochrane Database Syst Rev.* 7(7):CD004345. DOI: 10.1002/14651858.CD004345.pub3.
- Balaji, S. M., 2018, *Textbook of Oral & Maxillofacial Surgery*, 3<sup>rd</sup> ed., Elsevier, New Delhi, pp. 864-945.
- Balakrishnan, G. et al., 2017. Incidence of Trismus in Transalveolar Extraction of Lower Third Molar. *J Pharm Bioallied. Sci.* 2017 Nov;9 (Suppl 1):S222-S227. DOI: 10.4103/jpbs.JPBS\_161\_17.

- Bogdanov, Stefan. 2016. Propolis: biological properties and medical applications. The Propolis Book, Chapter 2. Bee Product Science. <https://www.researchgate.net/publication/304012147>. [11November 2023].
- Caruana, A., Savina, D., Macedo, J.P. and Soares, S.C., 2019. From Platelet-Rich Plasma to Advanced Platelet-Rich Fibrin: Biological Achievements and Clinical Advances in Modern Surgery. *Eur J Dent*. 13(2):280-286. DOI: 10.1055/s-0039-1696585.
- Da, R. C., Bueno, I. L., Quaresma, A. C. M. & Longato, G. B. 2022. Healing Potential of Propolis in Skin Wounds Evidenced by Clinical Studies. *Pharmaceuticals (Basel)*. 2022 Sep 14;15(9):1143. DOI: 10.3390/ph1509114
- Deliverska, Elitsa & Petkova, Milena., 2016. Complications After Extraction Of Impacted Third Molars – Literature Review. *Journal of IMAB*. 22. 1202-1211. DOI: 10.5272/jimab.2016223.1202.
- Demirsoy, Mustafa., Erdil, Aras. & Tümer, Mehmet., 2022. Comparison of the Effects of the Mouthwashes with Different Ingredients on Inflammatory Complications and Early Wound Healing After Impacted Third Molar Surgery: Randomized Clinical Trial. *Turkiye Klinikleri Journal of Dental Sciences*. 28. 21-30. DOI: 10.5336/dentalsci.2021-83696.

- Dutta, S. R., Singh, P., Passi, D. & Patter, P. 2015. Mandibula Third Molar Extraction Wound Healing With and Without Platelet Rich Plasma: A Comparative Prospective Study. *J Maxillofac Oral Surg.* 2015 Sep;14(3):808-15. DOI: 10.1007/s12663-014-0738-1.
- Ekeuku, S. O. & Chin, K. Y. 2021. Application of Propolis in Protecting Skeletal and Periodontal Health-A Systematic Review. *Molecules.* 2021 May 25;26(11):3156. DOI: 10.3390/molecules26113156.
- Galeotti, F., Capitani, F., Fachini, A. & Volpi, N., 2019. Recent advances in analytical approaches for the standardization & quality of polyphenols of propolis. *Journal of Medicinal Plants Research.* 13, 487-500. DOI:10.5897/jmpr2019.6849.
- González, S. J. et al., 2021. Application of propolis extract, nanovitamin C and nanovitamin E to prevent alveolar osteitis after impacted lower third molar surgery. A randomized, double-blind, split-mouth, pilot study. *Med Oral Patol Oral Cir Bucal.* 26(2):e118-e125. DOI: 10.4317/medoral.23915.
- González, S. J. et al., 2022. Efficacy & safety of a bioadhesive gel containing propolis extract, nanovitamin C and nanovitamin E on desquamative gingivitis: a double-blind, randomized, clinical trial. *Clin Oral Investig.* 27(2):879-888. DOI: 10.1007/s00784-022-04653-0.
- Hupp, J. R., Ellis, E. and Tucker, M. R., 2019, *Contemporary Oral & Maxillofacial Surgery*, 7<sup>th</sup> ed., Elsevier, Philadelphia, pp. 161-171.

- Idris, AM. Et al., 2021. Third molar impaction in the Jazan Region: Evaluation of the prevalence and clinical presentation. *Saudi Dent J.* 33(4):194-200. DOI: 10.1016/j.sdentj.2020.02.004.
- Iswanto H., Kusw danari, S. & Mahendra, P.K.W., 2016. Pengaruh Pemberian Topikal Propolis 10% terhadap Penyembuhan Luka Pasca Pencabutan Gigi Desidui Persistensi (Kajian Pada Anak Usia 6-10 Tahun ). *J Ked Gi.* Vol. 7, No. 2, April 2016: 80 – 85. ISSN 2086-0218. <https://journal.ugm.ac.id/jkg/article/view/27858>. [13 November 2023]
- Jeyaraj, P. E. & Chakranarayan, A., 2018. Soft Tissue Healing and Bony Regeneration of Impacted Mandibular Third Molar Extraction Sockets, Following Postoperative Incorporation of Platelet-rich Fibrin. *Ann Maxillofac Surg.* 2018 Jan-Jun;8(1):10-18. DOI: 10.4103/ams.ams\_185\_17.
- Juwita, D. A. et al., 2021. Effect of Propolis on Bone Quality and Cortical Bone Thickness of Ovariectomized Female Wistar White Rats as A Model for Osteoporosis. *Pharmaceutical Sciences and Research (PSR)*, 8(3), 2021, 121 – 127. <https://scholarhub.ui.ac.id/cgi/viewcontent.cgi?article=1214&context=psr#:~:text=The%20administration%20of%20propolis%20orally,white%20rats%20as%20menopause%20modelling>. [5 Februari 2024].
- Kantrong, N. et al., 2023. An in vitro anti-inflammatory effect of Thai propolis in human dental pulp cells. *J Appl Oral Sci.* 2023 Jun 5;31:e20230006. DOI: 10.1590/1678-7757-2023-0006.

Kapoor, Muneet. Et al., 2020. Incidence of impacted mandibula and maxillary third molars: A radiographic study in a group of kashmiri population. *Ann Int Med Dent Res*. 2020;6(6):42–4. ISSN (O):2395-2822; ISSN (P):2395-2814. [https://aimdrjournal.com/wp-content/uploads/2021/06/DE10\\_OA\\_Tajamul-Hakim-Edit-DE.pdf](https://aimdrjournal.com/wp-content/uploads/2021/06/DE10_OA_Tajamul-Hakim-Edit-DE.pdf) . [17 Agustus 2023].

Kashmoola, Muhannad Ali. et al., 2019. Retrospective demographic study on tooth impaction in a Malaysian sample. *Journal of International Dental and Medical Research*. Volume 12, Issue 2, 2019. Pp. 548-552. ISSN 1309-100X. <https://www.proquest.com/openview/0d2f494351fa838d389b64433a9cab9b/1?pq-origsite=gscholar&cbl=1036416>. [17 Agustus 2023].

Khurshid, Z. et al., 2017. Propolis: A natural biomaterial for dental & oral healthcare. *J Dent Res Dent Clin Dent Prospects*. 11(4):265-274. DOI: 10.15171/joddd.2017.046.

Kjeldsen, H. B., Klausen, T.W. & Rosenberg, J., 2016. Preferred Presentation of the Visual Analog Scale for Measurement of Postoperative Pain. *Pain Pract*. 2016(8):980-984. DOI: 10.1111/papr.12344.

Kresnodi, U., Lunardhi, L. C. & Agustono, B. 2020. Propolis extract and bovine bone graft combination in the expression of VEGF and FGF2 on the preservation of post extraction socket. *J Indian Prosthodont Soc*. 2020;20:417-23. DOI: 10.4103/jips.jips\_106\_20.

Kusumaningrum, E., Suryono. & Rahman, E.F., 2022. Pengaruh Pemberian Topikal Gel Propolis 10 % dan Fototerapi Near Infrared Pada Penyembuhan Luka Pasca Kuretase Studi terhadap Tikus Sprague dawley Ditinjau dari Jumlah Pembuluh Darah Baru ( Angiogenesis ). *Pros Konstelasi Ilm Mhs Unissula* 7. 2022;023:72–85. ISSN. 2809-2988. <https://jurnal.unissula.ac.id/index.php/kimukes/article/view/20281/6485>. [15 Oktober 2023].

Lingamaneni, S., Mandadi, L. R. & Pathakota, K. R., 2019. Assessment of healing following low-level laser irradiation after gingivectomy operations using a novel soft tissue healing index: A randomized, double-blind, split-mouth clinical pilot study. *J Indian Soc Periodontol.* 23(1):53-57. DOI: 10.4103/jisp.jisp\_226\_18.

Lisbona, G. M. J. et al., 2021. Effect of Propolis Paste and Mouthwash Formulation on Healing after Teeth Extraction in Periodontal Disease. *Plants (Basel)*. 10(8):1603. DOI: 10.3390/plants10081603.

Lita, Y. & Hadikrishna, I., 2020. Klasifikasi impaksi gigi molar ketiga melalui pemeriksaan radiografi sebagai penunjang odontektomi. *Jurnal Radiografi Dentomaksilofasial Indonesia (JRDI)*. 4(1): 1, 1-5. DOI: 10.32793/jrdi.v4i1.467.

Lunardhi, LC., Kresnoadi, U. & Agustono, B., 2019. The effect of a combination of propolis extract and bovine bone graft on the quantity of fibroblasts, osteoblasts and osteoclasts in tooth extraction sockets. *Dent J (Majalah Kedokt Gigi)*. 52(3):126–32. DOI: 10.20473/j.djmk.v52.i3.p126–132.

- Miloro, M., Ghali, G. E., Larsen, P. E., Waite, P. 2022. Peterson's Principles of Oral and Maxillofacial Surgery, 4<sup>th</sup> ed., Springer, pp. 15-16.
- Mostafa, D. & Mandil, O. A., 2021. Treatment of gingival recession defects using non-invasive pinhole technique with propolis application, a case report. *Int J Surg Case*. 2021;83:106042. DOI: 10.1016/j.ijscr.2021.106042.
- Mostafa, N. A., 2015. The effects of primary and secondary wound closure following surgical extraction of lower third molars on post-operative morbidity: A prospective randomized clinical trial. *Journal of Dentistry and Oral Hygiene*. 2015. 7. 168-174. DOI: 10.5897/JDOH2015.0173.
- Mudjono, H., Rahajoe, PS., & Astuti, ER., 2020. The effect of triangular and reversed triangular flap designs to post third molar odontectomy complications (a pilot study). *J Clin Exp Dent*. ;12(4):e327-e334. DOI: 10.4317/jced.55864.
- Novyana, RM. & Susanti., 2016. Lidah Buaya (Aloe vera) untuk Penyembuhan Luka. *J Kedokt Univ Lampung*. 2016;5(4):149–53. DOI: 10.25077/mka.v46.i2.p436-442.2023.
- Öncü, E. et al., 2016. Positive effect of platelet rich fibrin on osseointegration. *Med Oral Patol Oral Cir Bucal*. 21(5):e601-7. DOI: 10.4317/medoral.21026. PMID: 27475686. PMCID: PMC5005098.
- Oršolić N. 2022. Allergic Inflammation: Effect of Propolis and Its Flavonoids. *Molecules*. 2022 Oct 8;27(19):6694. DOI: 10.3390/molecules27196694.

Özveri, K. B. et al., 2020. Effect of concentrated growth factor (CGF) on short-term clinical outcomes after partially impacted mandibula third molar surgery: A split-mouth randomized clinical study. *J Stomatol Oral Maxillofac Surg.* 121(2):118-123. DOI: 10.1016/j.jormas.2019.07.002.

Pasupuleti, V. R., Sammugam, L., Ramesh, N. & Gan, S. H., 2017. Honey, Propolis, and Royal Jelly: A Comprehensive Review of Their Biological Actions and Health Benefits. *Oxidative Medicine and Cellular Longevity.* 2017:2017:1259510. 1–21. DOI:10.1155/2017/1259510.

Prabowo, Teguh., Kresnoadi, Utari. & Hidayati, Hanoem., 2020. Effective dose of propolis extract combined with bovine bone graft on the number of osteoblasts and osteoclasts in tooth extraction socket preservation. *Dental Journal (Majalah Kedokteran Gigi).* 53. 40. DOI: 10.20473/j.djmk.v53.i1.p40-44.

Rauf S, Ali W, Chaudhry R, Kazmi SS, Imtiaz M. Pattern of mandibula third molar impaction: a radiographic study. *Pak Oral Dent J.* 2019; 39(3):238-42.. [https://www.researchgate.net/publication/343610516\\_Pattern\\_Of\\_Mandibula\\_Third\\_Molar\\_Impaction\\_A\\_Radiographic\\_Study/Link/5f3402dc458515b729196681/download?\\_Tp=Eyjjb250zxh0ijp7imzpcnn0ugfnzsi6inb1ymxpy2f0aw9uiiwicgfnZsi6inb1ymxpy2f0aw9uin19](https://www.researchgate.net/publication/343610516_Pattern_Of_Mandibula_Third_Molar_Impaction_A_Radiographic_Study/Link/5f3402dc458515b729196681/download?_Tp=Eyjjb250zxh0ijp7imzpcnn0ugfnzsi6inb1ymxpy2f0aw9uiiwicgfnZsi6inb1ymxpy2f0aw9uin19). [17 November 2023].

Sabir, Ardo., 2019. Indonesian propolis suppressed the expression of COX-2 in inflamed rat dental pulp in direct capping treatment. *Journal of Dentomaxillofacial Science.* 4(2):109. DOI: 4.109.10.15562/jdmfs.v4i2.966.

- Shin, S. M., Choi, E.J. & Moon, S.Y., 2016. Prevalence of pathologies related to impacted mandibula third molars. *Springerplus*. 29;5(1):915. DOI: 10.1186/s40064-016-2640-4.
- Siheri, W., Alenezi, S., Tusiimire, J. & Watson, D. G., 2017. The Chemical & Biological Properties of Propolis. *Bee Products – Chemical and Biological Properties*. 2017 May 16:137–78. DOI: 10.1007/978-3-319-59689-1\_7.
- Silva, D. A., Caldeira, P. C., de Sousa, S. F. & Santos, V. R., 2023. Grade IV oral mucositis treatment with Brazilian green propolis mucoadherent gel. *Explor Drug Sci*. 2023;1:312–21. DOI: 10.37349/eds.2023.00022.
- Silva, R. F. et al., 2015. Biology of Bone Tissue: Structure, Function, and Factors That Influence Bone Cells. *BioMed Research International*. Volume 2015. 17 pages. DOI: 10.1155/2015/421746
- Simundic, A.M. et al., 2018. Joint EFLM-COLABIOCLI Recommendation for venous blood sampling. *Clin Chem Lab Med*. 56(12):2015-2038. DOI: 10.1515/cclm-2018-0602.

- Singh, Madhumati. & Chakrabarty, Anindya., 2016. Prevalence of Impacted Teeth: Study of 500 Patients. *International Journal of Science and Research (IJSR)*. Volume 5 Issue 1, January 2016. ISSN (Online): 2319-7064. [https://www.researchgate.net/publication/304245287\\_Prevalence\\_of\\_Impacted\\_Teeth\\_Study\\_of\\_500\\_Patients/link/576a3b2c08ae3bf53d332805/download?tp=eyJjb250ZXh0Ijp7imZpcnN0UGFnZSI6InB1YmxpY2F0aW9uInI9](https://www.researchgate.net/publication/304245287_Prevalence_of_Impacted_Teeth_Study_of_500_Patients/link/576a3b2c08ae3bf53d332805/download?tp=eyJjb250ZXh0Ijp7imZpcnN0UGFnZSI6InB1YmxpY2F0aW9uInI9). [15 oktober 2023].
- Sokeng, S. D. et al., 2020. Anti-Inflammatory and Analgesic Effect of Arachic Acid Ethyl Ester Isolated from Propolis. *BioMed Research International*. 2020, 1–8. DOI:10.1155/2020/8797284.
- Somsanith, N. et al., 2018. Enhancing of Osseointegration with Propolis-Loaded TiO<sub>2</sub> Nanotubes in Rat Mandible for Dental Implants. *Materials (Basel)*. 2018 Jan 1;11(1):61. DOI: 10.3390/ma11010061.
- Sulfiana, Sulfiana., Yusuf, Harmas Yazid. & Riawan, Lucky. 2021. Efficacy of natrium diclofenac gels application after odontectomy of lower third molar by assessment of swelling based on the level of alpha amylase & imunoglobulin-g: research. *Journal of Dentomaxillofacial Science*. 2021: 6 (1):22. DOI: 10.15562/jdmfs.v6i1.1020.
- Suryono. et al., 2017. Propolis 10%-Gel as a Topical Drug Candidate on Gingivitis. *International Journal of Medicine and Pharmacy*. Vol. 5, No. 1, pp. 12-17. DOI: 10.15640/ijmp.v5n1a2.

- Syaflida, R., Rusdy, H., Riza, A & Sitorus, M., 2019. Comparison of wound healing time post odontectomy surgery using silk and catgut sutures In Pirngadi Hospital. *Journal of Dentomaxillofacial Science*. 4(2): 96-99. DOI: 10.15562/jdmfs.v4i2.797.
- Thor, M. et al., 2017. Temporal patterns of patient-reported trismus and associated mouth-opening distances in radiotherapy for head and neck cancer: A prospective cohort study. *Clin Otolaryngol*. 2017;43(1):22-30. DOI: 10.1111/coa.12896.
- Uskokovic, Vuk & Ghosh, Shreya. 2016. Carriers for the Tunable Release of Therapeutics: Etymological Classification and Examples. *Expert Opinion on Drug Delivery*. DOI: 13. 10.1080/17425247.2016.1200558.
- Wimardhani, Y. S. & Soegyanto, A. I., 2014. Oral mucosal ulceration caused by the topical application of a concentrated propolis extract. *Case Rep Dent*. 2014:307646. DOI: 10.1155/2014/307646.
- Wiwekowiati, Wiwekowiati. et al., 2020. Indonesian Propolis Reduces Malondialdehyde Level & Increase Osteoblast Cell Number in Wistar Rats with Orthodontic Tooth Movement. *Open Access Macedonian Journal of Medical Sciences*. 8. 100-104. DOI: 10.3889/oamjms.2020.3984.
- Yanti, Evita. & Kustiawan, P. M., 2023. Study Of Indonesian Stingless Bee Propolis Potential As Antioxidant: A Review. *Jurnal Farmasi Sains dan Praktis*. Vol.9, No.3, Page: 261-269. DOI: 10.31603/pharmacy.v9i3.7105.

Yarlina, V. P., 2020. Study of Ethanol Concentration, Propolis Extraction Method & Characteristics of Propolis extract of Trigona sp. Bees to Antimicrobial Activity of Escherichia coli. *Jurnal Teknologi & Industri Hasil Pertanian*. 2020: 25(1): 27. DOI: 10.23960/jtihp.v25i1.27-34.

Zerener, T. et al., 2015. Clinical comparison of submucosal injection of dexamethasone and triamcinolone acetonide on postoperative discomfort after third molar surgery. *Quintessence Int.* 46(4):317-26. DOI: 10.3290/j.qi.a33281.

## DAFTAR LAMPIRAN

### Lampiran 1. Persetujuan Etik Penelitian.

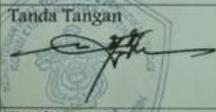
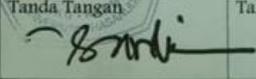


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FAKULTAS KEDOKTERAN GIGI  
RUMAH SAKIT GIGI DAN MULUT  
KOMITE ETIK PENELITIAN KESEHATAN  
Sekretariat : Lantai 2, Gedung Lama RSGM Unhas  
Jl. Kande'a No. 5 Makassar  
Contact Person: drg. Muhammad Iqbal, Sp.Prost/Oral Andeh AR TELP. 081342971011/08114919191



**REKOMENDASI PERSETUJUAN ETIK**  
Nomor: 0126/PL.09/KEPK FKG-RSGM UNHAS/2022  
Tanggal: 28 Oktober 2022

Dengan ini menyatakan bahwa protokol dan dokumen yang berhubungan dengan protokol berikut ini telah mendapatkan persetujuan etik:

No. Protokol	UH 17120705	No Protokol Sponsor	
Peneliti Utama	drg. I Gede Arya Wira Yudha	Sponsor	Pribadi
Judul Peneliti	Analisis Klinis dan Radiografi terhadap Efektivitas Aplikasi Propolis pada Penyembuhan Luka Pasca Odontektomi Gigi Molar Ketiga Mandibula		
No. Versi Protokol	1	Tanggal Versi	13 Oktober 2022
No. Versi Protokol		Tanggal Versi	
Tempat Penelitian	1. Politeknik Pertanian Negeri Pangkajene Kepulauan, 2. RSGMP Unhas		
Dokumen Lain			
Jenis Review	<input checked="" type="checkbox"/> Exempted <input type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 28 Oktober 2022- 28 Oktober 2023	Frekuensi Review Lanjutan
Ketua Komisi Etik Penelitian	Nama: Dr. drg. Marhamah, M.Kes	Tanda Tangan 	Tanggal
Sekretaris Komisi Etik Penelitian	Nama: drg. Muhammad Iqbal, Sp.Prost	Tanda Tangan 	Tanggal

Kewajiban peneliti utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum diimplementasikan
- Menyerahkan laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan lapor SUSAR dalam 72 jam setelah peneliti utama menerima laporan.
- Menyerahkan laporan kemajuan (*progress report*) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah.
- Menyerahkan laporan akhir setelah penelitian berakhir.
- Melaporkan penyimpangan dari protokol yang disetujui (*protocol deviation/violation*)
- Mematuhi semua aturan yang berlaku.

**Lampiran 2.** Persetujuan tindakan kesediaan mengikuti subyek penelitian.

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Laman: <http://rsgm.unhas.ac.id/>, Email: [care.rsgmp@unhas.ac.id](mailto:care.rsgmp@unhas.ac.id)

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**SURAT PERNYATAAN KESEDIAAN MENJADI SUBYEK PENELITIAN**

Dengan ini saya,

Nama : Athila Febrianita  
Umur : 25 thn  
Jenis Kelamin : Perempuan

Setelah mendapat penjelasan secukupnya mengenai manfaat dan risiko penelitian dengan judul:

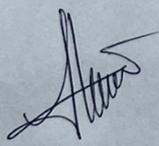
**“Analisis Klinis dan Radiografi Terhadap Efektivitas Aplikasi Propolis pada  
Penyembuhan Luka Pasca Odonntektomi Gigi Molar Ketiga Mandibula”**

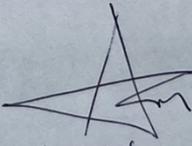
Dengan ini menyatakan bahwa saya **bersedia** dengan suka rela berpartisipasi menjadi subjek penelitian tersebut.

Demikian pernyataan ini saya buat dengan sebenarnya dengan penuh kesadaran dan tanpa paksaan.

Makassar, 26/11/ 2022  
Yang Berpartisipasi,

Peneliti,

  
(drg. I Gede Arya Wira Yudha)

  
( Athila )

Lampiran 3. Formulir kontrol pasien



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 Tlp 0411-3616336/3622423, Fax 0411-3635302, Careline: 0811-4429191  
 Laman: <http://rsgm.unhas.ac.id/>, Email: [care.rsgmp@unhas.ac.id](mailto:care.rsgmp@unhas.ac.id)

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**Non Propolis**

Nama : Athilia Febrinista  
 No. RM : 05.90.86  
 Alamat : Makassar  
 Diagnosis/Tindakan : Impaksi gigi U8 kelas II posisi A. Mesioangulor  
 Jenis Kelamin : ~~Laki-laki~~ / Perempuan

POD	VAS	TRISMUS	PEMBENGGKAKAN	PERIODONTAL
Pre Op Tanggal: 26/11/2022	5	3	1. Kantus.L → Ramus: 9,2 2. Tragus → Comisurra: 11,2 3. Tragus → Pgenion: 13,8	2
I Tanggal: 27/11/2022	3	5	1. Kantus.L → Ramus: 9,3 2. Tragus → Comisurra: 11,6 3. Tragus → Pgenion: 14,0	2
III Tanggal: 29/11/2022	3	4	1. Kantus.L → Ramus: 9,5 2. Tragus → Comisurra: 11,7 3. Tragus → Pgenion: 14,5	2
VII Tanggal: 5/12/2022	2	3	1. Kantus.L → Ramus: 9,8 2. Tragus → Comisurra: 11,5 3. Tragus → Pgenion: 14,2	3

Lampiran 4. Proses pembuatan propolis.



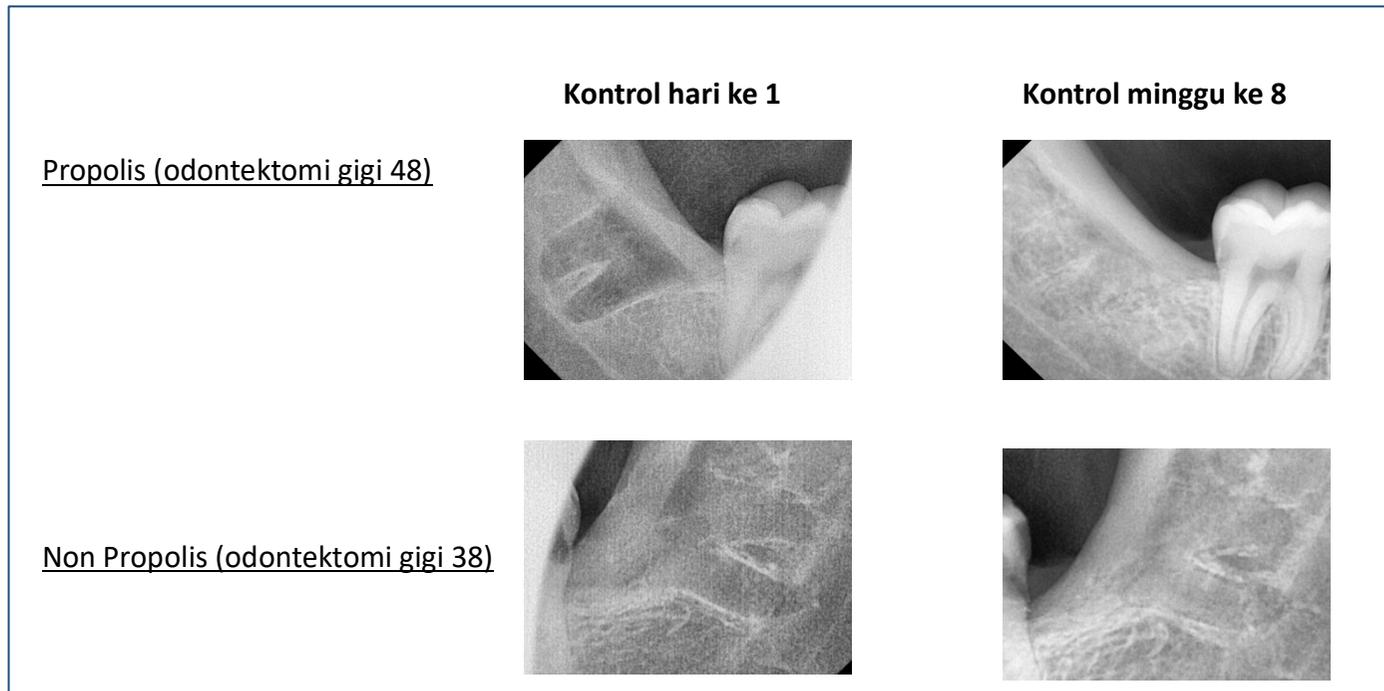
**Lampiran 5.** Pemberian propolis dalam soket pasca odontektomi



**Lampiran 6.** Kontrol klinis pasien pemberian propolis pasca odontektomi.



**Lampiran 7.** Kontrol radiografi periapikal pada pasien pemberian propolis pasca odontektomi.



**Lampiran 8.** Data Penelitian Kelompok Tanpa Pemberian Propolis

<b>No</b>	<b>Nama</b>	<b>JK</b>	<b>Umur</b>	<b>No. RM</b>	<b>Element gigi</b>	<b>Tanggal Operasi</b>
1	Jusmainnah	P	24	06.75.88	38	11/11/2022
2	Meyske crystian	p	22	06.79.32	48	26/11/2022
3	Nurjayanti	p	32	06.77.58	38	18/11/2022
4	Fitria Nabila	p	25	06.77.69	48	18/11/2022
5	Tn. Mulfi Adhyaksa	L	28	06.78.14	38	21/11/2022
6	Tn. Sugianto	L	25	06.76.53	48	15/11/2022
7	St. Fatima	P	32	06.79.65	48	28/11/2022
8	Ike nurmalasari	P	31	06.78.47	38	22/11/2022
9	Mutia Nurafni Diapati	P	32	06.78.75	48	23/11/2022
10	Tn. Andi dwi satria	L	24	06.69.82	38	24/11/2022
11	Tn. Muhammad Khairal Zadly	L	19	06.80.67	38	02/12/2022
12	Tn. Abdi hidayat	L	48	06.81.83	38	09/12/2022
13	Tn. Ahmad Abdoellah Abyari	L	30	06.81.19	48	06/12/2022
14	Fadhilah	P	31	06.13.43	38	09/12/2022
15	Tn. Yoseph Budiman	L	29	06.83.70	38	16/12/2022

No	Pre Op						POD I						POD III					
	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal
			Kantus. Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion				Kantus. Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion				Kantus. Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion	
1	4	2	9,2	11,3	15,8	2	2	3	9,3	11,4	16,0	2	1	2	9,2	11,3	15,9	3
2	3	3	9,0	10,8	12,6	2	2	4	9,0	11,0	12,8	2	1	4	9,0	10,9	12,6	3
3	4	2	9,0	10,5	13,1	2	3	2	9,2	10,6	13,2	2	3	2	9,0	10,6	13,1	3
4	5	3	9,1	11,8	14,8	2	2	4	9,3	12,0	15,0	2	1	3	9,2	11,8	14,9	2
5	3	1	9,4	11,7	14,3	2	2	2	9,5	11,9	14,4	2	1	2	9,4	11,8	14,5	4
6	4	1	9,6	11,8	14,7	2	2	2	9,8	11,8	14,7	2	3	1	9,6	11,8	14,7	3
7	3	2	8,5	11,3	13,2	2	1	2	8,5	11,5	13,3	2	0	2	8,5	11,3	13,4	4
8	3	2	9,5	10,6	13,4	2	1	4	9,6	10,7	13,5	2	0	2	9,5	10,8	13,6	4
9	6	2	8,4	10,1	13,7	2	2	2	8,5	10,2	13,7	2	1	2	8,4	10,2	13,9	4
10	4	2	8,3	10,5	14,5	2	2	3	8,5	10,5	14,6	2	0	2	8,3	10,3	14,5	3
11	3	2	9,8	11,5	14,7	2	1	3	9,8	11,7	14,8	2	1	2	9,9	11,5	14,6	4
12	3	1	9,4	11,7	15,0	2	1	1	9,6	11,8	15,0	2	1	1	9,4	11,7	15,0	3
13	3	1	8,9	10,5	13,5	2	3	1	9,0	10,5	13,6	2	1	1	8,9	10,6	13,5	4
14	2	2	8,9	10,7	13,7	2	1	4	9,0	10,8	13,8	2	0	2	9,0	10,7	13,7	3
15	3	2	9,5	11,8	14,1	2	2	2	9,7	11,8	14,1	2	0	2	9,6	11,8	14,1	3

No	POD 7						PRE OP		PASCA OP	
	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal	Overall Density Score	Trabecular Pattern Score	Over all Density Score	Trabecular Pattern Score
			Kantus. Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion					
1	0	2	9,2	11,2	15,7	3	0	0	2	2
2	0	3	8,9	10,8	12,7	4	0	0	1	2
3	1	2	8,8	10,5	13,0	5	0	0	2	1
4	0	2	9,2	11,7	14,9	4	0	0	2	2
5	0	1	9,4	11,7	14,2	4	0	0	2	2
6	1	1	9,5	11,7	14,7	5	0	0	1	1
7	0	2	8,2	11,3	13,2	4	0	0	2	2
8	0	2	9,5	10,5	13,3	5	0	0	2	1
9	0	2	8,3	10,2	13,7	5	0	0	1	1
10	0	2	8,5	11,5	14,4	5	0	0	1	2
11	0	2	9,7	11,3	14,7	4	0	0	2	2
12	1	1	9,5	11,7	14,9	3	0	0	2	2
13	0	1	9,0	10,6	13,5	4	0	0	2	1
14	0	2	8,9	10,6	13,7	4	0	0	1	1
15	0	2	9,5	11,8	14,1	4	0	0	2	1

**Lampiran 9.** Data Penelitian Kelompok pemberian Propolis

No	Nama	JK	Umur	No. RM	Element Gigi	Tanggal Operasi
1	Tn. Hairil Rahmad	L	33	06.51.22	48	19/11/2022
2	Tn. Muh. Alhabsi	L	23	06.51.76	48	21/11/2022
3	Ny. Nurul Tridya Syam	P	26	06.51.61	38	21/11/2022
4	Athika Febrianita	P	25	05.90.86	48	26/11/2022
5	Delfia Ariany	P	35	06.52.58	38	26/11/2022
6	Tn. Fahdalisman	L	27	06.11.80	38	26/11/2022
7	Tn. Muhammad Iksan	L	23	05.73.79	48	04/12/2022
8	Tn. Ridwan Rusli	L	24	06.55.57	38	09/12/2022
9	Rosmala Dewi	P	48	06.70.81	48	23/12/2022
10	Rezki Utami	P	26	06.57.94	38	18/12/2022
11	Ija Kahar	P	28	06.61.32	38	01/12/2022
12	Dewi Purnama	P	39	05.73.99	48	13/12/2022
13	Sabrina AT	P	22	06.66.15	38	24/12/2022
14	Tn. Wahyudin	L	37	06.60.74	38	30/12/2022
15	Tn. Muh. Sultan	L	24	06.82.44	38	12/12/2022

No	Pre Op						POD I						POD III					
	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal
			Kantus Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion				Kantus. Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion				Kantus. Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion	
1	4	1	9,6	12,3	15,1	2	3	2	10,0	12,5	15,3	2	3	2	9,1	12,3	15,3	3
2	3	1	8,1	12,2	14,8	2	4	3	8,9	12,4	15,0	2	2	3	8,9	12,5	15,1	3
3	4	2	9,8	11,3	15	2	3	2	9,8	11,5	15,1	2	3	2	9,6	11,7	15,0	3
4	5	3	9,3	11,2	13,8	2	3	5	9,3	11,6	14,0	2	3	4	9,5	11,7	14,5	2
5	4	2	7,9	11,1	13,7	2	4	4	8,2	11,5	14,0	2	3	4	8,7	11,5	14,4	2
6	3	1	8,0	11,2	14,8	2	3	2	8,4	11,5	15,5	2	2	3	8,5	11,4	15,3	3
7	4	2	8,9	13	16,7	2	3	4	9,1	13,2	17,0	2	3	4	9,0	13,6	16,9	3
8	4	1	12,0	13,5	16	2	5	2	12,2	13,8	16,5	2	4	3	12,2	13,7	16,4	2
9	3	3	7,0	10,1	11,9	2	3	4	7,2	10,5	12,7	2	2	4	7,5	10,4	12,5	3
10	5	2	6,0	9,8	12,1	2	4	4	6,2	9,9	12,8	2	3	3	6,4	10,5	13,0	3
11	3	2	8,8	11	13	2	3	2	9,1	11,2	13,5	2	4	3	9,0	11,4	13,3	2
12	4	3	7,8	11,4	13,4	2	3	4	8,0	11,5	13,7	2	3	3	8,2	11,5	13,6	2
13	3	3	8,9	8,9	14,8	2	4	4	9,2	9,3	15,0	2	3	4	9,3	9,9	14,9	3
14	3	2	7,9	11,2	15,4	2	4	3	8,1	11,6	15,7	2	4	2	10,0	11,6	16,0	3
15	4	1	10,1	12,1	14	2	2	1	10,5	12,8	14,5	2	2	2	10,8	12,9	14,3	3

No	POD VII						PRE OP		PASCA OP	
	VAS (Visual analog Scale)	Trismus	Udema			Status Jaringan. Periodontal	Overall Density Score	Trabecular Pattern Score	Over all Density Score	Trabecular Pattern Score
			Kantus Lateral → Ramus	Tragus → Comisura	Tragus → Pgenion					
1	2	1	9,5	12,5	15,0	3	0	0	1	1
2	1	2	8,8	12,2	14,9	4	0	0	1	2
3	2	3	9,8	11,2	15,2	3	0	0	1	1
4	2	3	9,8	11,5	14,2	3	0	0	1	1
5	1	2	7,8	11,2	13,9	4	0	0	2	0
6	0	2	8,2	11,2	15,0	5	0	0	1	1
7	1	2	9,0	12,8	16,7	3	0	0	2	1
8	2	2	12,1	13,5	16,2	3	0	0	1	1
9	1	3	7,2	10,3	12,2	4	0	0	1	1
10	1	2	6,2	9,7	12,2	4	0	0	1	1
11	2	2	8,8	11,1	13,1	4	0	0	1	0
12	1	3	8,0	11,5	13,4	3	0	0	1	2
13	2	3	9,5	9,6	14,8	4	0	0	2	1
14	2	2	10,0	11,0	15,5	4	0	0	1	1
15	1	2	9,9	12,1	14,0	4	0	0	1	2

**Lampiran 10.** Data Hasil Uji Statistik (SPSS VER. 27)

**Gambaran Variabel**

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
VAS_PreOp_1 * Kelompok	30	100.0%	0	0.0%	30	100.0%
VAS_PreOp_3 * Kelompok	30	100.0%	0	0.0%	30	100.0%
VAS_PreOp_7 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Edema_PreOp_1 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Edema_PreOp_3 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Edema_PreOp_7 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Trismus_PreOp_1 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Trismus_PreOp_3 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Trismus_PreOp_7 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Jaringan_0_1 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Jaringan_0_3 * Kelompok	30	100.0%	0	0.0%	30	100.0%
Jaringan_0_7 * Kelompok	30	100.0%	0	0.0%	30	100.0%

### Report

Kelompok		VAS	VAS	VAS	Edema_	Edema_	Edema_	Trismus	Trismus	Trismus	Jaringan	Jaringan	Jaringan
		POStOp	PostOp	Postop	PreOp_	PreOp_	PreOp_	_PreOp	_PreOp	_PreOp	0 1	0 3	0 7
		1	3	7	1	3	7	1	3	7	0 1	0 3	0 7
Propolis	Mean	-1.7333	-2.6000	-3.3333	.1067	.0400	-.0067	.5333	.1333	-.0667	.0000	1.3333	2.2000
	Std. Deviation	.96115	1.12122	1.04654	.03608	.04912	.11492	.51640	.35187	.25820	.00000	.61721	.67612
	Median	-2.0000	-2.0000	-3.0000	.1000	.0333	-.0333	1.0000	.0000	.0000	.0000	1.0000	2.0000
	Minimum	-4.00	-5.00	-6.00	.07	-.07	-.10	.00	.00	-1.00	.00	.00	1.00
	Maximum	.00	-1.00	-2.00	.20	.13	.37	1.00	1.00	.00	.00	2.00	3.00
	Non Propolis	Mean	-.3333	-.8000	-2.3333	.3200	.4200	.1644	1.0000	.8667	.3333	.0000	.6667
Propolis	Std. Deviation	1.04654	.94112	.89974	.11464	.26868	.20176	.75593	.74322	.48795	.00000	.48795	.61721
	Median	.0000	-1.0000	-2.0000	.3333	.4667	.1000	1.0000	1.0000	.0000	.0000	1.0000	2.0000
	Minimum	-2.00	-2.00	-4.00	.10	-.10	-.07	.00	.00	.00	.00	.00	1.00
	Maximum	1.00	1.00	-1.00	.53	1.03	.67	2.00	2.00	1.00	.00	1.00	3.00
	Total	Mean	-1.0333	-1.7000	-2.8333	.2133	.2300	.0789	.7667	.5000	.1333	.0000	1.0000
Total	Std. Deviation	1.21721	1.36836	1.08543	.13691	.27085	.18330	.67891	.68229	.43417	.00000	.64327	.69149
	Median	-1.0000	-2.0000	-3.0000	.1667	.1000	.0167	1.0000	.0000	.0000	.0000	1.0000	2.0000
	Minimum	-4.00	-5.00	-6.00	.07	-.10	-.10	.00	.00	-1.00	.00	.00	1.00
	Maximum	1.00	1.00	-1.00	.53	1.03	.67	2.00	2.00	1.00	.00	2.00	3.00

## Uji Normalitas

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
VAS_PreOp_1	30	100.0%	0	0.0%	30	100.0%
VAS_PreOp_3	30	100.0%	0	0.0%	30	100.0%
VAS_PreOp_7	30	100.0%	0	0.0%	30	100.0%
Edema_PreOp_1	30	100.0%	0	0.0%	30	100.0%
Edema_PreOp_3	30	100.0%	0	0.0%	30	100.0%
Edema_PreOp_7	30	100.0%	0	0.0%	30	100.0%
Trismus_PreOp_1	30	100.0%	0	0.0%	30	100.0%
Trismus_PreOp_3	30	100.0%	0	0.0%	30	100.0%
Trismus_PreOp_7	30	100.0%	0	0.0%	30	100.0%
Jaringan_0_1	30	100.0%	0	0.0%	30	100.0%
Jaringan_0_3	30	100.0%	0	0.0%	30	100.0%
Jaringan_0_7	30	100.0%	0	0.0%	30	100.0%

## Descriptives

		Statistic	Std. Error	
VAS_PreOp_1	Mean	-1.0333	.22223	
	95% Confidence Interval for Mean	Lower Bound	-1.4878	
		Upper Bound	-.5788	
	5% Trimmed Mean	-1.0000		
	Median	-1.0000		
	Variance	1.482		
	Std. Deviation	1.21721		
	Minimum	-4.00		
	Maximum	1.00		
	Range	5.00		
	Interquartile Range	2.00		
	Skewness	-.055	.427	
	Kurtosis	.032	.833	
VAS_PreOp_3	Mean	-1.7000	.24983	
	95% Confidence Interval for Mean	Lower Bound	-2.2110	
		Upper Bound	-1.1890	

	5% Trimmed Mean		-1.6852	
	Median		-2.0000	
	Variance		1.872	
	Std. Deviation		1.36836	
	Minimum		-5.00	
	Maximum		1.00	
	Range		6.00	
	Interquartile Range		1.25	
	Skewness		-.241	.427
	Kurtosis		.431	.833
VAS_PreOp_7	Mean		-2.8333	.19817
	95% Confidence Interval for Mean	Lower Bound	-3.2386	
		Upper Bound	-2.4280	
	5% Trimmed Mean		-2.7778	
	Median		-3.0000	
	Variance		1.178	
	Std. Deviation		1.08543	
	Minimum		-6.00	
	Maximum		-1.00	
	Range		5.00	
	Interquartile Range		1.00	
	Skewness		-.700	.427
	Kurtosis		1.718	.833
Edema_PreOp_1	Mean		.2133	.02500
	95% Confidence Interval for Mean	Lower Bound	.1622	
		Upper Bound	.2645	
	5% Trimmed Mean		.2049	
	Median		.1667	
	Variance		.019	
	Std. Deviation		.13691	
	Minimum		.07	
	Maximum		.53	
	Range		.47	
	Interquartile Range		.23	
	Skewness		.796	.427
	Kurtosis		-.432	.833
Edema_PreOp_3	Mean		.2300	.04945

	95% Confidence Interval for Mean	Lower Bound	.1289	
		Upper Bound	.3311	
	5% Trimmed Mean		.2099	
	Median		.1000	
	Variance		.073	
	Std. Deviation		.27085	
	Minimum		-.10	
	Maximum		1.03	
	Range		1.13	
	Interquartile Range		.43	
	Skewness		1.154	.427
	Kurtosis		1.025	.833
Edema_PreOp_7	Mean		.0789	.03347
	95% Confidence Interval for Mean	Lower Bound	.0104	
		Upper Bound	.1473	
	5% Trimmed Mean		.0605	
	Median		.0167	
	Variance		.034	
	Std. Deviation		.18330	
	Minimum		-.10	
	Maximum		.67	
	Range		.77	
	Interquartile Range		.15	
	Skewness		1.671	.427
	Kurtosis		2.674	.833
Trismus_PreOp_1	Mean		.7667	.12395
	95% Confidence Interval for Mean	Lower Bound	.5132	
		Upper Bound	1.0202	
	5% Trimmed Mean		.7407	
	Median		1.0000	
	Variance		.461	
	Std. Deviation		.67891	
	Minimum		.00	
	Maximum		2.00	
	Range		2.00	
	Interquartile Range		1.00	
	Skewness		.323	.427

	Kurtosis		- .722	.833
Trismus_PreOp_	Mean		.5000	.12457
3	95% Confidence Interval for Mean	Lower Bound	.2452	
		Upper Bound	.7548	
	5% Trimmed Mean		.4444	
	Median		.0000	
	Variance		.466	
	Std. Deviation		.68229	
	Minimum		.00	
	Maximum		2.00	
	Range		2.00	
	Interquartile Range		1.00	
	Skewness		1.047	.427
	Kurtosis		-.034	.833
Trismus_PreOp_	Mean		.1333	.07927
7	95% Confidence Interval for Mean	Lower Bound	-.0288	
		Upper Bound	.2955	
	5% Trimmed Mean		.1296	
	Median		.0000	
	Variance		.189	
	Std. Deviation		.43417	
	Minimum		-1.00	
	Maximum		1.00	
	Range		2.00	
	Interquartile Range		.00	
	Skewness		.786	.427
	Kurtosis		2.009	.833
Jaringan_0_1	Mean		.0000	.00000
	95% Confidence Interval for Mean	Lower Bound	.0000	
		Upper Bound	.0000	
	5% Trimmed Mean		.0000	
	Median		.0000	
	Variance		.000	
	Std. Deviation		.00000	
	Minimum		.00	
	Maximum		.00	
	Range		.00	

	Interquartile Range		.00	
	Skewness		.	.
	Kurtosis		.	.
Jaringan_0_3	Mean		1.0000	.11744
	95% Confidence Interval for Mean	Lower Bound	.7598	
		Upper Bound	1.2402	
	5% Trimmed Mean		1.0000	
	Median		1.0000	
	Variance		.414	
	Std. Deviation		.64327	
	Minimum		.00	
	Maximum		2.00	
	Range		2.00	
	Interquartile Range		.00	
	Skewness		.000	.427
	Kurtosis		-.364	.833
Jaringan_0_7	Mean		1.9333	.12625
	95% Confidence Interval for Mean	Lower Bound	1.6751	
		Upper Bound	2.1915	
	5% Trimmed Mean		1.9259	
	Median		2.0000	
	Variance		.478	
	Std. Deviation		.69149	
	Minimum		1.00	
	Maximum		3.00	
	Range		2.00	
	Interquartile Range		1.00	
	Skewness		.087	.427
	Kurtosis		-.770	.833

## Tests of Normality

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
VAS_PreOp_1	.189	30	.008	.921	30	.028
VAS_PreOp_3	.180	30	.014	.940	30	.092
VAS_PreOp_7	.272	30	.000	.875	30	.002
Edema_PreOp_1	.221	30	.001	.879	30	.003
Edema_PreOp_3	.218	30	.001	.870	30	.002
Edema_PreOp_7	.227	30	.000	.814	30	.000
Trismus_PreOp_1	.268	30	.000	.790	30	.000
Trismus_PreOp_3	.368	30	.000	.706	30	.000
Trismus_PreOp_7	.454	30	.000	.586	30	.000
Jaringan_0_1	.	30	.	.	30	.
Jaringan_0_3	.300	30	.000	.787	30	.000
Jaringan_0_7	.272	30	.000	.804	30	.000

a. Lilliefors Significance Correction

## Uji Statistik

### (Mann-Whitney Test) Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
VAS_PreOp_1	Propolis	15	10.57	158.50
	Non Propolis	15	20.43	306.50
	Total	30		
VAS_PreOp_7	Propolis	15	11.73	176.00
	Non Propolis	15	19.27	289.00
	Total	30		
Edema_PreOp_1	Propolis	15	8.60	129.00
	Non Propolis	15	22.40	336.00
	Total	30		
Edema_PreOp_3	Propolis	15	9.27	139.00
	Non Propolis	15	21.73	326.00
	Total	30		
Edema_PreOp_7	Propolis	15	10.37	155.50
	Non Propolis	15	20.63	309.50
	Total	30		
Trismus_PreOp_1	Propolis	15	12.93	194.00
	Non Propolis	15	18.07	271.00
	Total	30		
Trismus_PreOp_3	Propolis	15	11.30	169.50
	Non Propolis	15	19.70	295.50
	Total	30		
Trismus_PreOp_7	Propolis	15	12.67	190.00
	Non Propolis	15	18.33	275.00
	Total	30		
Jaringan_0_1	Propolis	15	15.50	232.50
	Non Propolis	15	15.50	232.50
	Total	30		
Jaringan_0_3	Propolis	15	19.50	292.50
	Non Propolis	15	11.50	172.50
	Total	30		
Jaringan_0_7	Propolis	15	18.57	278.50
	Non Propolis	15	12.43	186.50
	Total	30		

### Test Statistics<sup>a</sup>

	VAS		EDEMA			TRISMUS			PERIODONTAL		
	VAS_Pr	VAS_Pr	Edema_Pr	Edema_Pr	Edema_Pr	Trismus_	Trismus_	Trismus_	Jaringan_	Jaringan_	Jaringan_
	eOp_1	eOp_7	eOp_1	eOp_3	eOp_7	PreOp_1	PreOp_3	PreOp_7	0_1	0_3	0_7
Mann-Whitney U	38.500	56.000	9.000	19.000	35.500	74.000	49.500	70.000	112.500	52.500	66.500
Wilcoxon W	158.500	176.000	129.000	139.000	155.500	194.000	169.500	190.000	232.500	172.500	186.500
Z	-3.183	-2.525	-4.338	-3.900	-3.212	-1.759	-3.004	-2.534	.000	-2.838	-2.104
Asymp. Sig. (2-tailed)	.001	.012	.000	.000	.001	.079	.003	.011	1.000	.005	.035
Exact Sig. [2*(1-tailed Sig.)]	.001 <sup>b</sup>	.019 <sup>b</sup>	.000 <sup>b</sup>	.000 <sup>b</sup>	.001 <sup>b</sup>	.116 <sup>b</sup>	.008 <sup>b</sup>	.081 <sup>b</sup>	1.000 <sup>b</sup>	.011 <sup>b</sup>	.056 <sup>b</sup>

a. Grouping Variable: Kelompok

b. Not corrected for ties.

### T-Test

#### Group Statistics

	Kelompok	N	Mean	Std. Deviation	Std. Error Mean
VAS_PreOp_3	Propolis	15	-2.6000	1.12122	.28950
	Non Propolis	15	-.8000	.94112	.24300

### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
<b>VAS_Pre</b>	Equal variances assumed	.914	.347	-4.762	28	.000	-1.80000	.37796	-2.57423	-1.02577
	Equal variances not assumed			-4.762	27.183	.000	-1.80000	.37796	-2.57527	-1.02473

### Independent Samples Effect Sizes

		Standardizer <sup>a</sup>	Point Estimate	95% Confidence Interval	
				Lower	Upper
VAS_PreOp_3	Cohen's d	1.03510	-1.739	-2.575	-.881
	Hedges' correction	1.06390	-1.692	-2.505	-.857
	Glass's delta	.94112	-1.913	-2.897	-.893

a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control group.

## Radiografi

### Mann-Whitney Test Density

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
Density_Pre_Post	Propolis	15	19.00	285.00
	Non Propolis	15	12.00	180.00
	Total	30		

### Test Statistics<sup>a</sup>

	Density_Pre_Post
Mann-Whitney U	60.000
Wilcoxon W	180.000
Z	-2.536
Asymp. Sig. (2-tailed)	.011
Exact Sig. [2*(1-tailed Sig.)]	.029 <sup>b</sup>

a. Grouping Variable: Kelompok

b. Not corrected for ties.

### Mann-Whitney Test trabecular

Ranks				
	Kelompok	N	Mean Rank	Sum of Ranks
Trabecular_Pre_Post	Propolis	15	18.47	277.00
	Non Propolis	15	12.53	188.00
	Total	30		

### Test Statistics<sup>a</sup>

	Trabecular_Pre_Post
Mann-Whitney U	68.000
Wilcoxon W	188.000
Z	-2.104
Asymp. Sig. (2-tailed)	.035
Exact Sig. [2*(1-tailed Sig.)]	.067 <sup>b</sup>

a. Grouping Variable: Kelompok

b. Not corrected for ties.

## Lampiran 11. Kandungan Propolis

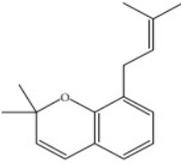
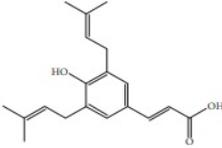
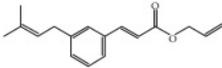
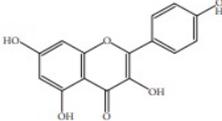
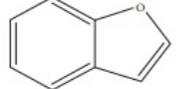
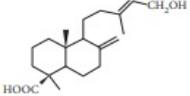
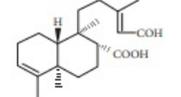
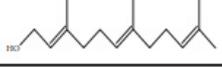
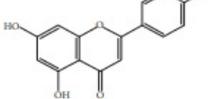
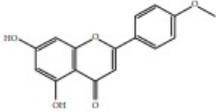
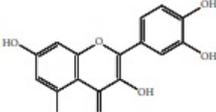
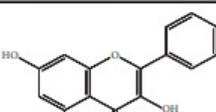
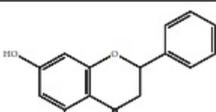
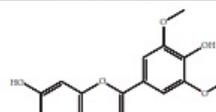
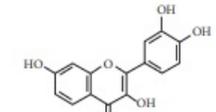
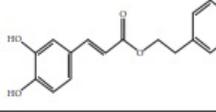
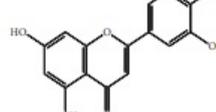
Type of bee product	Bioactive compound	Chemical structure	Biological activity	References
Propolis	Phenolic compound: 2, 2-dimethyl-8-prenylchromene		Antimicrobial	Viuda-Martos et al. [22]
Propolis	Phenolic compound: 4-hydroxy-3, 5-diprenyl cinnamic acid (artepillin C)		Antimicrobial, anti-inflammatory, anticancer	Viuda-Martos et al. [22]
Propolis	Phenolic compound: 3-prenyl cinnamic acid allyl ester		Antimicrobial	Viuda-Martos et al. [22]
Propolis	Phenolic compound: kaempferide		Antitumor, anticancer	Viuda-Martos et al. [22], [23]
Type of bee product	Bioactive compound	Chemical structure	Biological activity	References
Propolis	Phenolic compound: propolis benzofuran		Antifungal	Viuda-Martos et al. [22], [23]
Propolis	Terpenoid: isocupressic acid, a labdane diterpenoid		Antifungal	Viuda-Martos et al. [22] (Khalil & Sulaiman [23])
Propolis	Terpenoid: 13C-symphoreticolic acid, a clerodane diterpenoid		Antitumor	Viuda-Martos et al. [22], [24]
Propolis	Terpenoid: esters of long-chain fatty acids, (3-hydroxystearic acid (n = 11) procrim a; 3-hydroxystearic acid (n = 13), procrim b and a pentacyclic triterpenoid (lupeol))		Antioxidant, antimicrobial, antitumor	(Salatino et al. [25]), Viuda-Martos et al. [22], (Huang et al. [13])
Propolis	Terpenoid: farnesol, a sesquiterpenoid		Antifungal	Viuda-Martos et al. [22], (Cotoras et al. [26])
Propolis, honey	Flavonoid: apigenin		Antibacterial, anti-inflammatory	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])

TABLE 1: Continued.

Type of bee product	Bioactive compound	Chemical structure	Biological activity	References
Honey, propolis	Flavonoid: acacetin		Antiallergy, anticancer	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])
Honey, propolis	Flavonoid: quercetin		Anticancer, antiallergy, antibacterial, anti-inflammatory	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])
Honey, propolis	Flavonoid: galangin		Anticancer, antioxidant	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])
Honey, propolis	Flavonoid: pinocembrin		Antimicrobial, anticancer	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])
Type of bee product	Bioactive compound	Chemical structure	Biological activity	References
Honey, propolis	Flavonoid: chrysin		Antibacterial, anti-inflammatory, anticancer	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])
Honey, propolis	Flavonoid: fisetin		Antibacterial, antiallergy, anticancer	Viuda-Martos et al. [22], (Abubakar et al. [27])
Honey, propolis	Flavonoid: caffeic acid phenethyl ester		Antitumor, anticancer	Viuda-Martos et al. [22], (Khalil & Sulaiman [23])
Propolis, royal jelly	10-hydroxyl-2-decenoic acid		Antibiotic, antitumor	Izuta et al. [28]
Honey	Flavonoid: luteolin		Antioxidant, anti-inflammatory, antitumor	Lin et al. [29], Mijanur et al. [30]

**Lampiran 12.** Literatur peran Propolis dalam proses penyembuhan luka

No	Penulis	Judul	Hasil
1	Suryono, Nurhidayati Saputri Hasmy, <i>et al</i> (2017)	Propolis 10%-Gel as a Topical Drug Candidate on Gingivitis	Penelitian menyimpulkan bahwa flavonoid dan CAPE adalah komponen alami yang paling penting pada propolis. Penggunaan propolis 10%-gel dapat menstimulasi proses penyembuhan model gingivitis pada Sparague Dawley melalui penurunan jumlah PMN dan meningkatkan jumlah fibroblas dan pembuluh darah baru.
2	Louisa Christy Lunardhi, <i>et al</i> (2019)	The effect of a combination of propolis extract and bovine bone graft on the quantity of fibroblasts, osteoblasts and osteoclasts in tooth extraction sockets	Kombinasi ekstrak propolis dan BBG ( <i>bovine bone graft</i> ) dapat meningkatkan jumlah fibroblas dan sel osteoblas, sekaligus mengurangi jumlah sel osteoklas dalam soket pencabutan gigi yang dirawat dengan konsentrasi 2% zat aktif.
3	Pawel Olczyk, <i>et al</i> (2014)	Propolis Modulates Fibronectin Expression in the Matrix of Thermal Injury	Hasil menunjukkan bahwa propolis memodifikasi metabolisme fibronektin dalam proses penyembuhan luka. Pengaruh dari propolis tercermin dalam pencegahan biosintesis fibronektin serta degradasi di daerah luka. Perubahan metabolisme dapat menurunkan risiko komplikasi dalam proses penyembuhan luka.

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4	Ardo Sabir (2019)	Indonesian propolis suppressed the expression of COX-2 in inflamed rat dental pulp in direct capping treatment	Kecuali kelompok I, ekspresi COX-2 menurun pada semua kelompok perlakuan dengan periode waktu pengamatan yang lebih lama. Kelompok II dan kelompok V, ekspresi COX-2 lebih lemah daripada kelompok III dan IV pada semua periode waktu. Namun, tidak ada perbedaan ekspresi COX-2 yang signifikan secara statistik di antara kelompok untuk setiap periode waktu. Kesimpulan: Penelitian ini menunjukkan bahwa EEP dan Ca(OH) <sub>2</sub> adalah lebih kuat dari tes bahan lain untuk menekan ekspresi COX-2 pada pulpa gigi tikus yang meinflamasi.
<hr/>			
5	Ira Widjiastuti (2020)	The cytotoxicity test of calcium hydroxide, propolis, and calcium hydroxide-propolis combination in human pulp fibroblast	Kelangsungan hidup fibroblas pulpa manusia lebih besar setelah pemberian kombinasi Ca(OH) <sub>2</sub> dengan propolis dibandingkan aplikasi Ca(OH) <sub>2</sub> atau propolis saja.

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### Lampiran 13. Kandungan Propolis dari beberapa negara

Molecular Species	m/z	Italy	Spain	France	Romania	Bulgaria	Ukraine	Macedonia	Turkey	China	Uruguay	
		European Propolis										
1	Dicaffeic acid	341	Np	np	np	np	np	np	np	np	np	
2	Caffeic acid	179	Np	np	np	np	np	np	np	np	np	
3	p-coumaric acid	163	Np	np	np	np	np	np	np	np	np	
4	Ferulic acid	193	Np	np	np	np	np	np	np	np	np	
5	Isoferulic acid	193	Np	np	np	np	np	np	np	np	np	
6	3,4-dimethyl-caffeic acid (dmca)	207	Np	np	np	np	np	np	np	np	np	
7	Quercetin	301	0.8	0.9	0.5	0.7	0.5	0.8	0.7	0.7	0.2	0.1
8	Pinobanksin-5-methyl-ether	285	1.5	3.0	5.5	1.4	1.7	2.6	3.4	1.4	3.1	4.1
9	Quercetin-3-methyl-ether	315	2.6	1.9	0.7	2.4	0.5	1.2	1.1	3.0	1.3	1.0
10	Cinnamic acid	147	Np	np	np	np	np	np	np	np	np	np
11	Chrysin-5-methyl-ether	267	Np	np	np	np	np	np	np	np	np	np
12	Apigenin	269	0.6	2.0	2.4	1.2	1.5	1.5	3.8	1.2	0.2	0.2
13	Kaempferol	285	2.2	0.9	1.7	2.7	1.7	1.7	1.8	2.3	0.8	0.5
14	Pinobanksin	271	1.6	1.1	3.0	2.3	2.0	4.9	3.0	1.9	4.1	3.9
15	Isorhamnetin	315	2.0	1.6	1.9	1.8	1.9	1.7	0.8	1.0	1.0	0.4
16	Luteolin-methyl-ether	299	1.2	1.0	0.6	1.8	0.5	1.1	1.3	1.2	1.3	0.8
17	Quercetin-dimethyl-ether	329	1.1	1.3	0.8	0.6	1.0	0.1	0.7	0.7	2.0	1.2
18	Galangin-5-methyl-ether	283	0.9	1.0	2.5	0.8	0.4	0.9	1.2	0.8	0.5	1.2
19	Pinobanksin-5-methyl-ether-3-o-acetate	327	Np	np	np	np	np	np	np	np	np	np
20	Cinnamildiacetic acid	173	Np	np	np	np	np	np	np	np	np	np
21	Quercetin-7-methyl-ether	315	0.7	0.9	0.7	0.5	0.6	1.2	1.4	1.0	0.3	0.1
22	Quercetin-methyl-x-methylether	329	2.6	1.0	0.7	1.8	0.6	1.3	1.3	1.7	2.1	1.3
23	Caffeic acid isoprenyl ester	247	0.9	2.1	1.7	0.8	1.6	3.7	5.5	0.8	nd	nd
24	Chrysin	253	5.3	4.3	5.5	2.4	3.7	6.7	6.9	4.0	5.3	2.8
25	Caffeic acid benzyl ester	269	0.2	4.6	0.1	0.8	0.9	1	0.3	0.2	0.3	0.2
26	Caffeic acid isoprenyl ester	247	0.1	0.1	0.2	0.1	0.8	2.1	0.1	0.1	0.1	0.1
27	Pinocembrin	255	4.5	5.5	10.3	4.8	3.0	6.7	10.4	3.6	5.9	4.5
28	Galangin	269	5.9	2.8	7.2	6.9	4.0	5.2	6.2	5.7	4.5	2.4
29	Caffeic acid phenylethyl ester (cape)	283	1.3	1.2	1.3	1.5	2.1	2.1	2.4	1.5	2.0	1.8
30	Pinobanksin-3-o-acetate	313	13.1	9.1	8.9	13.3	7.0	12.7	17.2	12.7	8.9	7.9
31	Methoxy-chrysin	283	1.0	0.8	0.6	1.2	0.9	4.8	0.8	0.6	2.9	1.6
32	p-coumaric prenyl ester	231	Np	np	np	np	np	np	np	np	np	np
33	p-coumaric benzyl ester	253	Np	np	np	np	np	np	np	np	np	np
34	Caffeic acid cinnamyl ester	295	0.4	4.6	1.0	0.5	0.5	0.7	2.9	0.4	5.2	3.5
35	p-coumaric prenyl ester	231	Np	np	np	np	np	np	np	np	np	np
36	Pinobanksin-3-o-propionate	327	4.3	4.8	3.1	5.4	5.2	5.1	3.2	3.1	6.8	2.6
37	p-coumaric cinnamyl ester	279	0.5	1.0	0.6	0.3	0.2	0.9	0.2	0.4	1.3	1.1

**Lampiran14.** Kandungan Propolis dari berbagai daerah di Indonesia

<b>Bee Species</b>	<b>Location</b>	<b>Finding (IC<sub>50</sub>, method)</b>	<b>Compound</b>
<i>Trigona</i> sp.	Mataram, West Nusa Tenggara	0.983 mg/mL, DPPH	Ferulic acid, CAPE, Coumaric acid, Chysin
<i>Trigona</i> sp.	North Lombok, West Nusa Tenggara.	493.3 ± 0.01 µg/mL, DPPH	Flavonoids Phenolic acid
<i>Trigona</i> sp	Bandung, West Java	142 µg/mL, DPPH	Ferulic acid
<i>Tetragonula biroi</i>	Kalimantan	452 µg/mL, DPPH	
<i>Heterotrigona itama</i>	Sulawesi	543 µg/mL, DPPH	Flavonoids phenolic
<i>Tetragonula laeviceps</i>	Banten	568 µg/mL, DPPH	
	West Java	0.87 ± 0.14 µg/mL, DPPH	
	West Nusa Tenggara	2.90 ± 0.55 µg/mL, DPPH	
<i>Trigona</i> spp.	South Sulawesi	1.76 ± 0.35 µg/mL, DPPH	Flavonoids Phenolic
	West Kalimantan	0.54 ± 0.06 µg/mL, DPPH	
<i>Trigona</i> sp	Mataram, West Nusa Tenggara	24.7 µg/mL, DPPH	Galangin, Caffeic acid phenyl ester (CAPE)
	Makassar	1125.56 µg/mL, DPPH	
	Pekanbaru	308 µg/mL, DPPH	
<i>Trigona</i> spp.	Kendal	114.06 µg/mL, DPPH	Flavonoids
	Pandeglang	68.93 µg/mL, DPPH	
	Banjarmasin	4162.61 µg/mL, DPPH	
<i>Trigona itama</i>	North Bintan, Riau	965.89 ± 8.14 µg/mL, DPPH	Flavonoids
<i>Trigona</i> sp	Luwu, North Sulawesi	477.01 µg/mL, DPPH	Flavonoids
<i>Trigona</i> sp	Pandeglang	75.34 µg/mL, DPPH	Flavonoids (quercetin)
	Batu	166.25 ± 0.42 µg/mL, DPPH	
<i>Trigona</i> sp	Mojokerto	987.24 ± 4.03 µg/mL, DPPH	Flavonoids
<i>Tetragonula fuscibasis</i>	Samarinda, East Kalimantan	38.7 ± 0.02 mg/mL, DPPH	
		0.26 ± 0.00 mg/mL, ABTS	
<i>Tetragonula fuscobalteata</i>		31.1 ± 0.01 mg/mL, DPPH	Kaempferol Glyesperin A
		0.26 ± 0.00 mg/mL, ABTS	
<i>Tetragonula sapiens</i>	South Tenggara	2.213 ± 0.0389 µg/mL, ABTS EC <sub>50</sub> = 32.10 g/mL, FRAP	Flavonoids
<i>Tetragonula indipennis</i>	Samarinda, East Kalimantan	33.74 µg/mL, DPPH	Flavonoids Terpenoids Tannins
<i>Trigona incisa</i>	Samarinda, East Kalimantan	99.42 µg/mL, DPPH	Alkaloids

## DAFTAR RIWAYAT HIDUP



### A. IDENTITAS DIRI

1. Nama Lengkap : drg. I Gede Arya Wira Yudha
2. Tempat, tanggal lahir : Singaraja, 10 April 1992
3. Jenis kelamin : Laki - laki
4. Alamat : Jln. Pulau Komodo Gg Aditya No. 15B, Singaraja
5. Telepon : 0811436161
6. Email : aryawira2002.awy@gmail.com
7. Agama : Hindu
8. Tinggi Badan : 177 cm
9. Berat Badan : 78 kg
10. Anak ke : 4 dari 5 bersaudara
11. Status : Menikah
12. Istri : dr. Ni Putu Yunita Puspitra Sari

### B. RIWAYAT PENDIDIKAN

1. TK Swastiastu, Singaraja 1996 - 1998
2. SD 3,4,7 Br. Jawa, Singaraja 1998 - 2004
3. SMP N 1 Singaraja 2004 - 2007
4. SMA N 1 Singaraja 2007 - 2010
5. Fakultas Kedokteran Gigi Universitas Brawijaya 2010 - 2017
6. Program Pendidikan Dokter Gigi Spesialis Bedah Mulut dan Maksilofasial, Fakultas Kedokteran Gigi, Universitas Hasanuddin 2019 - Sekarang

### C. RIWAYAT PEKERJAAN

1. RS Pratama Nusa Penida, Bali 2017 - 2019
2. Puskesmas Busung Biu 2, Bali 2019
3. RS Parama Sidhi, Bali 2019

