

DAFTAR PUSTAKA

1. Jannah M, Habibi M, Madinah A. Studi Keanekaragaman Lichen di Hutan Daerah Malang Propinsi Jawa Timur sebagai Langkah Awal Pemanfaatan Lichen di Indonesia. *Jurnal Penelitian*. 2019
2. Ranković B, Kosanic M. Lichens as a Potential Source of Bioactive Secondary Metabolites. In: *Lichen Secondary Metabolites*. Switzerland: Springer International Publishing; 2015.
3. Al-thani RF, Al-meri HA. Study of Some Lichens of Qatar. *Journal of Biology*. 2011;1(3):41–6.
4. Okuyama E, Umeyama K, Yamazaki M, Kinoshita Y, Yamamoto Y. Usnic acid and diffractic acid as analgesic and antipyretic components of *Usnea diffracta*. *Planta Med*. 1995;61(2):113–5.
5. Huneck S, Yoshimura I. Siegfried Huneck and Isao Yoshimura Identification of Lichen Substances. Springer. 1996;
6. Manojlov NT, Vasiljevi P, Juskovi M, Slobodan SN, Milenkovi A. HPLC Analysis and Cytotoxic Potential of Extracts From The Lichen , *Thamnolia vermicularis* var . subuliformis. *Journal Med Plants* 2010;4(9):817–23.
7. Ismed F, Hartati SRI, Mulyadi R, Putra HE, Vidian NP. Isolasi Senyawa Depside-Depsonone dari Lichen Sumatera (*Stereocaulon halei*) dan Uji Aktivitas Antimikroba serta Anti Tuberkulosis. *Jurnal Ilmu Kefarmasian Indonesia*. 2016;14(1):49–56.
8. Andayani R, Bakhtiar A, Friardi, Putri AD. Validation of High Performance Thin Layer Chromatography Densitometry Method for Quantitative Determination of Usnic Acid in Ethyl Acetate Extract of *Usnea* sp. 2018;8(8):1-11
9. Hasanah N, Gultom ES. Uji Aktivitas Aantibakteri Ekstrak Metanol Daun Kirinyuh (*Chromolaena odorata*) Terhadap Bakteri MDR (Multi Drug Resistant) Dengan Metode KLT Bioautografi. *J BIOSAINS*. 2020;6(2):45.

10. RI K. PERMENKES RI NO 2406/MENKES/PER/XII/2011 Pedoman Umum Penggunaan Antibiotik. In: Permenkes RI. 2011.
11. GG, A., I, C., A., M., & A, M. Monitoring Epiphytic Lichen Biodiversity to Detect Environmental Quality and Air Pollution: the Case Study of Roccamonfina Park (Campania Region - Italy). In A. Moldoveanu, Air Pollution. Italy: InTech. 2011. p. 324.
12. Nash T. Lichen Biology 2nd edn. Cambridge: Cambridge Press. 2008;
13. Beaching SQ, Hill R. Guide to Twelvw Common and Conspicuous Lichens of Georgia's Piedmont. Georgia : University of Georgia Atlanta (UGA). 2007.
14. Yurnaliza. Lichens (Karakteristik, Klasifikasi dan Kegunaan). 2002
15. Ingólfssdóttir K. Usnic Acid. Journal of Pharmacy and Pharmacology. 2002;61:729–36.
16. Vartia KO. Chapter 17. The Lichens. Academic Press, Inc.1973; 547-561 p.
17. Marcano V, Rodriguez-alcocer V, Me AM. Occurrence Of Usnic Acid In *Usnea* Lae 6 Is Nylander (Lichenized Ascomycetes) From The Venezuelan Andes. Journal Etnopharmacology. 1999;66:343–6.
18. GBIF. *Usnea mekista* [Internet]. *Usnea mekista*. 2020. Available from: <https://www.gbif.org/occurrence/1099108116>
19. Purpis W. The Lichen Flora of Great Britain and Ireland. London : Natural Historical Museum Publication in Association with the British Lichen Society. 1990.
20. Kosanic M., Rankovic Br, Sukdolak Sl. Anti Microbial Activity of the Lichen *Lecanora frustulosa* and *Parmeliopsis hyperopta* and Their Divaricatic Acid and Zeorin Constituents African. Journal of Microbiology Research. 2010.
21. Heyne, K. Tumbuhan Berguna Indonesia. Jakarta: Yayasan Wanajaya. 1987.
22. Galloway, DJ. Tropical Lichen : Their Systematics, Conservation, and Ecology. Oxford : Clasendon Press. 1991.
23. Molnar K, Farkasˇ, E. Current result on biological activities of Lichen Secondary Metabolite: a review. Zeitschrift fur Naturforschung C. 2010

24. Balaji P, Hariharan, G.N. Invitro Antimicrobial Activity of *P. Praesoredium thallus* Extract. Research J. Botany. 2007; (1): 54-59.
25. Septiani E. Potensi Lichen Sebagai Sumber Bahan Obat: Suatu Kajian Pustaka. Jurnal Biologi. 2002;(1):1-5.
26. Amalia R, Trimulyono G. Aktivitas Antibakteri Ekstrak Lichen Usnea subfloridana terhadap Pertumbuhan Bakteri Escherichia coli FNCC 0091 dan Staphylococcus aureus FNCC 0047. LenteraBio
27. Humaida R. Strategy to Handle Resistance of Antibiotics; article review. 2014; (3)
28. Pratiwi. Mikrobiologi Farmasi. Yogyakarta: Erlangga; 2008.
29. Harborne JB. Phytochemical Methods: A Guide to Modern Techniques of Plant Analysis. Springer Netherlands; 2012.
30. Sarker SD, Latif Z, Gray AI. Natural Products Isolation: an overview. Nat Prod Isol. 2006;864:1-25.
31. DepkesRI. Parameter Standar Umum ekstrak Tumbuhan Obat. Jakarta: Kemenkes RI. 2000.
32. Handa SS. An Overview of Extraction Techniques for Medicinal and Aromatic Plants. In: Extraction Technologies for Medicinal and Aromatic Plants. Environmental and Marine Science. 2008. p. 25.
33. Sastrohamidjojo H. Kromatografi. Yogyakarta: Liberty; 1985.
34. Bintang M. Biokimia: teknik penelitian. Jakarta: Penerbit Erlangga; 2010.
35. Supratman U. Elusidasi Struktur Senyawa Organik. Bandung: Widya Padjadjaran. 2010;94-102.
36. Kosela S. Cara mudah dan sederhana penentuan struktur molekul berdasarkan spektra data (NMR, MASS, IR, UV). Lembaga Penerbit Fakultas Ekonomi Universitas Indonesia; 2010.
37. Silverstein RM, Webster FX, Kiemle DJ, Bryce DL. Spectrometric identification of organic compounds. John wiley & sons; 2014.
38. Low KB. Encyclopedia of Microbiology. Encyclopedia of Microbiology. 2009. 578-586 p.

39. Valgas C, Souza SM de, Smânia EFA, Smânia Jr A. Screening methods to determine antibacterial activity of natural products. *Brazilian J Microbiol.* 2007;38(2):369–80.
40. Jawetz E, Melnick JL, Adelberg EA. *Jawetz, Melnick & Adelberg's medical microbiology.* Appleton & Lange; 1995.
41. Botz L. Bioautography. Reference Module in Chemistry, Molecular Sciences and Chemical Engineering. Elsevier Inc.; 2013. 1–8 p.
42. Balouiri M, Sadiki M, Ibsouda SK. Methods for in vitro evaluating antimicrobial activity: A review. *J Pharm Anal.* 2016;6(2):71–9.
43. Tarina Nimas TI, Kusuma Sri AF. Deteksi Bakteri Klebsiella pneumonia. *Farmaka*;15:2
44. Allegrucci M, Sauer K. Characterization of Colony Morphology Variants Isolated from *Streptococcus pneumoniae* Biofilms. *Journal of Bacteriology.* 2007. p. 2030–2038
45. Chuan Chiang-Ni,^a Po-Xing Zheng,^b Shu-Ying Wang,^c Pei-Jane Tsai,^b Woei-Jer Chuang,^d Yee-Shin Lin,^c Ching-Chuan Liu,^e Jiunn-Jong Wub. Epidemiology Analysis of *Streptococcus pyogenes* in a Hospital in Southern Taiwan by Use of the Updated emm Cluster Typing System. *Journal of Clinical Microbiology.* 2016;54
46. Suzanne J.C. Verhaegh, Viveka Schaar², Yu Ching Su, Kristian Riesbeck and John P. Hays. *Moraxella catarrhalis.* Molecular Medical Microbiology. Rotterdam, The Netherlands, ²Lund University, Malmo, Sweden. 2015
47. Frengki. Isolasi, Elusidasi Struktur Dan Uji Bioaktivitas Kandungan Kimia Fraksi Etil Asetat Kulit Batang Tanaman *Calophyllum Macrophyllum* Scheff: universitas indonesia; 2010
48. Condalab. Brain Heart Infusion Broth (BHI Broth) Microbiological test [Internet]. Condalab. 2020. p. 1–2. Available from: www.condalab.com
49. Mansouri S, Foroumadi A, Ghaneie T, Najjar AG. Antibacterial activity of the crude extracts and fractionated constituents of *Myrtus communis*. *Pharm Biol.* 2001;39(5):399–401.

50. Nurmuhaimina SA, Maulia R, Yuniarti I, Umaningrum D. Uji Aktivitas Antioksidan Dari Ekstrak Campuran Tumbuhan Alang-Alang (*Imperata cylindrica*) Dan Lidah Ular (*Hedyotis corymbosa*) Sebagai Peredam Radikal Bebas Asam Linoleat. *J Sains Dan Terap Kim.* 2009;2(1):85–93.
51. Elix JA, Stocker-Wörgötter E. Biochemistry and secondary metabolites. In: *Lichen Biology, Second Edition.* 2008.
52. Pan X, Chen F, Wu T, Tang H, Zhao Z. The acid, bile tolerance and antimicrobial property of *Lactobacillus acidophilus* NIT. *Food Control.* 2009;20:598–602.
53. Suryelita S, Etika SB, Kurnia NS. Isolasi dan Karakterisasi Senyawa Steroid dari Daun Cemara Natal (*Cupressus funebris* Endl.). *Berk Ilm Bid MIPA.* 2017;18(1):86–94.
54. Rankovic B, Kosanic M, Stanojkovic T, Vasiljevic P, Manojlovic N. Biological activities of *Tonimia candida* and *Usnea barbata* together with their norshiclic acid and usnic acid constituents. *Int J Mol Sci.* 2012.13:14707-22.16. Maulidiyah, Cahyana
55. Maulidiyah, Azis T, Hadijah Siti, Nurdin M. Isolasi dan Identifikasi Senyawa (-)-Asam Usnat dari Lichen *Usnea* sp. serta Aktivitas Sitotoksiknya terhadap Sel Murine Leukemia P388. *JURNAL ILMU KEFARMASIAN INDONESIA.* April 2015. 40-44
56. Brakni R, Ahmed A M, Burger P, Schwing A, Michel Gregory, Pomares C, Housseine L, Boyer Lauren, Fernandez X, Landreau A, Michel Thomas. UHPLC-HRMS/MS based profiling of Algerian lichens and their antimicrobial activities. 2018.
57. Jin, Y. Ma Yinghua. Xie W. Hou L. Xu H. UHPLC-Q-TOF-MS/MS-oriented characteristic components dataset and multivariate statistical techniques for the holistic quality control of *Usnea*. 2018.15487-15500
58. ISNAENI, A. TOTO POERNOMO FN. Profil Bioautogram Bakteriosin dalam Sediaan Susu Probiotik. Dep Kim Farm Fak Farm Univ airlangga

59. Aktivitas Antibakteri dan Karakteristik Gugus Fungsi dari Tunikita *Policarpa Aurata*. PHARMACON. 2015;4(2):32–44.
60. Mansouri S, Foroumadi A, Ghaneie T, Najjar AG. Antibacterial activity of the crude extracts and fractionated constituents of *Myrtus communis*. Pharm Biol. 2001;39(5):399–401.
61. Octaviani M, Fadhli H, Yuneistya E. Uji Aktivitas Antimikroba Ekstrak Etanol dari Kulit Bawang Merah (*Allium cepa* L.) dengan Metode Difusi Cakram. J Pharm Sci Res. 2019;
62. Pelczar Jr, Michael J, Chan ECS. Dasar-Dasar Mikrobiologi 2. UI Press. Jakarta; 2009.
63. Pan X, Chen F, Wu T, Tang H, Zhao Z. The acid, bile tolerance and antimicrobial property of *Lactobacillus acidophilus* NIT. Food Control. 2009;20:598–602.