

DAFTAR PUSTAKA

- 1 Guarino A, Bruzzese E, Giannattasio A. Antibiotic treatment of acute gastroenteritis in children. *F1000Research* 2018; **7**: 1–10.
- 2 Azucena RCI, Roberto CLJ, Martin ZR, Rafael CZ, Leonardo HH, Gabriela TP *et al.* Drug susceptibility testing and synergistic antibacterial activity of curcumin with antibiotics against enterotoxigenic *Escherichia coli*. *Antibiotics* 2019; **8**. doi:10.3390/antibiotics8020043.
- 3 World Health Organization (WHO): Diarrhoeal Disease. <https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease>.
- 4 Centre for Disease Control and Prevention. Diarrhea : Common Illness , Global Killer. *Centers of Disease Control and Prevention* 2012; : 1–4.
- 5 Kementerian Kesehatan RI. Hasil Utama Riset Kesehatan Dasar (RISKESDAS) 2018.; **44**: 1–200.
- 6 Susanti WE, Sunarsih E. Determinan Kejadian Diare Pada Anak Balita di Indonesia (Analisis Lanjut Data SKDI 2012). *Jurnal Ilmu Kesehatan*. 2016; **7**: 64–72.
- 7 Kementerian Kesehatan RI. Riset kesehatan dasar (RISKESDAS) 2013. Jakarta: Kementerian Kesehatan RI; 2013. .
- 8 Caulfield LE, de Onis M, Blössner M, Black RE. Undernutrition as an underlying cause of child deaths associated with diarrhea, pneumonia, malaria, and measles. *American Journal of Clinical Nutrition* 2004; **80**: 193–198.
- 9 Doe WF, Barr GD. Acute diarrhoea in adults. *American Family Physician* 1981; **10**: 438–446.
- 10 Kaushik D, Mohan M, Borade DM, Swami OC. Ampicillin: Rise fall & resurgence. *Journal of Clinical and Diagnostic Research* 2014; **8**: 10–12.

- 11 Permenkes. Pedoman Umum Penggunaan Antibiotik. 2011; : 4.
- 12 Kesehatan KM, Indonesia R, Menteri K, Republik K, Atas P, Menteri K *et al.* *Formularium nasional*. 2016.
- 13 Thakre R, Eqbal S, Dwivedi A, Jain S. a New Method for the Development of *Escherichia Coli*.
- 14 Diniz-Santos DR, Silva LR, Silva N. Antibiotics for the empirical treatment of acute infectious diarrhea in children. *Brazilian Journal of Infectious Disease* 2006; **10**: 217–227.
- 15 Nonong YH, Satari MH. Tetrasiklin Sebagai Salah Satu Antibiotik yang Dapat Menghambat Pertumbuhan *Staphylococcus aureus* resisten-Metisilin (MRSA). *FKG Universitas Padjajaran*; : 1–7.
- 16 Jurnalis YD, Sayoeti Y, Ilmu B, Anak K. Pola Resistensi Kuman Penyebab Diare Terhadap Antibiotika. Bagian Ilmu Kesehatan Anak Fakultas Kedokteran Universitas Andalas. *Majalah Kedokteran* 2008; **33**.
- 17 Bruno L. Anonim. *J Chem Inf Model* 2019; **53**: 1689–1699.
- 18 Rahman S, Parvez AK, Islam R, Khan MH. Antibacterial activity of natural spices on multiple drug resistant *Escherichia coli* isolated from drinking water, Bangladesh. *Annals of Clinical Microbiology and Antimicrobials* 2011; **10**: 10.
- 19 Prasetyo U. Aktivitas Antibakteri Kombinasi Ekstrak Etanol Daun Jambu Monyet (*Anacardium occidentale* L.) dan Ampisilin terhadap *Escherichia coli* sensitif dan *Escherichia coli* Multiresisten. *Jakarta Fakultas Farmasi Universitas Muhammadiyah Surakarta* 2013.
- 20 Zainol MI, Mohd Yusoff K, Mohd Yusof MY. Antibacterial activity of selected Malaysian honey. *BMC Complementary and Alternative Medicine* 2013; **13**. doi:10.1186/1472-6882-13-129.
- 21 Al-Daihan S, Al-Faham M, Al-shawi N, Almayman R, Brnawi A, zargar S

- et al.* Antibacterial activity and phytochemical screening of some medicinal plants commonly used in Saudi Arabia against selected pathogenic microorganisms. *Journal of King Saud University - Science* 2013; **25**: 115–120.
- 22 Hosea ZY, Kator L, Rhoda EH. Phytochemical Properties and Antimicrobial Activities of Aqueous Extract of *Curcuma longa* (Turmeric) Rhizome Extract. *Asian Journal Research in Crop Science* 2018; **2**: 1–8.
- 23 Ramadhani P. Artikel Penelitian Hambat Ekstrak Etanol Rimpang Kunyit (*Curcuma domestica V.*) terhadap Pertumbuhan Bakteri *Staphylococcus aureus* Secara In Vitro. 2017; **6**: 590–595.
- 24 Oghenejobo M. Antibacterial Evaluation, Phytochemical Screening and Ascorbic Acid Assay of Turmeric (*Curcuma longa*). *MOJ Bioequivalence Bioavailability* 2017; **4**: 232–239.
- 25 Studi P, Kesehatan A. Daya Hambat Ekstrak Rimpang Kunyit (*Curcuma domestica Val.*) Terhadap Pertumbuhan *Staphylococcus aureus* dan *Staphylococcus epidermidis* secara In Vitro. 2016.
- 26 Rini CS, Rohmah J, Widyaningrum LY. Efektivitas Kunyit (*Curcuma longa* Linn) terhadap *Escherichia coli* dan *Bacillus subtilis*. *Medicra (Journal of Medical Laboratory Science/Technology* 2018); **1**: 1.
- 27 Kumara INC, Sri Pradnyani IGA, Sidiarta IGAFN. Uji efektivitas ekstrak kunyit (*Curcuma longa*) terhadap daya hambat pertumbuhan bakteri *Streptococcus mutans*. *Intisari Sains Medis* 2019; **10**: 462–467.
- 28 Laishram S, Pragasam A, Bakthavatchalam Y, Veeraraghavan B. An update on technical, interpretative and clinical relevance of antimicrobial synergy testing methodologies. *Indian Journal of Medical Microbiology* 2017; **35**: 445–468.
- 29 Ziaei-Daroukalei N, Ameri M, Zahraei-Salehi T, Ziaei-Daroukalei O, Mohajer-Tabrizi T, Bornaei L. AZDAST the new horizon in antimicrobial

- synergism detection. *MethodsX* 2016; **3**: 43–52.
- 30 Upadhy R K, Shenoy L, Venkateswaran R. Action and resistance mechanisms of antibiotics: A guide for clinicians. *Journal of Anaesthesiology Clinical Pharmacology* 2018; **34**: 46–50.
- 31 Soares GMS, Figueiredo LC, Faveri M, Cortelli SC, Duarte PM, Feres M. Mechanisms of Action of Systemic Antibiotics in Periodontal Treatment. *Journal of Oral Rehabilitation* 2012; **20**: 295–309.
- 32 Alves HC, Cruz FDPN, Assis PCP De, Pessoa JDC, Trevelin LC, Leal AMDO *et al.* Antibiotic Resistance among *Escherichia coli*: Isolates and Novel Approaches to the Control of *E. coli* Infections. .
- 33 Stefanović OD. Synergistic Activity of Antibiotics and Bioactive Plant Extracts: A Study Against Synergistic Activity of Antibiotics and Bioactive Plant Bacteria Extracts: A Study Against Gram-Positive and Gram-Negative Bacteria. doi:10.5772/intechopen.72026.
- 34 Elmogahzy Y. *Engineering Textiles: Integrating the Design and Manufacture of Textile Products*. Second Edition. Elsevier, 2020.
- 35 Tyagi P, Singh M, Kumari H, Kumari A, Mukhopadhyay K. Bactericidal activity of curcumin I is associated with damaging of bacterial membrane. *PLoS One* 2015; **10**: 1–15.
- 36 Teow SY, Liew K, Ali SA, Khoo ASB, Peh SC. Antibacterial Action of Curcumin against *Staphylococcus aureus*: A Brief Review. *Journal of Tropical Medicine* 2016; **2016**. doi:10.1155/2016/2853045.
- 37 Ardhyani SD, Puspitasari Y, Meydawati Y, Novaryatiin S. Efektivitas Antibakteri Senyawa Kurkumin terhadap *Foodborne Bacteria*: Tinjauan *Curcuma longa* untuk Mengatasi Resistensi Antibiotik. *Jurnal Sains dan Kesehatan*. 2019; **2**: 122–128.
- 38 Kai K, Bi W, Bo Y, Ye Y, Zhang D. Curcumin-A Review of Its Antibacterial

- Effect. 2020; : 19585–19587.
- 39 Halim S. Antibacterial Effect Of Curcuma ; : 159–164.
- 40 Zorofchian Moghadamtousi S, Abdul Kadir H, Hassandarvish P, Tajik H, Abubakar S, Zandi K. A review on antibacterial, antiviral, and antifungal activity of curcumin. *Biomed Researcg International* 2014. doi:10.1155/2014/186864.
- 41 Abdullatif. Daya Hambat Ekstrak Rimpang Kunyit (*Curcuma domestica Val.*) Terhadap Pertumbuhan *Staphylococcus aureus* dan *Staphylococcus epidermidis* Secara In Vitro. 2016; : 86.
- 42 Butarbutar R. Uji Aktivitas Antibakteri Ekstrak Etanol Buah Attarasa Litsea cubeba (Lour.) Pers. terhadap bakteri *Staphylococcus aureus* dan *Eschericia coli*. *Program Studi Sarjana Farmasi Fakultas Farmasi dan Kesehatan Umum Institut Kesehatan Helvita Medan* 2019.
- 43 Sastika AR, Mulyani S. Ekstrak metanol dan etanol daun sidaguri . 2010; : 560–563.
- 44 Othman L, Sleiman A, Abdel-massih RM. Antimicrobial Activity of Polyphenols and Alkaloids in Middle Eastern Plants. 2019; **10**. doi:10.3389/fmicb.2019.00911.
- 45 Cushnie TPT, Lamb AJ. Recent advances in understanding the antibacterial properties of flavonoids. *International Journal of Antimicrobial Agents* 2011; **38**: 99–107.
- 46 Heinrich, M, (et A. Farmakognosis dan Fitoterapi. Jakarta: EGC. 2009.
- 47 Sundari D dan MWW. Informasi Tumbuhan Obat Sebagai Anti Jamur. Puslitbang-Balitbangkes Depkes RI, Jakarta. 2000.
- 48 Cushnie TPT, Cushnie B, Lamb AJ. Alkaloids: An overview of their antibacterial, antibiotic-enhancing and antivirulence activities. *Int J Antimicrob Agents* 2014; **44**: 377–386.

- 49 Scalbert A. Antimicrobial properties of tannins. *Phytochemistry* 1991; **30**: 3875–3883.
- 50 LIPI. *Berita Biologi*. Pusat Penelitian Biologi - LIPI, 2008.
- 51 Kali A, Bhuvaneshwar D, Charles P V., Seetha K. Antibacterial synergy of curcumin with antibiotics against biofilm producing clinical bacterial isolates. *J Basic Clin Pharm* 2016; **7**: 93.
- 52 Brown D. Antibiotic resistance breakers: Can repurposed drugs fill the antibiotic discovery void? *Nat Rev Drug Discov* 2015; **14**: 821–832.
- 53 Bayer AS, Chow AW, Morrison JO, Guze LB. Bactericidal synergy between penicillin or ampicillin and aminoglycosides against antibiotic-tolerant lactobacilli. *Antimicrobial Agents and Chemotherapy* 1980; **17**: 359–363.
- 54 Eliopoulos GM, Moellering RC. Antibiotic synergism and antimicrobial combinations in clinical infections george. 1982; **4**: 282–293.
- 55 Stefan Riedel, Stephen Morse, Timothy Mietzner, Steve Miller - Jawetz M& AMM-M-H (2019). *Jawetz Melnick & Adelbergs Medical Microbiology 28 E (28th edition)*. 2013.
- 56 Willey JM. *Prescott 's Microbiology*. .
- 57 Fritz H. Kayser, Michael Beall - Medical microbiology (2005 GTV. *Basic Principles General Aspects of Medical Microbiology II Bacteriology General Bacteriology Bacteria as Human Pathogens III Mycology General Mycology Fungi as Human Pathogens IV Virology General Virology Viruses as Human Pathogens V Parasitology Protozo*. 2005.
- 58 Hogg SD. *Oral microbiology, 2nd edition*. 1994 doi:10.1016/0300-5712(94)90077-9.
- 59 PhD KT. Online Textbook of Bacteriology - The Growth of Bacterial Population. 2020.http://textbookofbacteriology.net/growth_3.html#:~:text=The

generation time for *E. coli* in the,as *Rhizobium* tend to have longer generation times.

- 60 Schiefer HG, Von Graevenitz A. *Clinical microbiology*. 2006 doi:10.1007/3-540-33713-X_74.
- 61 Donnenberg MS. *Escherichia Coli: pathotypes and Principles of Pathogenesis*. 2013.
- 62 Croxen MA, Law RJ, Scholz R, Keeney KM, Wlodarska M, Finlay BB. Recent advances in understanding enteric pathogenic *Escherichia coli*. *Clinical Microbiology Review* 2013; **26**: 822–880.
- 63 Gad Frankel EZR. *Systems Biology and Biotechnology of*. 2009.
- 64 American Chemical Society International Historic Chemical Landmarks. Discovery and Development of Penicillin. <http://www.acs.org/content/acs/en/education/whatischemistry/landmarks/flemingpenicillin.html> (accessed Month Day, Year). .
- 65 Zeng X, Lin J. Beta-lactamase induction and cell wall metabolism in Gram-negative bacteria. *Front Microbiol* 2013; **4**. doi:10.3389/fmicb.2013.00128.
- 66 PORRITT AE. The discovery and development of penicillin. *Med. Press*. 1951; **225**: 460–462.
- 67 Torella JP, Chait R, Kishony R. Optimal drug synergy in Antimicrobial Treatments. *PLoS Computational Biology* 2010; **6**: 1–9.
- 68 Walker RD. *NCCLS: Standards for antimicrobial susceptibility testing*. 1999.
- 69 Delcour AH. Outer Membrane Permeability and Antibiotic Resistance Anne. 2010; **1794**: 808–816.
- 70 Li M, Liu Q, Teng Y, Ou L, Xi Y, Chen S *et al*. The resistance mechanism of *escherichia coli* induced by ampicillin in laboratory. *Infection and Drug Resistance* 2019; **12**: 2853–2863.

- 71 Reygaert WC. Antimicrobial Mechanisms of *Escherichia coli*. .
- 72 Anonim. *Curcuma domestica* Val. 2012; : 5–26.
- 73 Winarto IW. *Khasiat dan Manfaat Kunyit*. Jakarta: AgroMedia Pustaka. 2004 doi:10.1016/B978-0-12-374984-0.00992-X.
- 74 Lina. Standarisasi Ekstrak Rimpang Kunyit (*Curcuma domestica* Val.). 2008; : 1–70.
- 75 Hasanah H dan Y. Budidaya Tanaman Obat dan Rempah. USUPress, Medan. 2011.
- 76 Kusbiantoro D· YP. Pemanfaatan kandungan metabolit sekunder pada tanaman kunyit dalam mendukung peningkatan pendapatan masyarakat. Utilization of secondary metabolite in the turmeric plant to increase community income. 2018; **17**: 544–549.
- 77 Gupta A, Mahajan S, Sharma R. Evaluation of antimicrobial activity of *Curcuma longa* rhizome extract against *Staphylococcus aureus*. *Biotechnology Reports* 2015; **6**: 51–55.
- 78 Roihatul Mutiah. Evidance Based Kurkumin dari Tanaman Kunyit (*Curcuma longa*) Sebagai Terapi Kanker pada Pengobatan Modern. 2015; **1**: 28–41.
- 79 Cobra LS, Amini HW, Putri AE. Skirining Fitokimia Ekstrak Sokhletasi Rimpang Kunyit (*Curcuma longa*) dengan Pelarut Etanol 96 %. *Jurnal Ilmu Kesehatan Karya Putra Bangsa* 2019; **1**: 12–17.
- 80 Lee W-H, Loo C-Y, Bebawy M, Luk F, Mason R, Rohanizadeh R. Curcumin and its Derivatives: Their Application in Neuropharmacology and Neuroscience in the 21st Century. *Curr Neuropharmacol* 2013; **11**: 338–378.
- 81 Sitepu JSG. Pengaruh Variasi Metode Ekstraksi Secara Maserasi dan Dengan Alat Soxhlet terhadap Kandungan Kurkuminoid dan Minyak Atsiri dalam Ekstrak Etanolik Kunyit (*Curcuma domestica* Val.). *Universitas*

- Sanata Dharma Yogyakarta* 2010.
- 82 Rukmana. Kunyit. Kanisius: Jakarta. 2004.
- 83 Teow SY, Liew K, Ali SA, Khoo ASB, Peh SC. Antibacterial Action of Curcumin against *Staphylococcus aureus*: A Brief Review. *J Trop Med* 2016; **2016**. doi:10.1155/2016/2853045.
- 84 Jain SN, Vishwanatha T, Reena V, Divyashree BC, Sampath A, Siddhalingeswara KG *et al*. Antibiotic Synergy Test: Checkerboard Method on Multi Drug Resistant *Pseudomonas aeruginosa* Antibiotic Synergy Test : Checkboard Method on Multidrug Resistant. 2011; : 2–5.
- 85 Principle M, Samples K, Procedure T. ESBL Disc Tests. 2014; : 18–20.
- 86 Laishram S, Pragasam A, Bakthavatchalam Y, Veeraraghavan B. An update on technical, interpretative and clinical relevance of antimicrobial synergy testing methodologies. *Indian Journal of Medicial Microbiology* 2017; **35**: 445–468.
- 87 Microchem Laboratory. Zone of Inhibition Test for Antimicrobial Activity. 2015.
- 88 Varghese N. Microbiology Laboratory Manual Naveena Varghese. 2016.
- 89 Clinical and Laboratory Standards Institute C. M02-A12: Performance Standards for Antimicrobial Disk Susceptibility Tests; Approved Standard—Twelfth Edition. *Clinical and Laboratory Standards Institute* 2015; **35**: 73.
- 90 F. R. Cockerill, M. A. Wiker, J. Alder, M. N. Dudley, G. M. Eliopoulos, M. J. Ferraro, D. J. Hardy, D. W. Hecht, J. A. Hindler, J. B. Patel, M. Powell, J. M. Swenson, R. B. Thomson, M. M. Traczewski, J. D. Turnidge, M. P. Weinstein BLZ. *Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria That Grow Aerobically; Approved Standard — Ninth Edition*. 2012.
- 91 Cappuccino. JG, Sherman N. *New Features Make the Micro Lab More*

Clinical Application Gram Staining : The First. 2014.

- 92 REMEL Inc. RapID ONE. .
- 93 Raji P, Samrot A V., Keerthana D, Karishma S. Antibacterial Activity of Alkaloids, Flavonoids, Saponins and Tannins Mediated Green Synthesised Silver Nanoparticles Against *Pseudomonas aeruginosa* and *Bacillus subtilis*. *Journal of Cluster Science* 2019; **30**: 881–895.