

DAFTAR PUSTAKA

1. Xia X, Zhang L, Wang Y. The antimicrobial peptide cathelicidin-BF could be a potential therapeutic for *Salmonella typhimurium* infection. *Microbiol Res.* 2015;171:45-51. doi:10.1016/j.micres.2014.12.009
2. Huang F. The differential effects of 1, 25-dihydroxyvitamin D3 on *Salmonella* - induced interleukin-8 and human beta-defensin-2 in intestinal epithelial cells. 2016:98-106. doi:10.1111/cei.12792
3. Alena Klochko, MD; Chief Editor: Michael Stuart Bronze M. *Salmonella Infection (Salmonellosis).* *Infect Dis (Auckl).* <https://emedicine.medscape.com/article/228174-overview>.
4. Purba IE, Wandra T, Nugrahini N, Nawawi S. Program Pengendalian Demam Tifoid di Indonesia : tantangan dan peluang. 2016:99-108.
5. Pratiwi D, Suswati I, Abdullah M, Kedokteran F, Muhammadiyah U, Sutami JB. Efek Anti Bakteri Ekstrak Kulit Jeruk Nipis (*Citrus Aurantifolia*) Terhadap *Salmonella Typhi* Secara In Vitro. 2013:110-115.
6. Pharm MSAB, Pharm NMAB, Pharm SSAB, D TAP, D SAKP. Chemical composition and in-vitro antioxidant and antimicrobial activity of the essential oil of *Citrus aurantifolia* L . leaves grown in eastern Oman. *J Taibah Univ Med Sci.* 2018;(January):1-5. doi:10.1016/j.jtumed.2017.12.002
7. Loizzo MR, Tundis R, Bonesi M, Menichini F, Luca D De, Menichini F. Evaluation of *Citrus aurantifolia* peel and leaves extracts for their chemical composition , antioxidant and anti-cholinesterase activities. 2012;(February). doi:10.1002/jsfa.5708
8. Tenri A, Dwi U, Andani R, Gigi FK, Hasanuddin U. Efektivitas Ekstrak Kulit Jeruk Nipis (*Citrus Aurantifolia*) Dengan Naocl 5 , 25 % Sebagai Alternatif Larutan Irigasi Saluran Akar Dalam Menghambat Bakteri *Enterococcus faecalis*. 2016.
9. Cushnie TPT, Lamb AJ. Antimicrobial activity of flavonoids. 2005;26:343-356. doi:10.1016/j.ijantimicag.2005.09.002

10. Etxeberria U, Fernandez-Quintela A, Milagro FI, Aguirre L, Martinez JA, Portillo MP. Impact of polyphenols and polyphenol-rich dietary sources on gut microbiota composition. *J Agric Food Chem*. 2013;61(40):9517-9533. doi:10.1021/jf402506c
11. Perez-Cano FJ, Massot-Cladera M, Rodriguez-Lagunas MJ, Castell M. Flavonoids Affect Host-Microbiota Crosstalk through TLR Modulation. *Antioxidants (Basel, Switzerland)*. 2014;3(4):649-670. doi:10.3390/antiox3040649
12. Wahid, Syarifuddin., Miskad, Upik A. F kedokteran U. *Imunologi*. 1st ed. (Wijaya A, ed.). Makassar; 2016.
13. Liang J, Lei Z, Xu X, et al. Role of interleukin-6 in differentiating interleukin-11 induced fever and early bacterial infection. *Indian J Pediatr*. 2014;81(9):871-875. doi:10.1007/s12098-014-1361-3
14. Parry CM, Hien TT, Dougan G, White NJ, Farrar JJ. Typhoid fever. *N Engl J Med*. 2002;347(22):1770-1782. doi:10.1056/NEJMra020201
15. Pastoor R, Hatta M, Abdoel TH, Smits HL. Simple, rapid, and affordable point-of-care test for the serodiagnosis of typhoid fever. *Diagn Microbiol Infect Dis*. 2008;61(2):129-134. doi:10.1016/j.diagmicrobio.2007.12.014
16. Olsen SJ, Pruckler J, Bibb W, et al. Evaluation of Rapid Diagnostic Tests for Typhoid Fever. 2004;42(5):1885-1889. doi:10.1128/JCM.42.5.1885
17. Tumbelaka. *Tata Laksana Demam Tifoid Pada Anak. Pediatrics Update. Naskah Lengkap Pendidikan Kedokteran Berkelanjutan*. Ilmu Kesehatan Anak IDAI Jaya; 2003.
18. Mimi Marleni. et al. Ketepatan Uji Tubex TF® dalam Mendiagnosis Demam Tifoid Anak pada Demam Hari ke-4. *J Kedokt DAN Kesehat*. 2012;1:7-11.
19. Nasronudin. *Penyakit Infeksi Di Indonesia Solusi Kini & Mendatang*. Surabaya : Airlangga: University Press: Indonesia; 2007.
20. WHO. *W.H.O. Typhoid.*; 2015. <http://www.who.int/immunization/diseases/typhoid/en/>.
21. Sudoyo AW. *Buku Ajar Ilmu Penyakit Dalam*. Indonesia : Jakarta: Interna

- Publishing; 2009. <https://www.scribd.com/doc/154496984/Buku-Ajar-Ilmu-Penyakit-Dalam-Edisi-V>.
22. Coyne MS. *Soil Microbiology: An Exploratory Approach*. Delmar; 1999. <https://books.google.co.id/books?id=y5hFAQAAIAAJ>.
 23. Tam, F.C.H. et al. New rapid test for paratyphoid a fever: usefulness, cross-detection, and solution. *Diagn Microbiol Infect Dis*. 2008;62(2):142-150.
 24. van Crevel R, Ottenhoff THM, van der Meer JWM. Innate immunity to Mycobacterium tuberculosis. *Clin Microbiol Rev*. 2002;15(2):294-309.
 25. Hurley D, Matthew P, Fanning S, Martins M. Salmonella – host interactions – modulation of the host innate immune system. 2014;5(October):1-11. doi:10.3389/fimmu.2014.00481
 26. Abbas A k., Lichtman AH, Pillai S. *Imunologi Dasar Fungsi Dan Kelainan Sistem Immun*. Edisi Indo. (Handono Kalim, Prof, DR, dr D-K, ed.). Singapore: Elsevier (Singapore) Pte td; 2014.
 27. Abbas AK, Lichtman AH and PJ. *Cellular and Molecular Immunology*. 8th Editio. Philadelphia: W.B. Saunders Company; 2014. <https://www.elsevier.com/books/cellular-and-molecular-immunology/abbas/978-0-323-22275-4>.
 28. Kang SSW, Kauls LS, Gaspari AA. Toll-like receptors: applications to dermatologic disease. *J Am Acad Dermatol*. 2006;54(6):951-956. doi:10.1016/j.jaad.2005.05.004
 29. Petry V, Gaspari AA. Toll-like receptors and dermatology. 2009:558-570.
 30. Akira Shizuo. A Toll-Like Receptor Recognized Bacteri. *Nature*. 2000;408:740-745.
 31. Albiger B, Dahlberg S, Henriques-Normark B, Normark S. Role of the innate immune system in host defence against bacterial infections: focus on the Toll-like receptors. *J Intern Med*. 2007;261(6):511-528. doi:10.1111/j.1365-2796.2007.01821.x
 32. Carpenter S, O'Neill LAJ. How important are Toll-like receptors for antimicrobial responses? *Cell Microbiol*. 2007;9(8):1891-1901.

doi:10.1111/j.1462-5822.2007.00965.x

33. de Zoete MR, Bouwman LI, Kestra AM, van Putten JPM. Cleavage and activation of a Toll-like receptor by microbial proteases. *Proc Natl Acad Sci U S A*. 2011;108(12):4968-4973. doi:10.1073/pnas.1018135108
34. Elson G, Dunn-Siegrist I, Daubeuf B, Pugin J. Contribution of Toll-like receptors to the innate immune response to Gram-negative and Gram-positive bacteria. *Blood*. 2007;109(4):1574-1583. doi:10.1182/blood-2006-06-032961
35. Valins W, Amini S, Berman B. The Expression of Toll-like Receptors in Dermatological Diseases and the Therapeutic Effect of Current and Newer Topical Toll-like Receptor Modulators. *J Clin Aesthet Dermatol*. 2010;3(9):20-29.
36. Liew FY, Xu D, Brint EK, O'Neill LAJ. Negative regulation of toll-like receptor-mediated immune responses. *Nat Rev Immunol*. 2005;5(6):446-458. doi:10.1038/nri1630
37. Gay NJ, Gangloff M, Weber ANR. Toll-like receptors as molecular switches. *Nat Rev Immunol*. 2006;6(9):693-698. doi:10.1038/nri1916
38. Yauch LE, Mansour MK, Shoham S, Rottman JB, Levitz SM. Involvement of CD14, toll-like receptors 2 and 4, and MyD88 in the host response to the fungal pathogen *Cryptococcus neoformans* in vivo. *Infect Immun*. 2004;72(9):5373-5382. doi:10.1128/IAI.72.9.5373-5382.2004
39. Kadowaki N, Ho S, Antonenko S, et al. Subsets of human dendritic cell precursors express different toll-like receptors and respond to different microbial antigens. *J Exp Med*. 2001;194(6):863-869.
40. Ermertcan AT, Ozturk F, Gunduz K. Toll-like receptors and skin. *J Eur Acad Dermatol Venereol*. 2011;25(9):997-1006. doi:10.1111/j.1468-3083.2011.04049.x
41. Anum Q. Peranan Toll-Like Receptor Terhadap Infeksi Bakteri Pada Kulit. 2012;39(1):42-48.
42. Terhorst D, Kalali BN, Ollert M, Ring J, Mempel M. The role of toll-like receptors in host defenses and their relevance to dermatologic diseases. *Am J Clin Dermatol*. 2010;11(1):1-10. doi:10.2165/11311110-000000000-00000

43. Nguyen MD, Julien J, Rivest S. Innate Immunity : The Missing Link In Neuroprotection And Neurodegeneration ? 2002;3(March):216-227. doi:10.1038/nrn752
44. Nuzulul Hikmah* Idard. Peran Toll Like Receptors (Tlrs) Pada Innate Immunity (The Role of Toll Like Receptors to Innate immunity). *Stomatognatic (JKG Unej)*. 2011;Vol. 8 No.:21-26.
45. Paul-clark MJ, Master SKM, Belcher E, et al. Differential effects of Gram-positive versus Gram-negative bacteria on NOSII and TNF a in macrophages : role of TLRs in synergy between the two. 2006:1067-1075. doi:10.1038/sj.bjp.0706815
46. Tada H, Nemoto E, Shimauchi H, et al. Saccharomyces cerevisiae- and Candida albicans-derived mannan induced production of tumor necrosis factor alpha by human monocytes in a CD14- and Toll-like receptor 4-dependent manner. *Microbiol Immunol*. 2002;46(7):503-512.
47. Ulupi N. Salmonella enteritidis Menggunakan Gen Tlr4 Sebagai Penciri Genetik. 2014.
48. Lorenz E, Mira JP, Frees KL, Schwartz DA. Relevance of mutations in the TLR4 receptor in patients with gram-negative septic shock. *Arch Intern Med*. 2002;162(9):1028-1032.
49. Baratawidjaja, K. G. Rengganis I. *Immunologi Dasar*. 11th ed. Jakarta: Fakultas Kedokteran Universitas Indonesia; 2014.
50. Apraj V, Thakur N, Bhagwat A, Mallya R, Sawant L. Pharmacognostic and Phytochemical Evaluation of Citrus aurantifolia (Christm) Swingle PEEL. 2011;3(26):70-76. doi:10.5530/pj.2011.26.12
51. Enejoh OS, Ogunyemi IO, Bala MS. Ethnomedical Importance of Citrus Aurantifolia (Christm) Swingle. 2015;4(8):1-6.
52. Sandoval-montemayor NE, García A, Elizondo-treviño E, Garza-gonzález E, Alvarez L, Camacho-corona MR. Chemical Composition of Hexane Extract of Citrus aurantifolia and Anti-Mycobacterium tuberculosis Activity of Some of Its Constituents. 2012;5:11173-11184. doi:10.3390/molecules170911173
53. Hamilton-Miller JM, Shah S. Activity of the tea component epicatechin

- gallate and analogues against methicillin-resistant *Staphylococcus aureus*. *J Antimicrob Chemother*. 2000;46(5):852-853.
54. Sakagami Y, Mimura M, Kajimura K, et al. Anti-MRSA activity of sophoraflavanone G and synergism with other antibacterial agents. *Lett Appl Microbiol*. 1998;27(2):98-100.
 55. Wang SX, Zhang FJ, Feng QP, Li YL. Synthesis, characterization, and antibacterial activity of transition metal complexes with 5-hydroxy-7,4'-dimethoxyflavone. *J Inorg Biochem*. 1992;46(4):251-257.
 56. Dastidar SG, Manna A, Kumar KA, et al. Studies on the antibacterial potentiality of isoflavones. *Int J Antimicrob Agents*. 2004;23(1):99-102.
 57. Yoshida H, Watanabe W, Oomagari H, Tsuruta E, Shida M, Kurokawa M. Citrus flavonoid naringenin inhibits TLR2 expression in adipocytes ☆. *J Nutr Biochem*. 2013:39-41. doi:10.1016/j.jnutbio.2012.10.003
 58. Tao X, Sun X, Xu L, et al. Total Flavonoids from *Rosa laevigata* Michx Fruit Ameliorates Hepatic Ischemia / Reperfusion Injury through Inhibition of Oxidative Stress and. 2016. doi:10.3390/nu8070418
 59. Moosavy MH, Hassanzadeh P, Mohammadzadeh E, Mahmoudi R, Khatibi SA. Antioxidant and Antimicrobial Activities of Essential Oil of Lemon (*Citrus limon*) Peel in Vitro and in a Food Model. 2017;4:42-48.
 60. Trombetta D, Castelli F, Sarpietro MG, et al. Mechanisms of Antibacterial Action of Three Monoterpenes. 2005;49(6):2474-2478. doi:10.1128/AAC.49.6.2474
 61. Raut JS, Karuppayil SM. A status review on the medicinal properties of essential oils. *Ind Crop Prod*. 2014;62:250-264. doi:10.1016/j.indcrop.2014.05.055
 62. Cetin-karaca H. Evaluation Of Natural Antimicrobial Phenolic Compounds Against Foodborne. 2011.
 63. Accession G, Description G, Results V, Size A, Primer F, Primer R. PrimerBank. 2018:3-4.
 64. Pathan R khan, Gali PR, Pathan P, Gowtham T, Pasupuleti S. In vitro Antimicrobial Activity of *Citrus aurantifolia* and its Phytochemical

- screening. *Asian Pacific J Trop Dis.* 2012;2(SUPPL.1):S328-S331. doi:10.1016/S2222-1808(12)60176-5
65. Cushnie TPT, Cushnie B, Lamb AJ. Alkaloids: an overview of their antibacterial, antibiotic-enhancing and antivirulence activities. *Int J Antimicrob Agents.* 2014;44(5):377-386. doi:10.1016/j.ijantimicag.2014.06.001
66. McClure R, Massari P. TLR-Dependent Human Mucosal Epithelial Cell Responses to Microbial Pathogens. *Front Immunol.* 2014;5:386. doi:10.3389/fimmu.2014.00386
67. Ghasemi K, Sciences SA, Ghasemi Y, Ebrahimzadeh MA. Antioxidant activity , phenol and flavonoid contents of 13 Citrus species peels and tissues Antioxidant Activity , Phenol And Flavonoid Contents Of 13 Citrus Species Peels And Tissues. 2009;(April 2014).
68. Fayek NM, Farag MA, Abdel Monem AR, Moussa MY, Abd-Elwahab SM, El-Tanbouly ND. Comparative Metabolite Profiling of Four Citrus Peel Cultivars via Ultra-Performance Liquid Chromatography Coupled with Quadrupole-Time-of-Flight-Mass Spectrometry and Multivariate Data Analyses. *J Chromatogr Sci.* 2019;57(4):349-360. doi:10.1093/chromsci/bmz006
69. Coppo E, Marchese A. Antibacterial activity of polyphenols. *Curr Pharm Biotechnol.* 2014;15(4):380-390.
70. Lagana P, Anastasi G, Marano F, et al. Phenolic Substances in Foods: Health Effects as Anti-Inflammatory and Antimicrobial Agents. *J AOAC Int.* 2019;102(5):1378-1387. doi:10.5740/jaoacint.19-0131
71. Gutierrez-Del-Rio I, Fernandez J, Lombo F. Plant nutraceuticals as antimicrobial agents in food preservation: terpenoids, polyphenols and thiols. *Int J Antimicrob Agents.* 2018;52(3):309-315. doi:10.1016/j.ijantimicag.2018.04.024
72. Azam S, Jakaria M, Kim IS, Kim J, Ezazul Haque M, Choi DK. Regulation of toll-like receptor (TLR) signaling pathway by polyphenols in the treatment of age-linked neurodegenerative diseases: Focus on TLR4 signaling. *Front Immunol.* 2019;10(MAY). doi:10.3389/fimmu.2019.01000
73. Oikeh EI, Omoregie ES, Oviasogie FE, Oriakhi K. activities of different

citrus juice concentrates. 2015. doi:10.1002/fsn3.268

74. Aibinu I, Adenipekun T, Adelowotan T, Ogunsanya T, Odugbemi T. Evaluation of the antimicrobial properties of different parts of citrus aurantifolia (lime fruit) as used locally. *African J Tradit Complement Altern Med.* 2007;4(2):185-190.
75. Munawaroh R. Optimum Conditions for Extraction of Antibacterial Compounds from Citrus Aurantifolia Fruit Peel Waste. *Pharmacon J Farm Indones.* 2018;14(1):34-39. doi:10.23917/pharmacon.v14i1.5779
76. Singh P. In vitro Study of Antibacterial Activity by Citrus aurantifolia Fruit Peel , Citrus limetta Fruit Peel and Citrus aurantifolia Leaves against Oral Pathogens Microbial & Biochemical Technology. 2019:31-35. doi:10.4172/1948-5948.1000411.Copyright
77. Menendez A, Arena ET, Guttman JA, et al. Salmonella Infection of Gallbladder Epithelial Cells Drives Local Inflammation and Injury in a Model of Acute Typhoid Fever . *J Infect Dis.* 2009;200(11):1703-1713. doi:10.1086/646608
78. Chanana V, Ray P, Rishi DB, Rishi P. Reactive nitrogen intermediates and monokines induce caspase-3 mediated macrophage apoptosis by anaerobically stressed Salmonella typhi. *Clin Exp Immunol.* 2007;150(2):368-374. doi:10.1111/j.1365-2249.2007.03503.x
79. Besung INK, Astawa NM, Suata K, Suwiti K. Hubungan Antara Aktivasi Makrofag Dengan Kadar Interleukin-6 Dan Antibodi Terhadap Salmonella Typhi Pada Mencit (Relationship between the Macrophage Activity with Interleukin-6 Levels and Titers of Antibodies against Salmonella typhi). *J Kedokt Hewan.* 2016;10(1):1-4.
80. Haseeb A, Khan NM, Ashruf OS, Haqqi TM. A Polyphenol-rich Pomegranate Fruit Extract Suppresses NF-kappaB and IL-6 Expression by Blocking the Activation of IKKbeta and NIK in Primary Human Chondrocytes. *Phytother Res.* 2017;31(5):778-782. doi:10.1002/ptr.5799
81. Shen C-Y, Jiang J-G, Huang C-L, Zhu W, Zheng C-Y. Polyphenols from Blossoms of Citrus aurantium L. var. amara Engl. Show Significant Anti-Complement and Anti-Inflammatory Effects. *J Agric Food Chem.* 2017;65(41):9061-9068. doi:10.1021/acs.jafc.7b03759

82. Jeong S, Lee S, Choi WJ, Sohn UD, Kim W. The Effect of Polyphenols Isolated from *Cynanchi wilfordii* Radix with Anti-inflammatory, Antioxidant, and Anti-bacterial Activity. *Korean J Physiol Pharmacol Off J Korean Physiol Soc Korean Soc Pharmacol*. 2015;19(2):151-158. doi:10.4196/kjpp.2015.19.2.151
83. Ballistreri G, Fabroni S, Romeo FV, Timpanaro N, Amenta M, Rapisarda P. *Anthocyanins and Other Polyphenols in Citrus Genus: Biosynthesis, Chemical Profile, and Biological Activity*. 2nd ed. Elsevier Inc.; 2019. doi:10.1016/b978-0-12-813768-0.00014-1
84. Tejada S, Pinya S, Martorell M, et al. Potential Anti-inflammatory Effects of Hesperidin from the Genus Citrus. *Curr Med Chem*. 2018;25(37):4929-4945. doi:10.2174/0929867324666170718104412
85. Amorim JL, Simas DLR, Pinheiro MMG, et al. Anti-Inflammatory Properties and Chemical Characterization of the Essential Oils of Four Citrus Species. *PLoS One*. 2016;11(4):e0153643. doi:10.1371/journal.pone.0153643
86. Shin M-S, Park SB, Shin K-S. Molecular mechanisms of immunomodulatory activity by polysaccharide isolated from the peels of Citrus unshiu. *Int J Biol Macromol*. 2018;112:576-583. doi:10.1016/j.ijbiomac.2018.02.006
87. Du L, Li J, Zhang X, et al. Pomegranate peel polyphenols inhibits inflammation in LPS-induced RAW264.7 macrophages via the suppression of TLR4/NF- κ B pathway activation. *Food Nutr Res*. 2019;63. doi:10.29219/fnr.v63.3392
88. Fu Y, Liu B, Zhang N, et al. Magnolol inhibits lipopolysaccharide-induced inflammatory response by interfering with TLR4 mediated NF-kappaB and MAPKs signaling pathways. *J Ethnopharmacol*. 2013;145(1):193-199. doi:10.1016/j.jep.2012.10.051
89. Kim HS, Kim YJ, Lee HK, et al. Activation of macrophages by polysaccharide isolated from *Paecilomyces cicadae* through toll-like receptor 4. *Food Chem Toxicol*. 2012;50(9):3190-3197. doi:10.1016/j.fct.2012.05.051
90. Wang X, Hu D, Zhang L, et al. Gomisins A inhibits lipopolysaccharide-induced inflammatory responses in N9 microglia via blocking the NF-kappaB/MAPKs pathway. *Food Chem Toxicol*. 2014;63:119-127.

doi:10.1016/j.fct.2013.10.048

91. Gou Z, Liu R, Zhao G, et al. Epigenetic modification of TLRs in leukocytes is associated with increased susceptibility to *Salmonella enteritidis* in chickens. *PLoS One*. 2012;7(3):1-10. doi:10.1371/journal.pone.0033627
92. Weinstein DL, O'Neill BL, Metcalf ES. *Salmonella typhi* stimulation of human intestinal epithelial cells induces secretion of epithelial cell-derived interleukin-6. *Infect Immun*. 1997;65(2):395-404.
93. Bihl F, Salez L, Beaubier M, et al. Overexpression of Toll-Like Receptor 4 Amplifies the Host Response to Lipopolysaccharide and Provides a Survival Advantage in Transgenic Mice. *J Immunol*. 2003;170(12):6141-6150. doi:10.4049/jimmunol.170.12.6141

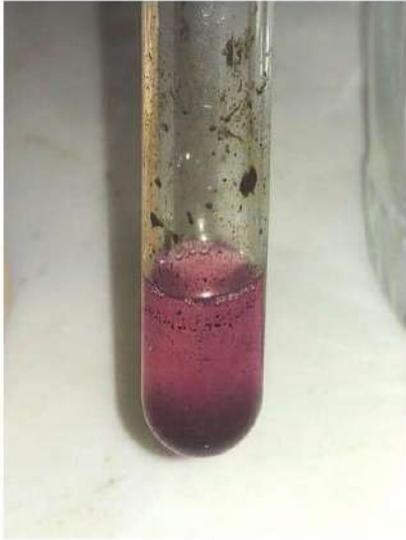
PROSES PERSIAPAN BAHAN MENTAH EKSTRAK KULIT JERUK NIPIS







HASIL SREENING FITOKIMIA KUALITATIF



(+) FLAVONOID



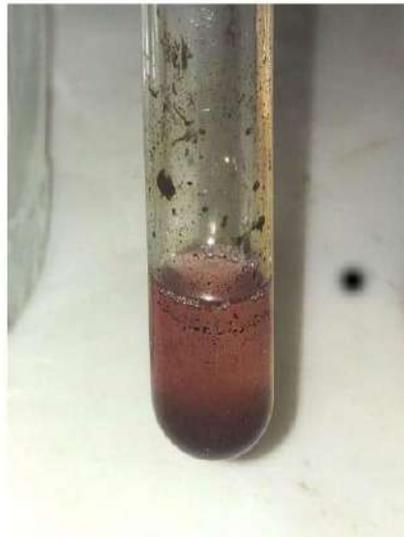
(+) SAPONIN



(+) ALKALOID



(+) TANIN



(+) TRITERPENOID

**UJI FITOKIMIA
EKSTRAK KULIT
JERUK**

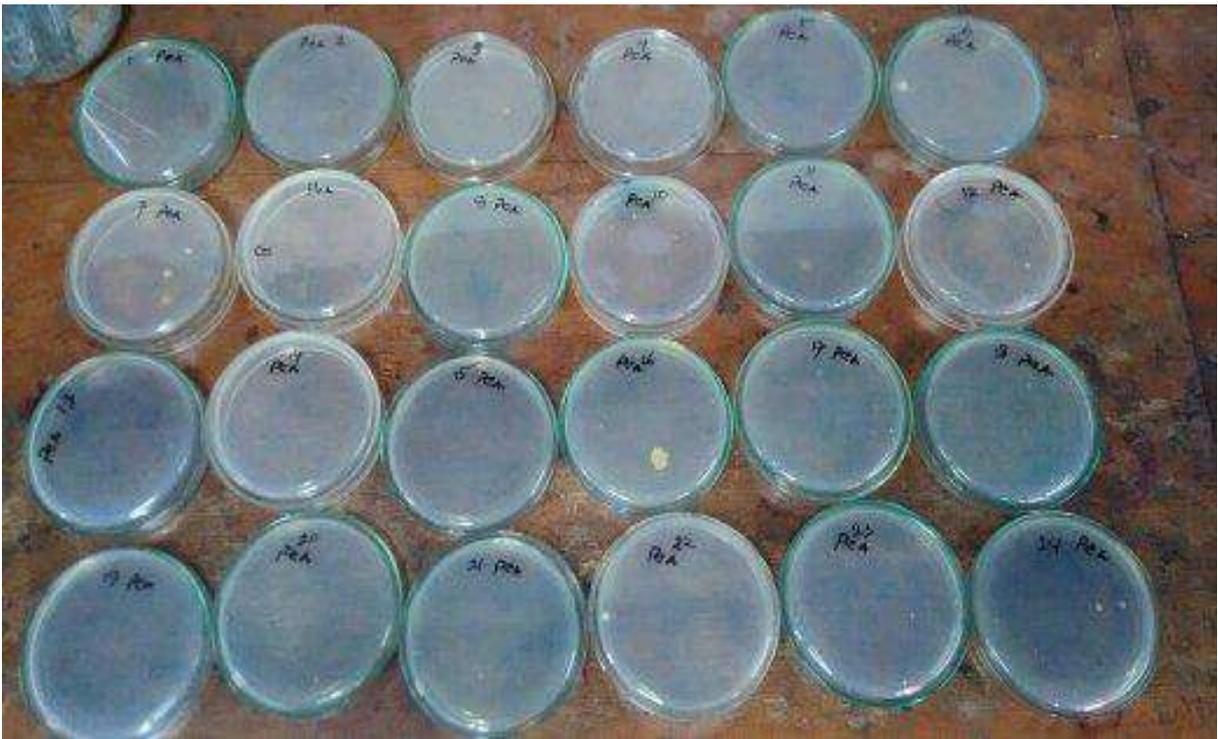
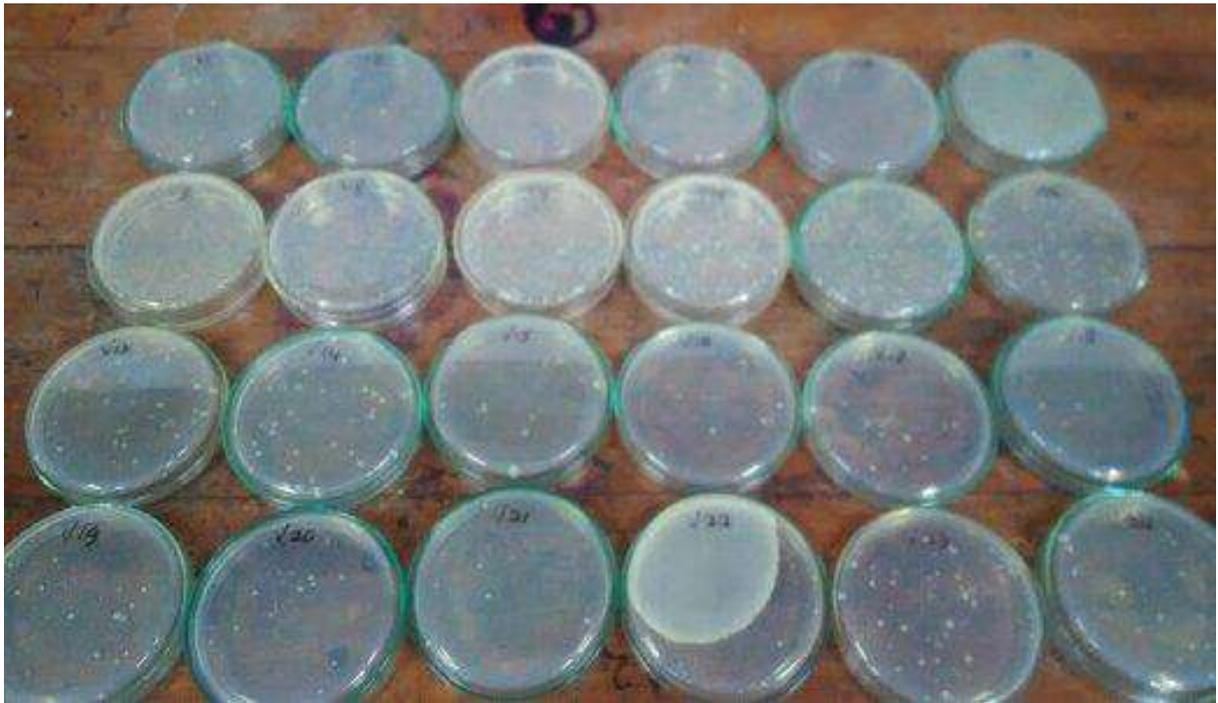
SCREENING FITOKIMIA KUANTITATIF



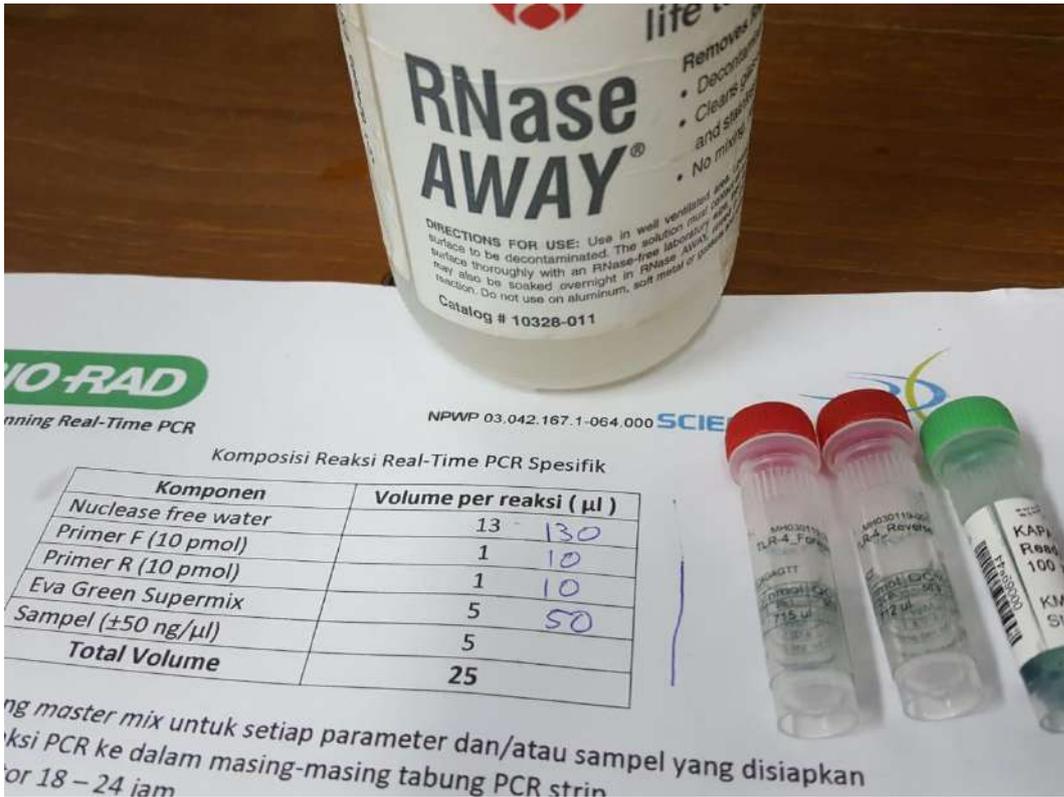
PERLAKUKAN PADA SAMPEL PENELITIAN













KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI
UNIVERSITAS HASANUDDIN
FAKULTAS KEDOKTERAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
KOMITE ETIK PENELITIAN KESEHATAN



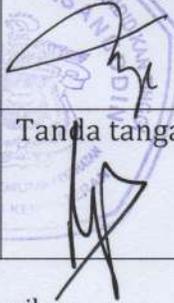
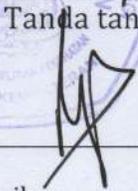
Sekretariat : Lantai 3 Gedung Laboratorium Terpadu
 JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
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REKOMENDASI PERSETUJUAN ETIK

Nomor : 900 / H4.8.4.5.31 / PP36-KOMETIK / 2018

Tanggal: 31 Oktober 2018

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH18090579	No Sponsor Protokol	
Peneliti Utama	dr. Vivien Novarina A. Kasim, M. Kes	Sponsor	
Judul Peneliti	Efek Ekstrak Kulit Jeruk Nipis (Citrus aurantifolia) Terhadap Ekspresi Gen mRNA Toll Like Receptor 4 (TLR - 4) dan Soluble Interleukin 6 (IL-6) Pada Mencit Yang Diinfeksi Salmonella Typhi		
No Versi Protokol	2	Tanggal Versi	16 Oktober 2018
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Laboratorium Biologi Molekuler dan Imunologi Fakultas Kedokteran Universitas Hasanuddin Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 31 Oktober 2018 sampai 31 Oktober 2019	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan 	
Sekretaris Komisi Etik Penelitian	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan 	

Kewajiban Peneliti Utama:

- Menyerahkan Amendemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan 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 prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan



SURAT KETERANGAN

Nomor : 170/AB/FAR-PKP/VII/2019

Kepala Laboratorium Biofarmaka Fakultas Farmasi Universitas Hasanuddin dengan ini menerangkan bahwa :

Nama : Vivien Novarina A. Kasim
NIM : C013171010
Asal Studi : Prodi. S3 Ilmu Kedokteran, F. Kedokteran UH

yang bersangkutan telah menggunakan UV-Vis Spectrophotometer untuk penelitian dengan judul "Efek Ekstrak Kulit Jeruk Nipis (*Citrus aurantifolia*) terhadap Ekspresi Gen mRNA Toll-Like Receptor 4 (TLR4) dan Kadar Soluble IL-6 pada Mencit yang Telah Diinduksi dengan *Salmonella Typhi*" di Laboratorium Biofarmaka.

Demikian surat keterangan ini diberikan kepada yang bersangkutan untuk digunakan sebagaimana mestinya.

Makassar, 24 Juli 2019

Kepala Laboratorium,



Prof. Dr. Elly Wahyudin, DEA., Apt. or
NIP 19560114 198601 2 001

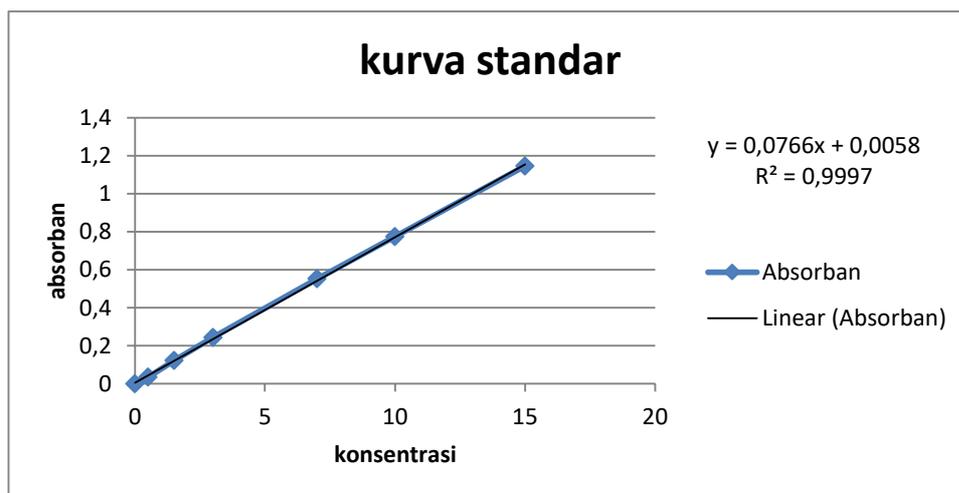


REKAMAN

DATA MENTAH KADAR POLIFENOL

KURVA BAKU STANDAR

Nama Sampel	konsentrasi	Absorban
blanko	0,0	0,000
asam galat 1	0,5	0,035
asam galat 2	1,5	0,122
asam galat 3	3	0,244
asam galat 4	7	0,552
asam galat 5	10	0,775
asam galat 6	15	1,146



Nama Sampel	Absorban	konsentrasi polifenol sampel	mg sampel	Faktor pengenceran	Kadar Polifenol Sampel	Rata-rata Kadar Polifenol
Ekstrak kulit jeruk nipis 1	0,289	3,700	16,3	10	2,27	2,285
Ekstrak kulit jeruk nipis 2	0,331	4,243	16,4	10	2,59	
Ekstrak kulit jeruk nipis 3	0,261	3,336	16,7	10	2,00	

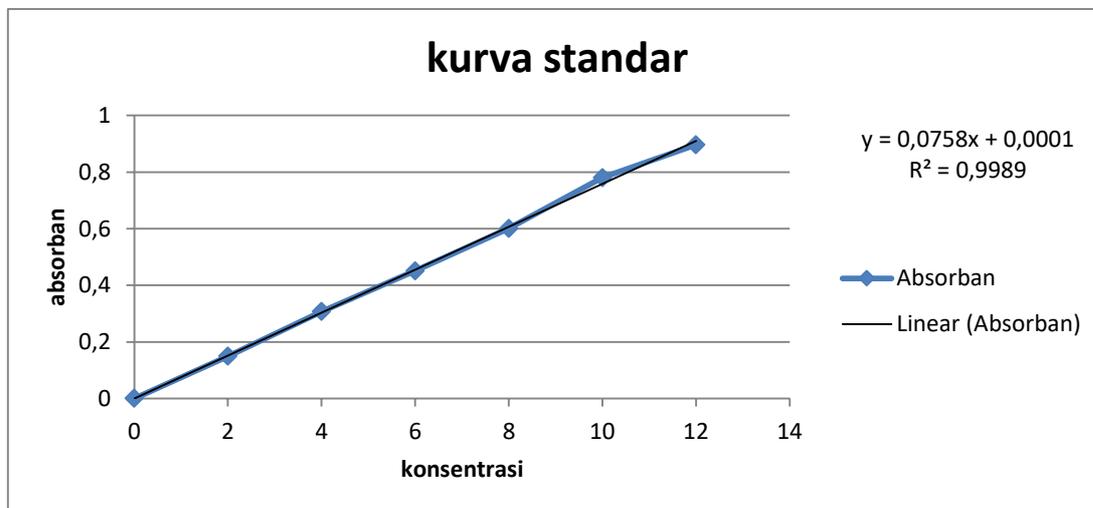
Nama sampel : Ekstrak kulit jeruk nipis
 Tanggal Uji : 17 Mei 2019
 Tanggal Selesai : 17 Mei 2019
 Jumlah sampel : 1

LABORATORIUM BIOFARMAKA FAKULTAS FARMASI UNIVERSITAS HASANUDDIN		Bagian : IK. 2
		Lembar : 2 dari 3 Halaman
		Edisi/Revisi: 00
		Tgl Terbit : 30 Desember 2015
		Tgl Revisi : 00
		Paraf MM :
REKAMAN		

DATA MENTAH KADAR FLAVONOID

KURVA BAKU STANDAR

Nama Sampel	konsentrasi	Absorban
blanko	0,0	0,000
quercetin 1	2,0	0,175
quercetin 2	4,0	0,322
quercetin 3	6	0,472
quercetin 4	8	0,669
quercetin 5	10	0,869



Nama Sampel	Absorban	konsentrasi Flavonoid sampel	mg sampel	Faktor pengenceran	Kadar Flavonoid Sampel	Rata-rata Kadar Flavonoid
Ekstrak kulit jeruk nipis 1	0,252	3,058	16,1	1,43	0,27	0,260
Ekstrak kulit jeruk nipis 2	0,233	2,837	16,5	1,43	0,25	
Ekstrak kulit jeruk nipis 3	0,250	3,04	16,6	1,43	0,26	

Nama sampel : Ekstrak kulit jeruk nipis
 Tanggal Uji : 17 Mei 2019
 Tanggal Selesai : 17 Mei 2019
 Jumlah sampel : 1

LABORATORIUM BIOFARMAKA FAKULTAS FARMASI UNIVERSITAS HASANUDDIN		Bagian : IK. 2
		Lembar : 3 dari 3 Halaman
		Edisi/Revisi: 00
		Tgl Terbit : 30 Desember 2015
		Tgl Revisi : 00
		Paraf MM :
REKAMAN		

DATA MENTAH KADAR TANIN

KURVA BAKU STANDAR

Nama Sampel	konsentrasi	Absorban
blanko	0,0	0,000
asam tanat 1	4,0	0,224
asam tanat 2	8,0	0,451
asam tanat 3	12	0,661
asam tanat 4	16	0,896
asam tanat 5	20	1,112



Nama Sampel	Absorban	konsentrasi tanin sampel (ppm)	mg sampel	Faktor pengenceran	Kadar tanin Sampel	Rata-rata Kadar Tanin
Ekstrak kulit jeruk nipis 1	0,318	5,072	18,4	5	1,38	1,415
Ekstrak kulit jeruk nipis 2	0,276	4,933	18,4	5	1,34	
Ekstrak kulit jeruk nipis 3	0,315	5,647	18,5	5	1,53	

LABORATORIUM BIOFARMAKA		Bagian : IK. i
FAKULTAS FARMASI		Lembar : 1 dari 3 Halaman
UNIVERSITAS HASANUDDIN		Edisi/Revisi : 00
		Tgl Terbit : 14 Maret 2014
		Tgl Revisi : 00
		Paraf MM :
REKAMAN		

HASIL PENGUJIAN

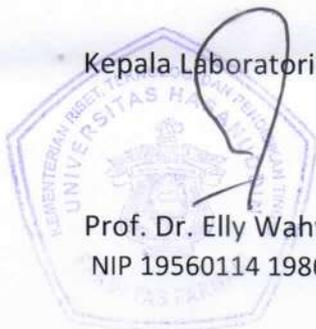
- 1. Nama peneliti : Vivien Novariana A Kasim
- 2. Unit Kerja : Prodi S3 Ilmu Kedokteran, Fakultas Kedokteran UNHAS
- 3. Nama produk : Ekstrak kulit jeruk nipis
- 4. Tanggal pemeriksaan sampel : 17 Mei 2019
- 5. Parameter Uji : Analisis Kandungan Polifenol

No.	Kode Sampel	Hasil Uji (%)	Metode Pengujian	Keterangan
1	Ekstrak kulit jeruk nipis	2.285	Folin Ciocalteu	-

Dibuat di: Makassar

pada tanggal : 29 Mei 2019

Kepala Laboratorium Biofarmaka



Prof. Dr. Elly Wahyudin, DEA., Apt *Dw*
NIP 19560114 198601 2 001

LABORATORIUM BIOFARMAKA		Bagian	: IK. i
FAKULTAS FARMASI		Lembar	: 2 dari 3 Halaman
UNIVERSITAS HASANUDDIN		Edisi/Revisi	: 00
		Tgl Terbit	: 14 Maret 2014
		Tgl Revisi	: 00
		Paraf MM	:
REKAMAN			

HASIL PENGUJIAN

1. Nama peneliti : Vivien Novariana A Kasim
2. Unit Kerja : Prodi S3 Ilmu Kedokteran, Fakultas Kedokteran UNHAS
3. Nama produk : Ekstrak kulit jeruk nipis
4. Tanggal pemeriksaan sampel : 17 Mei 2019
5. Parameter Uji : Analisis Kandungan Flavonoid

No.	Kode Sampel	Hasil Uji (%)	Metode Pengujian	Keterangan
1	Ekstrak kulit jeruk nipis	0.260	AlCl ₃	-

Dibuat di: Makassar

pada tanggal : 29 Mei 2019

Kepala Laboratorium Biofarmaka



Prof. Dr. Elly Wahyudin, DEA., Apt *EW*
NIP 19560114 198601 2 001

LABORATORIUM BIOFARMAKA		Bagian : IK. i
FAKULTAS FARMASI		Lembar : 3 dari 3 Halaman
UNIVERSITAS HASANUDDIN		Edisi/Revisi : 00 Tgl Terbit : 14 Maret 2014 Tgl Revisi : 00 Paraf MM :
REKAMAN		

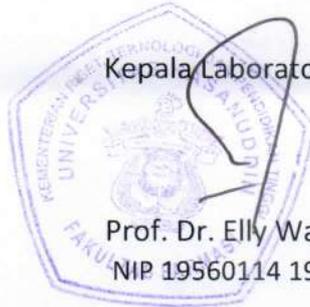
HASIL PENGUJIAN

1. Nama peneliti : Vivien Novariana A Kasim
2. Unit Kerja : Prodi S3 Ilmu Kedokteran, Fakultas Kedokteran UNHAS
3. Nama produk : Ekstrak kulit jeruk nipis
4. Tanggal pemeriksaan sampel : 20 Mei 2019
5. Parameter Uji : Analisis Kandungan Total Tanin

No.	Kode Sampel	Hasil Uji (%)	Metode Pengujian	Keterangan
1	Ekstrak kulit jeruk nipis	1.415	Folin Ciocalteu	-

Dibuat di: Makassar

pada tanggal : 29 Mei 2019



Kepala Laboratorium Biofarmaka

Prof. Dr. Elly Wahyudin, DEA., Apt
NIP 19560114 198601 2 001

EW



**LABORATORIUM FARMAKOLOGI-FITOKIMIA
FAKULTAS FARMASI
UNIVERSITAS HASANUDDIN**

KAMPUS UNHAS TAMALANREA JL. P. KEMERDEKAAN KM.10
Tlp. 0411 588556, 586200, Ext. 1093, Fax. 0411 590663 MAKASSAR 90245

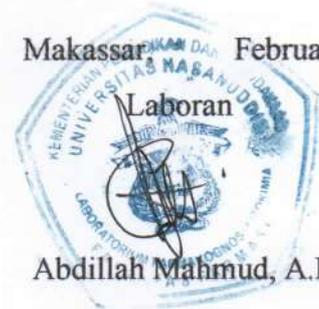
LEMBAR HASIL

Nama Peneliti : dr. Vivien Novarina Kasim, M.Kes

Sampel : Ekstrak Etanol Kulit Jeruk Nipis

No.	Jenis Pengujian	Hasil
1	Flavonoid	+ (positif)
2	Saponin	+ (positif)
3	Alkaloid	+ (positif)
4	Tanin	+ (positif)
5	Triterpenoid	+ (positif)

Makassar, Februari 2019



Abdillah Mahmud, A.Md.AK

NO	KLP	Kode Mencit	BB Awal	Berat Badan dan Dosis Pengobatan											
				Hari 1		Hari 2		Hari 3		Hari 4		Hari 5		Hari 6	
				BB	Dosis	BB	Dosis	BB	Dosis	BB	Dosis	BB	Dosis	BB	Dosis
19	IV Aquadest	Kepala	45.5	44.1	0.4	43.5	0.4	42.8	0.4	44.3	0.4	45.8	0.5	46.1	45.7
20		Punggung	37.0	37.1	0.4	34.9	0.3	34.5	0.3	34.7	0.3	34.4	0.3	35.0	33.5
21		Ekor	36.0	35.0	0.4	33.4	0.3	32.8	0.3	33.0	0.3	34.2	0.3	34.8	36.5
22		K. Depan KA	31.9	30.2	0.3	31.3	0.3	30.7	0.3	30.3	0.3	29.0	0.3	29.2	31.8
23		K. Depan KI	36.6	34.4	0.3	32.0	0.3	31.5	0.3	30.1	0.3	28.8	0.3	27.3	30.5
24		K. Belakang	40.2	37.1	0.4	35.2	0.4	35.3	0.4	36.0	0.4	36.4	0.4	37.2	32.7

Pemberian aquadest dalam cc : 0.4 = 0.4 cc / ekor / hari

Dr. Vivian



LifeSpan BioSciences, Inc.

Mouse IL6 / Interleukin 6

ELISA Kit

(Sandwich ELISA)

User Manual

Catalog No. LS-F24855

It is important that you read this entire manual
carefully before starting your experiment.

This kit is for **Research Use Only. Not for Diagnostic Use.**
This kit is not approved for use in humans or for clinical diagnosis.

Username 1st bioMerieux service engineer

Measurement parameters

Reader 270

Instrument serial number: 1211006860

Measurement mode: Absorbance

Measurement wavelength: 450 nm

Read mode: Normal

Unit: OD

Date: 03/25/19, Time: 5:12:37 PM

Raw data

	1	2	3	4	5	6	7	8	9	10	11	12
A	2.525	2.211	0.239	0.177	0.156	0.238	0.253	0.193	0.172	0.204	0.267	0.217
B	1.143	1.399	0.277	0.185	0.241	0.169	0.206	0.16	0.236	0.192	0.218	0.254
C	0.995	0.769	0.306	0.232	0.25	0.202	0.233	0.269	0.264	0.228	0.272	0.296
D	0.421	0.585	0.233	0.279	0.255	0.223	0.289	0.233	0.299	0.247	0.279	0.249
E	0.316	0.232	0.302	0.26	0.207	0.261	0.311	0.243	0.33	0.252	0.32	0.264
F	0.164	0.112	0.295	0.327	0.32	0.256	0.299	0.351	0.336	0.276	0.254	0.296
G	0.091	0.065	0.318	0.26	0.265	0.223	0.305	0.267	0.307	0.283	0.281	0.313
H	0.043	0.039	0.341	0.297	0.269	0.319	0.361	0.303	0.342	0.294	0.318	0.256

Username 1st bioMerieux service engineer

Measurement parameters

Reader 270
Instrument serial number: 1211006860
Measurement mode: Absorbance
Measurement wavelength: 450 nm
Read mode: Normal
Unit: OD
Date: 03/25/19, Time: 5:22:14 PM

Raw data

	1	2	3	4	5	6	7	8	9	10	11	12
A	2.251	2.579	0.236	0.176	0.165	0.219	0.24	0.204	0.228	0.168	0.26	0.208
B	1.553	1.257	0.252	0.204	0.169	0.199	0.237	0.169	0.201	0.229	0.262	0.226
C	1.086	0.86	0.27	0.206	0.249	0.203	0.302	0.25	0.273	0.229	0.229	0.295
D	0.681	0.549	0.227	0.265	0.243	0.205	0.23	0.288	0.247	0.217	0.247	0.291
E	0.343	0.273	0.417	0.375	0.397	0.347	0.372	0.338	0.434	0.378	0.399	0.367
F	0.131	0.175	0.272	0.238	0.217	0.279	0.301	0.257	0.242	0.288	0.315	0.253
G	0.1	0.07	0.429	0.373	0.368	0.41	0.393	0.343	0.433	0.395	0.374	0.422
H	0.047	0.043	0.284	0.238	0.284	0.228	0.299	0.263	0.307	0.241	0.301	0.273

Name : dr. Vivien Novarina
 Date : 25-3-2019
 Plate : 1
 Assay : Mouse IL6 / Interleukin 6 Elisa Kit Cat. LS-F24855

	1	2	3	4	5	6	7	8	9	10	11	12
A	STD-1	STD-1	A01	A01	A02	A02	A03	A03	A04	A04	A05	A05
B	STD-2	STD-2	A06	A06	A07	A07	A08	A08	A09	A09	A10	A10
C	STD-3	STD-3	B01	B01	B02	B02	B03	B03	B04	B04	B05	B05
D	STD-4	STD-4	B06	B06	B07	B07	B08	B08	B09	B09	B10	B10
E	STD-5	STD-5	C01	C01	C02	C02	C03	C03	C04	C04	C05	C05
F	STD-6	STD-6	C06	C06	C07	C07	C08	C08	C09	C09	C10	C10
G	STD-7	STD-7	D01	D01	D02	D02	D03	D03	D04	D04	D05	D05
H	NEG	NEG	D06	D06	D07	D07	D08	D08	D09	D09	D10	D10

Remarks :

Name : dr. Vivien Novarina

Date : 25-3-2019

Plate : 2

Assay : Mouse IL6 / Interleukin 6 Elisa Kit Cat. LS-F24855

	1	2	3	4	5	6	7	8	9	10	11	12
A	STD-1	STD-1	A11	A11	A12	A12	A13	A13	A14	A14	A15	A15
B	STD-2	STD-2	A16	A16	A17	A17	A18	A18	A19	A19	A20	A20
C	STD-3	STD-3	B11	B11	B12	B12	B13	B13	B14	B14	B15	B15
D	STD-4	STD-4	B16	B16	B17	B17	B18	B18	B19	B19	B20	B20
E	STD-5	STD-5	C11	C11	C12	C12	C13	C13	C14	C14	C15	C15
F	STD-6	STD-6	C16	C16	C17	C17	C18	C18	C19	C19	C20	C20
G	STD-7	STD-7	D11	D11	D12	D12	D13	D13	D14	D14	D15	D15
H	NEG	NEG	D16	D16	D17	D17	D18	D18	D19	D19	D20	D20

Remarks :



MACROGEN
Advancing through Genomics

Mochammad Hatta
BTN ANTARA B6/6,
Perintis Kemerdekaan, Km.9
90245

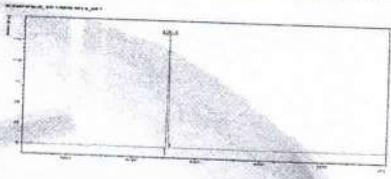
MH030119-001

Order date : 2019/01/03

Packing date : 2019/01/07

Page : 2 2/2

Oligo	TLR-4_Forward					
SEQ	TGACAGGAAACCCTATCCAGAGTT					
GC%	MW		Yield		scale (umoles)	Tm [⊙]
	calculated	measured	OD	nmol		
50.5	8.132,1	8.132,8	7.1	25.1	0.2	65.2
vol. for 100pmol/ul		Purification		Modification		
715		MOPC				



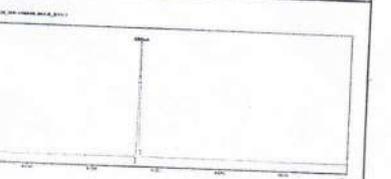
Oligo	TLR-4_Reverse					
SEQ	TCTCCACAGCCACCAGATTCT					
GC%	MW		Yield		scale (umoles)	Tm [⊙]
	calculated	measured	OD	nmol		
50.9	8.117,8	8.126,2	7.2	25.6	0.2	63.7
vol. for 100pmol/ul		Purification		Modification		
712		MOPC				



Oligo	β-actin_Forward					
SEQ	AGAGGGAAATCGTGCGTGAC					
GC%	MW		Yield		scale (umoles)	Tm [⊙]
	calculated	measured	OD	nmol		
50.2	8.058,2	8.026,3	6.7	24.6	0.2	63.8
vol. for 100pmol/ul		Purification		Modification		
709		MOPC				



Oligo	β-actin_Reverse					
SEQ	CAATAGTGATGACCTGGCCGT					
GC%	MW		Yield		scale (umoles)	Tm [⊙]
	calculated	measured	OD	nmol		
49.7	8.095,4	8.023,7	6.9	24.3	0.2	65.2
vol. for 100pmol/ul		Purification		Modification		
713		MOPC				



Name : dr. Vivien Novarina

Date : 23-3-2019

Plate : 1

Assay : Gen TLR4

	1	2	3	4	5	6	7	8	9	10	11	12
A	β -Actin-1 ✓	β -Actin-1 ✓	β -Actin-1 ✓	A01 ✓	A01 ✓	A01 ✓	A02 ✓	A02 ✓	A02 ✓	A03 ✓	A03 ✓	A03 ✓
B	β -Actin-2 ✓	β -Actin-2 ✓	β -Actin-2 ✓	A04 ✓	A04 ✓	A04 ✓	A05 ✓	A05 ✓	A05 ✓	B01 ✓	B01 ✓	B01 ✓
C	β -Actin-3 ✓	β -Actin-3 ✓	β -Actin-3 ✓	B02 ✓	B02 ✓	B02 ✓	B03 ✓	B04 ✓	B05 ✓	B04 ✓	B04 ✓	B04 ✓
D	β -Actin-4 ✓	β -Actin-4 ✓	β -Actin-4 ✓	B05 ✓	B05 ✓	B05 ✓	C01 ✓	C01 ✓	C01 ✓	C02 ✓	C02 ✓	C02 ✓
E	β -Actin-5 ✓	β -Actin-5 ✓	β -Actin-5 ✓	C03 ✓	C04 ✓	C05 ✓	C04 ✓	C04 ✓	C04 ✓	C05 ✓	C05 ✓	C05 ✓
F	β -Actin-6 ✓	β -Actin-6 ✓	β -Actin-6 ✓	D01 ✓	D01 ✓	D01 ✓	D02 ✓	D02 ✓	D02 ✓	D03 ✓	D03 ✓	D03 ✓
G	β -Actin-7 ✓	β -Actin-7 ✓	β -Actin-7 ✓	D04 ✓	D04 ✓	D04 ✓	D05 ✓	D05 ✓	D05 ✓			
H												

Remarks : 40 Cycle ; 94 C - 10 s and 56 C - 30 s

Name : dr. Vivien Novarina

Date : 23-3-2019

Plate : 2

Assay : Gen TLR4

	1	2	3	4	5	6	7	8	9	10	11	12
A	β -Actin-1 ✓	β -Actin-1 ✓	β -Actin-1 ✓	A06 ✓	A06 ✓	A06 ✓	A07 ✓	A07 ✓	A07 ✓	A08 ✓	A08 ✓	A08 ✓
B	β -Actin-2 ✓	β -Actin-2 ✓	β -Actin-2 ✓	A09 ✓	A09 ✓	A09 ✓	A10 ✓	A10 ✓	A10 ✓	B06 ✓	B06 ✓	B06 ✓
C	β -Actin-3 ✓	β -Actin-3 ✓	β -Actin-3 ✓	B07 ✓	B07 ✓	B07 ✓	B08 ✓	B09 ✓	B10 ✓	B09 ✓	B09 ✓	B09 ✓
D	β -Actin-4 ✓	β -Actin-4 ✓	β -Actin-4 ✓	B10 ✓	B10 ✓	B10 ✓	C06 ✓	C06 ✓	C06 ✓	C07 ✓	C07 ✓	C07 ✓
E	β -Actin-5 ✓	β -Actin-5 ✓	β -Actin-5 ✓	C08 ✓	C09 ✓	C10 ✓	C09 ✓	C09 ✓	C09 ✓	C10 ✓	C10 ✓	C10 ✓
F	β -Actin-6 ✓	β -Actin-6 ✓	β -Actin-6 ✓	D06 ✓	D06 ✓	D06 ✓	D07 ✓	D07 ✓	D07 ✓	D08 ✓	D08 ✓	D08 ✓
G	β -Actin-7 ✓	β -Actin-7 ✓	β -Actin-7 ✓	D09 ✓	D09 ✓	D09 ✓	D10 ✓	D10 ✓	D10 ✓			
H												

Remarks : 40 Cycle ; 94 C - 10 s and 56 C - 30 s

Name : dr. Vivien Novarina
 Date : 24-3-2019
 Plate : 3
 Assay : Gen TLR4

	1	2	3	4	5	6	7	8	9	10	11	12
A	β -Actin-1 ✓	β -Actin-1 ✓	β -Actin-1 ✓	A11 ✓	A11 ✓	A11 ✓	A12 ✓	A12 ✓	A12 ✓	A13 ✓	A13 ✓	A13 ✓
B	β -Actin-2 ✓	β -Actin-2 ✓	β -Actin-2 ✓	A14 ✓	A14 ✓	A14 ✓	A15 ✓	A15 ✓	A15 ✓	B11 ✓	B11 ✓	B11 ✓
C	β -Actin-3 ✓	β -Actin-3 ✓	β -Actin-3 ✓	B12 ✓	B12 ✓	B12 ✓	B13 ✓	B14 ✓	B15 ✓	B14 ✓	B14 ✓	B14 ✓
D	β -Actin-4 ✓	β -Actin-4 ✓	β -Actin-4 ✓	B15 ✓	B15 ✓	B15 ✓	C11 ✓	C11 ✓	C11 ✓	C12 ✓	C12 ✓	C12 ✓
E	β -Actin-5 ✓	β -Actin-5 ✓	β -Actin-5 ✓	C13 ✓	C14 ✓	C15 ✓	C14 ✓	C14 ✓	C14 ✓	C15 ✓	C15 ✓	C15 ✓
F	β -Actin-6 ✓	β -Actin-6 ✓	β -Actin-6 ✓	D11 ✓	D11 ✓	D11 ✓	D12 ✓	D12 ✓	D12 ✓	D13 ✓	D13 ✓	D13 ✓
G	β -Actin-7 ✓	β -Actin-7 ✓	β -Actin-7 ✓	D14 ✓	D14 ✓	D14 ✓	D15 ✓	D15 ✓	D15 ✓			
H												

Remarks : 40 Cycle ; 94 C - 10 s and 56 C - 30 s

Name : dr. Vivien Novarina

Date : 24-3-2019

Plate : 4

Assay : Gen TLR4

	1	2	3	4	5	6	7	8	9	10	11	12
A	β -Actin-1 ✓	β -Actin-1 ✓	β -Actin-1 ✓	A16 ✓	A16 ✓	A16 ✓	A17 ✓	A17 ✓	A17 ✓	A18 ✓	A18 ✓	A18 ✓
B	β -Actin-2 ✓	β -Actin-2 ✓	β -Actin-2 ✓	A19 ✓	A19 ✓	A19 ✓	A20 ✓	A20 ✓	A20 ✓	B16 ✓	B16 ✓	B16 ✓
C	β -Actin-3 ✓	β -Actin-3 ✓	β -Actin-3 ✓	B17 ✓	B17 ✓	B17 ✓	B18 ✓	B18 ✓	B18 ✓	B19 ✓	B19 ✓	B19 ✓
D	β -Actin-4 ✓	β -Actin-4 ✓	β -Actin-4 ✓	B20 ✓	B20 ✓	B20 ✓	C16 ✓	C16 ✓	C16 ✓	C17 ✓	C17 ✓	C17 ✓
E	β -Actin-5 ✓	β -Actin-5 ✓	β -Actin-5 ✓	C18 ✓	C19 ✓	C11 ✓	C19 ✓	C19 ✓	C19 ✓	C20 ✓	C20 ✓	C20 ✓
F	β -Actin-6 ✓	β -Actin-6 ✓	β -Actin-6 ✓	D16 ✓	D16 ✓	D16 ✓	D17 ✓	D17 ✓	D17 ✓	D18 ✓	D18 ✓	D18 ✓
G	β -Actin-7 ✓	β -Actin-7 ✓	β -Actin-7 ✓	D19 ✓	D19 ✓	D19 ✓	D20 ✓	D20 ✓	D20 ✓			
H												

Remarks : 40 Cycle ; 94 C - 10 s and 56 C - 30 s

```

ONEWAY BaselineIL6 BaselineTLR4 BY kelompok
/MISSING ANALYSIS
/POSTHOC=LSD ALPHA(0.05) .

```

Oneway

Notes

Output Created	13-Jun-2019 11:10:06	
Comments		
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	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax	ONEWAY BaselineIL6 BaselineTLR4 BY kelompok /MISSING ANALYSIS /POSTHOC=LSD ALPHA(0.05).	
Resources	Processor Time	00:00:00.047
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[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

ANOVA

		Sum of Squares	df	Mean Square
Baseline IL-6 (H0)	Between Groups	8273.582	3	2757.861
	Within Groups	42028.981	16	2626.811
	Total	50302.563	19	
Baseline TLR-4 (H0)	Between Groups	3.536	3	1.179
	Within Groups	7.633	16	.477
	Total	11.169	19	

ANOVA

		F	Sig.
Baseline IL-6 (H0)	Between Groups	1.050	.398
	Within Groups		
	Total		
Baseline TLR-4 (H0)	Between Groups	2.471	.099
	Within Groups		
	Total		

Post Hoc Tests

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	Mean Difference (I-J)	Std. Error	Sig.
Baseline IL-6 (H0)	EKJN 510mg	EKJN 750mg	-14.54200	32.41488	.660
		Levofloxacin (+)	36.11800	32.41488	.282
		Aquades (-)	26.98800	32.41488	.417
	EKJN 750mg	EKJN 510mg	14.54200	32.41488	.660
		Levofloxacin (+)	50.66000	32.41488	.138
		Aquades (-)	41.53000	32.41488	.218
	Levofloxacin (+)	EKJN 510mg	-36.11800	32.41488	.282
		EKJN 750mg	-50.66000	32.41488	.138
		Aquades (-)	-9.13000	32.41488	.782
	Aquades (-)	EKJN 510mg	-26.98800	32.41488	.417
		EKJN 750mg	-41.53000	32.41488	.218
		Levofloxacin (+)	9.13000	32.41488	.782
Baseline TLR-4 (H0)	EKJN 510mg	EKJN 750mg	-.12800	.43682	.773
		Levofloxacin (+)	.72800	.43682	.115
		Aquades (-)	-.41200	.43682	.360
	EKJN 750mg	EKJN 510mg	.12800	.43682	.773
		Levofloxacin (+)	.85600	.43682	.068
		Aquades (-)	-.28400	.43682	.525
	Levofloxacin (+)	EKJN 510mg	-.72800	.43682	.115
		EKJN 750mg	-.85600	.43682	.068
		Aquades (-)	-1.14000 *	.43682	.019
	Aquades (-)	EKJN 510mg	.41200	.43682	.360
		EKJN 750mg	.28400	.43682	.525
		Levofloxacin (+)	1.14000 *	.43682	.019

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	95% Confidence Interval	
			Lower Bound	Upper Bound
Baseline IL-6 (H0)	EKJN 510mg	EKJN 750mg	-83.2585	54.1745
		Levofloxacin (+)	-32.5985	104.8345
		Aquades (-)	-41.7285	95.7045
	EKJN 750mg	EKJN 510mg	-54.1745	83.2585
		Levofloxacin (+)	-18.0565	119.3765
		Aquades (-)	-27.1865	110.2465
	Levofloxacin (+)	EKJN 510mg	-104.8345	32.5985
		EKJN 750mg	-119.3765	18.0565
		Aquades (-)	-77.8465	59.5865
	Aquades (-)	EKJN 510mg	-95.7045	41.7285
		EKJN 750mg	-110.2465	27.1865
		Levofloxacin (+)	-59.5865	77.8465
Baseline TLR-4 (H0)	EKJN 510mg	EKJN 750mg	-1.0540	.7980
		Levofloxacin (+)	-.1980	1.6540
		Aquades (-)	-1.3380	.5140
	EKJN 750mg	EKJN 510mg	-.7980	1.0540
		Levofloxacin (+)	-.0700	1.7820
		Aquades (-)	-1.2100	.6420
	Levofloxacin (+)	EKJN 510mg	-1.6540	.1980
		EKJN 750mg	-1.7820	.0700
		Aquades (-)	-2.0660	-.2140
	Aquades (-)	EKJN 510mg	-.5140	1.3380
		EKJN 750mg	-.6420	1.2100
		Levofloxacin (+)	.2140	2.0660

```

ONEWAY KulturH5 IL6H5 TLR4H5 BY kelompok
/MISSING ANALYSIS
/POSTHOC=LSD ALPHA(0.05).
    
```

Oneway

Notes

Output Created	13-Jun-2019 11:14:46	
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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on cases with no missing data for any variable in the analysis.
Syntax	ONEWAY KulturH5 IL6H5 TLR4H5 BY kelompok /MISSING ANALYSIS /POSTHOC=LSD ALPHA(0.05).	
Resources	Processor Time	00:00:00.016
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[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

ANOVA

		Sum of Squares	df	Mean Square
Jumlah koloni bakteri sebelum intervensi (H5)	Between Groups	445.800	3	148.600
	Within Groups	446.400	16	27.900
	Total	892.200	19	
IL-6 sebelum intervensi (H5)	Between Groups	177202.943	3	59067.648
	Within Groups	32629.944	16	2039.371
	Total	209832.886	19	
TLR-4 sebelum intervensi (H5)	Between Groups	54.542	3	18.181
	Within Groups	4.965	16	.310
	Total	59.507	19	

ANOVA

		F	Sig.
Jumlah koloni bakteri sebelum intervensi (H5)	Between Groups	5.326	.010
	Within Groups		
	Total		
IL-6 sebelum intervensi (H5)	Between Groups	28.964	.000
	Within Groups		
	Total		
TLR-4 sebelum intervensi (H5)	Between Groups	58.594	.000
	Within Groups		
	Total		

Post Hoc Tests

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	Mean Difference (I-J)	Std. Error
Jumlah koloni bakteri sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	7.40000	3.34066
		Levofloxacin (+)	-5.80000	3.34066
		Aquades (-)	2.00000	3.34066
	EKJN 750mg	EKJN 510mg	-7.40000	3.34066
		Levofloxacin (+)	-13.20000*	3.34066
		Aquades (-)	-5.40000	3.34066
	Levofloxacin (+)	EKJN 510mg	5.80000	3.34066
		EKJN 750mg	13.20000*	3.34066
		Aquades (-)	7.80000*	3.34066

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	Sig.	95% Confidence Interval
				Lower Bound
Jumlah koloni bakteri sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	.042	.3181
		Levofloxacin (+)	.102	-12.8819
		Aquades (-)	.558	-5.0819
	EKJN 750mg	EKJN 510mg	.042	-14.4819
		Levofloxacin (+)	.001	-20.2819
		Aquades (-)	.126	-12.4819
	Levofloxacin (+)	EKJN 510mg	.102	-1.2819
		EKJN 750mg	.001	6.1181
		Aquades (-)	.033	.7181

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	95% Confidence Interval
			Upper Bound
Jumlah koloni bakteri sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	14.4819
		Levofloxacin (+)	1.2819
		Aquades (-)	9.0819
	EKJN 750mg	EKJN 510mg	-.3181
		Levofloxacin (+)	-6.1181
		Aquades (-)	1.6819
	Levofloxacin (+)	EKJN 510mg	12.8819
		EKJN 750mg	20.2819
		Aquades (-)	14.8819

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	Mean Difference (I-J)	Std. Error
Jumlah koloni bakteri sebelum intervensi (H5)	Aquades (-)	EKJN 510mg	-2.00000	3.34066
		EKJN 750mg	5.40000	3.34066
		Levofloxacin (+)	-7.80000*	3.34066
IL-6 sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	-75.79800*	28.56131
		Levofloxacin (+)	-143.71000*	28.56131
		Aquades (-)	109.78400*	28.56131
	EKJN 750mg	EKJN 510mg	75.79800*	28.56131
		Levofloxacin (+)	-67.91200*	28.56131
		Aquades (-)	185.58200*	28.56131
	Levofloxacin (+)	EKJN 510mg	143.71000*	28.56131
		EKJN 750mg	67.91200*	28.56131
		Aquades (-)	253.49400*	28.56131
	Aquades (-)	EKJN 510mg	-109.78400*	28.56131
		EKJN 750mg	-185.58200*	28.56131
		Levofloxacin (+)	-253.49400*	28.56131
TLR-4 sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	-1.97800	.35230
		Levofloxacin (+)	-4.06800*	.35230
		Aquades (-)	-.14200	.35230
	EKJN 750mg	EKJN 510mg	1.97800	.35230
		Levofloxacin (+)	-2.09000*	.35230
		Aquades (-)	1.83600*	.35230
	Levofloxacin (+)	EKJN 510mg	4.06800*	.35230
		EKJN 750mg	2.09000*	.35230
		Aquades (-)	3.92600*	.35230
	Aquades (-)	EKJN 510mg	.14200	.35230
		EKJN 750mg	-1.83600*	.35230
		Levofloxacin (+)	-3.92600*	.35230

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	Sig.	95% Confidence Interval
				Lower Bound
Jumlah koloni bakteri sebelum intervensi (H5)	Aquades (-)	EKJN 510mg	.558	-9.0819
		EKJN 750mg	.126	-1.6819
		Levofloxacin (+)	.033	-14.8819
IL-6 sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	.017	-136.3453
		Levofloxacin (+)	.000	-204.2573
		Aquades (-)	.001	49.2367
	EKJN 750mg	EKJN 510mg	.017	15.2507
		Levofloxacin (+)	.030	-128.4593
		Aquades (-)	.000	125.0347
	Levofloxacin (+)	EKJN 510mg	.000	83.1627
		EKJN 750mg	.030	7.3647
		Aquades (-)	.000	192.9467
	Aquades (-)	EKJN 510mg	.001	-170.3313
		EKJN 750mg	.000	-246.1293
		Levofloxacin (+)	.000	-314.0413
TLR-4 sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	.000	-2.7248
		Levofloxacin (+)	.000	-4.8148
		Aquades (-)	.692	-.8888
	EKJN 750mg	EKJN 510mg	.000	1.2312
		Levofloxacin (+)	.000	-2.8368
		Aquades (-)	.000	1.0892
	Levofloxacin (+)	EKJN 510mg	.000	3.3212
		EKJN 750mg	.000	1.3432
		Aquades (-)	.000	3.1792
	Aquades (-)	EKJN 510mg	.692	-.6048
		EKJN 750mg	.000	-2.5828
		Levofloxacin (+)	.000	-4.6728

Multiple Comparisons

LSD

Dependent Variable	(I) Klp. Penelitian	(J) Klp. Penelitian	95% Confidence Interval
			Upper Bound
Jumlah koloni bakteri sebelum intervensi (H5)	Aquades (-)	EKJN 510mg	5.0819
		EKJN 750mg	12.4819
		Levofloxacin (+)	-.7181
IL-6 sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	-15.2507
		Levofloxacin (+)	-83.1627
		Aquades (-)	170.3313
	EKJN 750mg	EKJN 510mg	136.3453
		Levofloxacin (+)	-7.3647
		Aquades (-)	246.1293
	Levofloxacin (+)	EKJN 510mg	204.2573
		EKJN 750mg	128.4593
		Aquades (-)	314.0413
	Aquades (-)	EKJN 510mg	-49.2367
		EKJN 750mg	-125.0347
		Levofloxacin (+)	-192.9467
TLR-4 sebelum intervensi (H5)	EKJN 510mg	EKJN 750mg	-1.2312
		Levofloxacin (+)	-3.3212
		Aquades (-)	.6048
	EKJN 750mg	EKJN 510mg	2.7248
		Levofloxacin (+)	-1.3432
		Aquades (-)	2.5828
	Levofloxacin (+)	EKJN 510mg	4.8148
		EKJN 750mg	2.8368
		Aquades (-)	4.6728
	Aquades (-)	EKJN 510mg	.8888
		EKJN 750mg	-1.0892
		Levofloxacin (+)	-3.1792

Notes

Output Created		14-Jun-2019 10:21:54
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	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=kelompok(1 2) /MISSING=ANALYSIS /VARIABLES=BaselineIL6 BaselineTLR4 KulturH5 IL6H5 TLR4H5 KulturH10 IL6H10 TLR4H10 KulturH30 IL6H30 TLR4H30 /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.031
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T-TEST GROUPS=kelompok(1 2)

/MISSING=ANALYSIS

/VARIABLES=BaselineIL6 IL6H5 IL6H10 IL6H30 BaselineTLR4 TLR4H5 TLR4H10 TLR4H30 KulturH5 Ku

/CRITERIA=CI(.95).

T-Test

Notes

Output Created		14-Jun-2019 10:23:57
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	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=kelompok(1 2) /MISSING=ANALYSIS /VARIABLES=BaselineIL6 IL6H5 IL6H10 IL6H30 BaselineTLR4 TLR4H5 TLR4H10 TLR4H30 KulturH5 KulturH10 KulturH30 /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.016
	Elapsed Time	00:00:00.078

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Group Statistics

Klp. Penelitian		N	Mean	Std. Deviation	Std. Error Mean
Baseline IL-6 (H0)	EKJN 510mg	5	157.2640	59.70581	26.70125
	EKJN 750mg	5	171.8060	58.07643	25.97257
IL-6 sebelum intervensi (H5)	EKJN 510mg	5	358.3000	59.46515	26.59362
	EKJN 750mg	5	434.0980	51.26307	22.92554
IL-6 setelah intervensi (H10)	EKJN 510mg	5	338.6680	64.89488	29.02187
	EKJN 750mg	5	409.5600	53.60485	23.97282
IL-6 hari ke-30	EKJN 510mg	5	284.6840	60.58226	27.09321
	EKJN 750mg	5	293.9560	34.30732	15.34270
Baseline TLR-4 (H0)	EKJN 510mg	5	6.6140	.95965	.42917
	EKJN 750mg	5	6.7420	.73169	.32722
TLR-4 sebelum intervensi (H5)	EKJN 510mg	5	9.2480	.30573	.13673
	EKJN 750mg	5	11.2260	.57752	.25828
TLR-4 setelah intervensi (H10)	EKJN 510mg	5	8.9600	.38256	.17108
	EKJN 750mg	5	10.6520	.56420	.25232
TLR-4 hari ke-30	EKJN 510mg	5	7.5040	1.12751	.50424
	EKJN 750mg	5	7.4060	.70451	.31507
Jumlah koloni bakteri sebelum intervensi (H5)	EKJN 510mg	5	24.6000	3.84708	1.72047
	EKJN 750mg	5	17.2000	2.28035	1.01980
Jumlah koloni bakteri setelah intervensi (H10)	EKJN 510mg	5	3.0000	2.91548	1.30384
	EKJN 750mg	5	.0000	.00000	.00000
Jumlah koloni bakteri hari ke-30	EKJN 510mg	5	.0000	.00000 ^a	.00000
	EKJN 750mg	5	.0000	.00000 ^a	.00000

a. t cannot be computed because the standard deviations of both groups are 0.

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
Baseline IL-6 (H0)	Equal variances assumed	.004	.954
	Equal variances not assumed		
IL-6 sebelum intervensi (H5)	Equal variances assumed	.002	.964
	Equal variances not assumed		
IL-6 setelah intervensi (H10)	Equal variances assumed	.010	.922
	Equal variances not assumed		
IL-6 hari ke-30	Equal variances assumed	1.748	.223
	Equal variances not assumed		
Baseline TLR-4 (H0)	Equal variances assumed	.341	.575
	Equal variances not assumed		
TLR-4 sebelum intervensi (H5)	Equal variances assumed	1.341	.280
	Equal variances not assumed		
TLR-4 setelah intervensi (H10)	Equal variances assumed	.100	.759
	Equal variances not assumed		
TLR-4 hari ke-30	Equal variances assumed	3.298	.107
	Equal variances not assumed		
Jumlah koloni bakteri sebelum intervensi (H5)	Equal variances assumed	1.371	.275
	Equal variances not assumed		
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	5.714	.044
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
Baseline IL-6 (H0)	Equal variances assumed	-.390	8	.706
	Equal variances not assumed	-.390	7.994	.706
IL-6 sebelum intervensi (H5)	Equal variances assumed	-2.159	8	.063
	Equal variances not assumed	-2.159	7.830	.064
IL-6 setelah intervensi (H10)	Equal variances assumed	-1.883	8	.096
	Equal variances not assumed	-1.883	7.725	.098
IL-6 hari ke-30	Equal variances assumed	-.298	8	.773
	Equal variances not assumed	-.298	6.326	.775
Baseline TLR-4 (H0)	Equal variances assumed	-.237	8	.818
	Equal variances not assumed	-.237	7.476	.819
TLR-4 sebelum intervensi (H5)	Equal variances assumed	-6.769	8	.000
	Equal variances not assumed	-6.769	6.079	.000
TLR-4 setelah intervensi (H10)	Equal variances assumed	-5.550	8	.001
	Equal variances not assumed	-5.550	7.036	.001
TLR-4 hari ke-30	Equal variances assumed	.165	8	.873
	Equal variances not assumed	.165	6.710	.874
Jumlah koloni bakteri sebelum intervensi (H5)	Equal variances assumed	3.700	8	.006
	Equal variances not assumed	3.700	6.502	.009
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	2.301	8	.050
	Equal variances not assumed	2.301	4.000	.083

Independent Samples Test

		t-test for Equality of Means	
		Mean Difference	Std. Error Difference
Baseline IL-6 (H0)	Equal variances assumed	-14.54200	37.24958
	Equal variances not assumed	-14.54200	37.24958
IL-6 sebelum intervensi (H5)	Equal variances assumed	-75.79800	35.11127
	Equal variances not assumed	-75.79800	35.11127
IL-6 setelah intervensi (H10)	Equal variances assumed	-70.89200	37.64260
	Equal variances not assumed	-70.89200	37.64260
IL-6 hari ke-30	Equal variances assumed	-9.27200	31.13584
	Equal variances not assumed	-9.27200	31.13584
Baseline TLR-4 (H0)	Equal variances assumed	-.12800	.53969
	Equal variances not assumed	-.12800	.53969
TLR-4 sebelum intervensi (H5)	Equal variances assumed	-1.97800	.29223
	Equal variances not assumed	-1.97800	.29223
TLR-4 setelah intervensi (H10)	Equal variances assumed	-1.69200	.30485
	Equal variances not assumed	-1.69200	.30485
TLR-4 hari ke-30	Equal variances assumed	.09800	.59458
	Equal variances not assumed	.09800	.59458
Jumlah koloni bakteri sebelum intervensi (H5)	Equal variances assumed	7.40000	2.00000
	Equal variances not assumed	7.40000	2.00000
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	3.00000	1.30384
	Equal variances not assumed	3.00000	1.30384

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
Baseline IL-6 (H0)	Equal variances assumed	-100.43968	71.35568
	Equal variances not assumed	-100.45112	71.36712
IL-6 sebelum intervensi (H5)	Equal variances assumed	-156.76473	5.16873
	Equal variances not assumed	-157.07171	5.47571
IL-6 setelah intervensi (H10)	Equal variances assumed	-157.69598	15.91198
	Equal variances not assumed	-158.23773	16.45373
IL-6 hari ke-30	Equal variances assumed	-81.07137	62.52737
	Equal variances not assumed	-84.51626	65.97226
Baseline TLR-4 (H0)	Equal variances assumed	-1.37252	1.11652
	Equal variances not assumed	-1.38786	1.13186
TLR-4 sebelum intervensi (H5)	Equal variances assumed	-2.65189	-1.30411
	Equal variances not assumed	-2.69083	-1.26517
TLR-4 setelah intervensi (H10)	Equal variances assumed	-2.39499	-.98901
	Equal variances not assumed	-2.41211	-.97189
TLR-4 hari ke-30	Equal variances assumed	-1.27310	1.46910
	Equal variances not assumed	-1.32035	1.51635
Jumlah koloni bakteri sebelum intervensi (H5)	Equal variances assumed	2.78799	12.01201
	Equal variances not assumed	2.59631	12.20369
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-.00666	6.00666
	Equal variances not assumed	-.62004	6.62004

T-TEST GROUPS=kelompok(1 3)

/MISSING=ANALYSIS

/VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30

/CRITERIA=CI(.95).

T-Test

Notes

Output Created	14-Jun-2019 11:45:24	
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	Split File	<none>
	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax	T-TEST GROUPS=kelompok(1 3) /MISSING=ANALYSIS /VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30 /CRITERIA=CI(.95).	
Resources	Processor Time	00:00:00.015
	Elapsed Time	00:00:00.021

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Group Statistics

Klp. Penelitian		N	Mean	Std. Deviation	Std. Error Mean
IL-6 setelah intervensi (H10)	EKJN 510mg	5	338.6680	64.89488	29.02187
	Levofloxacin (+)	5	477.9460	41.50279	18.56061
IL-6 hari ke-30	EKJN 510mg	5	284.6840	60.58226	27.09321
	Levofloxacin (+)	5	204.5400	40.69278	18.19836
TLR-4 setelah intervensi (H10)	EKJN 510mg	5	8.9600	.38256	.17108
	Levofloxacin (+)	5	12.8680	.46655	.20865
TLR-4 hari ke-30	EKJN 510mg	5	7.5040	1.12751	.50424
	Levofloxacin (+)	5	6.7100	.46771	.20917
Jumlah koloni bakteri setelah intervensi (H10)	EKJN 510mg	5	3.0000	2.91548	1.30384
	Levofloxacin (+)	5	1.6000	3.04959	1.36382
Jumlah koloni bakteri hari ke-30	EKJN 510mg	5	.0000	.0000 ^a	.00000
	Levofloxacin (+)	5	.0000	.0000 ^a	.00000

a. t cannot be computed because the standard deviations of both groups are 0.

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
IL-6 setelah intervensi (H10)	Equal variances assumed	.404	.543
	Equal variances not assumed		
IL-6 hari ke-30	Equal variances assumed	.846	.385
	Equal variances not assumed		
TLR-4 setelah intervensi (H10)	Equal variances assumed	.048	.832
	Equal variances not assumed		
TLR-4 hari ke-30	Equal variances assumed	8.913	.017
	Equal variances not assumed		
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	.018	.896
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
IL-6 setelah intervensi (H10)	Equal variances assumed	-4.043	8	.004
	Equal variances not assumed	-4.043	6.803	.005
IL-6 hari ke-30	Equal variances assumed	2.456	8	.040
	Equal variances not assumed	2.456	6.999	.044
TLR-4 setelah intervensi (H10)	Equal variances assumed	-14.484	8	.000
	Equal variances not assumed	-14.484	7.704	.000
TLR-4 hari ke-30	Equal variances assumed	1.454	8	.184
	Equal variances not assumed	1.454	5.337	.202
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	.742	8	.479
	Equal variances not assumed	.742	7.984	.479

Independent Samples Test

		t-test for Equality of Means	
		Mean Difference	Std. Error Difference
IL-6 setelah intervensi (H10)	Equal variances assumed	-139.27800	34.44946
	Equal variances not assumed	-139.27800	34.44946
IL-6 hari ke-30	Equal variances assumed	80.14400	32.63774
	Equal variances not assumed	80.14400	32.63774
TLR-4 setelah intervensi (H10)	Equal variances assumed	-3.90800	.26982
	Equal variances not assumed	-3.90800	.26982
TLR-4 hari ke-30	Equal variances assumed	.79400	.54590
	Equal variances not assumed	.79400	.54590
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	1.40000	1.88680
	Equal variances not assumed	1.40000	1.88680

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
IL-6 setelah intervensi (H10)	Equal variances assumed	-218.71860	-59.83740
	Equal variances not assumed	-221.21831	-57.33769
IL-6 hari ke-30	Equal variances assumed	4.88123	155.40677
	Equal variances not assumed	2.96561	157.32239
TLR-4 setelah intervensi (H10)	Equal variances assumed	-4.53021	-3.28579
	Equal variances not assumed	-4.53439	-3.28161
TLR-4 hari ke-30	Equal variances assumed	-.46485	2.05285
	Equal variances not assumed	-.58304	2.17104
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-2.95096	5.75096
	Equal variances not assumed	-2.95249	5.75249

T-TEST GROUPS=kelompok(1 4)

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/MISSING=ANALYSIS
/VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30
/CRITERIA=CI(.95).

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T-Test

Notes

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	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=kelompok(1 4) /MISSING=ANALYSIS /VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30 /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.016
	Elapsed Time	00:00:00.021

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Group Statistics

Klp. Penelitian		N	Mean	Std. Deviation	Std. Error Mean
IL-6 setelah intervensi (H10)	EKJN 510mg	5	338.6680	64.89488	29.02187
	Aquades (-)	5	236.8980	31.77908	14.21204
IL-6 hari ke-30	EKJN 510mg	5	284.6840	60.58226	27.09321
	Aquades (-)	5	194.9960	38.50324	17.21917
TLR-4 setelah intervensi (H10)	EKJN 510mg	5	8.9600	.38256	.17108
	Aquades (-)	5	7.9160	.56119	.25097
TLR-4 hari ke-30	EKJN 510mg	5	7.5040	1.12751	.50424
	Aquades (-)	5	7.5880	.73741	.32978
Jumlah koloni bakteri setelah intervensi (H10)	EKJN 510mg	5	3.0000	2.91548	1.30384
	Aquades (-)	5	6.0000	2.82843	1.26491
Jumlah koloni bakteri hari ke-30	EKJN 510mg	5	.0000	.00000	.00000
	Aquades (-)	5	1.2000	1.30384	.58310

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
IL-6 setelah intervensi (H10)	Equal variances assumed	.975	.352
	Equal variances not assumed		
IL-6 hari ke-30	Equal variances assumed	1.028	.340
	Equal variances not assumed		
TLR-4 setelah intervensi (H10)	Equal variances assumed	1.559	.247
	Equal variances not assumed		
TLR-4 hari ke-30	Equal variances assumed	2.615	.145
	Equal variances not assumed		
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	.186	.678
	Equal variances not assumed		
Jumlah koloni bakteri hari ke-30	Equal variances assumed	15.540	.004
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
IL-6 setelah intervensi (H10)	Equal variances assumed	3.149	8	.014
	Equal variances not assumed	3.149	5.814	.021
IL-6 hari ke-30	Equal variances assumed	2.794	8	.023
	Equal variances not assumed	2.794	6.778	.028
TLR-4 setelah intervensi (H10)	Equal variances assumed	3.437	8	.009
	Equal variances not assumed	3.437	7.057	.011
TLR-4 hari ke-30	Equal variances assumed	-.139	8	.893
	Equal variances not assumed	-.139	6.893	.893
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-1.651	8	.137
	Equal variances not assumed	-1.651	7.993	.137
Jumlah koloni bakteri hari ke-30	Equal variances assumed	-2.058	8	.074
	Equal variances not assumed	-2.058	4.000	.109

Independent Samples Test

		t-test for Equality of Means	
		Mean Difference	Std. Error Difference
IL-6 setelah intervensi (H10)	Equal variances assumed	101.77000	32.31487
	Equal variances not assumed	101.77000	32.31487
IL-6 hari ke-30	Equal variances assumed	89.68800	32.10205
	Equal variances not assumed	89.68800	32.10205
TLR-4 setelah intervensi (H10)	Equal variances assumed	1.04400	.30374
	Equal variances not assumed	1.04400	.30374
TLR-4 hari ke-30	Equal variances assumed	-.08400	.60250
	Equal variances not assumed	-.08400	.60250
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-3.00000	1.81659
	Equal variances not assumed	-3.00000	1.81659
Jumlah koloni bakteri hari ke-30	Equal variances assumed	-1.20000	.58310
	Equal variances not assumed	-1.20000	.58310

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
IL-6 setelah intervensi (H10)	Equal variances assumed	27.25177	176.28823
	Equal variances not assumed	22.08154	181.45846
IL-6 hari ke-30	Equal variances assumed	15.66053	163.71547
	Equal variances not assumed	13.27212	166.10388
TLR-4 setelah intervensi (H10)	Equal variances assumed	.34358	1.74442
	Equal variances not assumed	.32696	1.76104
TLR-4 hari ke-30	Equal variances assumed	-1.47337	1.30537
	Equal variances not assumed	-1.51320	1.34520
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-7.18906	1.18906
	Equal variances not assumed	-7.18973	1.18973
Jumlah koloni bakteri hari ke-30	Equal variances assumed	-2.54462	.14462
	Equal variances not assumed	-2.81893	.41893

GET

FILE='E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav'.
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T-TEST GROUPS=kelompok(2 3)

/MISSING=ANALYSIS

/VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30

/CRITERIA=CI(.95).

T-Test

Notes

Output Created	25-Jun-2019 13:15:43	
Comments		
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax	<pre>T-TEST GROUPS=kelompok(2 3) /MISSING=ANALYSIS /VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30 /CRITERIA=CI(.95).</pre>	
Resources	Processor Time	00:00:00.016
	Elapsed Time	00:00:00.040

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Group Statistics

Klp. Penelitian		N	Mean	Std. Deviation	Std. Error Mean
IL-6 setelah intervensi (H10)	EKJN 750mg	5	409.5600	53.60485	23.97282
	Levofloxacin (+)	5	477.9460	41.50279	18.56061
IL-6 hari ke-30	EKJN 750mg	5	293.9560	34.30732	15.34270
	Levofloxacin (+)	5	204.5400	40.69278	18.19836
TLR-4 setelah intervensi (H10)	EKJN 750mg	5	10.6520	.56420	.25232
	Levofloxacin (+)	5	12.8680	.46655	.20865
TLR-4 hari ke-30	EKJN 750mg	5	7.4060	.70451	.31507
	Levofloxacin (+)	5	6.7100	.46771	.20917
Jumlah koloni bakteri setelah intervensi (H10)	EKJN 750mg	5	.0000	.00000	.00000
	Levofloxacin (+)	5	1.6000	3.04959	1.36382
Jumlah koloni bakteri hari ke-30	EKJN 750mg	5	.0000	.00000 ^a	.00000
	Levofloxacin (+)	5	.0000	.00000 ^a	.00000

a. t cannot be computed because the standard deviations of both groups are 0.

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
IL-6 setelah intervensi (H10)	Equal variances assumed	.565	.474
	Equal variances not assumed		
IL-6 hari ke-30	Equal variances assumed	.244	.635
	Equal variances not assumed		
TLR-4 setelah intervensi (H10)	Equal variances assumed	.020	.891
	Equal variances not assumed		
TLR-4 hari ke-30	Equal variances assumed	2.748	.136
	Equal variances not assumed		
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	6.727	.032
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
IL-6 setelah intervensi (H10)	Equal variances assumed	-2.256	8	.054
	Equal variances not assumed	-2.256	7.528	.056
IL-6 hari ke-30	Equal variances assumed	3.757	8	.006
	Equal variances not assumed	3.757	7.778	.006
TLR-4 setelah intervensi (H10)	Equal variances assumed	-6.768	8	.000
	Equal variances not assumed	-6.768	7.728	.000
TLR-4 hari ke-30	Equal variances assumed	1.840	8	.103
	Equal variances not assumed	1.840	6.952	.109
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-1.173	8	.274
	Equal variances not assumed	-1.173	4.000	.306

Independent Samples Test

		t-test for Equality of Means	
		Mean Difference	Std. Error Difference
IL-6 setelah intervensi (H10)	Equal variances assumed	-68.38600	30.31818
	Equal variances not assumed	-68.38600	30.31818
IL-6 hari ke-30	Equal variances assumed	89.41600	23.80292
	Equal variances not assumed	89.41600	23.80292
TLR-4 setelah intervensi (H10)	Equal variances assumed	-2.21600	.32741
	Equal variances not assumed	-2.21600	.32741
TLR-4 hari ke-30	Equal variances assumed	.69600	.37817
	Equal variances not assumed	.69600	.37817
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-1.60000	1.36382
	Equal variances not assumed	-1.60000	1.36382

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
IL-6 setelah intervensi (H10)	Equal variances assumed	-138.29985	1.52785
	Equal variances not assumed	-139.07051	2.29851
IL-6 hari ke-30	Equal variances assumed	34.52638	144.30562
	Equal variances not assumed	34.25212	144.57988
TLR-4 setelah intervensi (H10)	Equal variances assumed	-2.97101	-1.46099
	Equal variances not assumed	-2.97567	-1.45633
TLR-4 hari ke-30	Equal variances assumed	-.17607	1.56807
	Equal variances not assumed	-.19948	1.59148
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-4.74497	1.54497
	Equal variances not assumed	-5.38657	2.18657

T-TEST GROUPS=kelompok(2 4)

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/MISSING=ANALYSIS  
/VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30  
/CRITERIA=CI(.95).
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T-Test

Notes

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	Split File	<none>
	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST GROUPS=kelompok(2 4) /MISSING=ANALYSIS /VARIABLES=IL6H10 IL6H30 TLR4H10 TLR4H30 KulturH10 KulturH30 /CRITERIA=CI(.95).
Resources	Processor Time	00:00:00.015
	Elapsed Time	00:00:00.033

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Group Statistics

Klp. Penelitian		N	Mean	Std. Deviation	Std. Error Mean
IL-6 setelah intervensi (H10)	EKJN 750mg	5	409.5600	53.60485	23.97282
	Aquades (-)	5	236.8980	31.77908	14.21204
IL-6 hari ke-30	EKJN 750mg	5	293.9560	34.30732	15.34270
	Aquades (-)	5	194.9960	38.50324	17.21917
TLR-4 setelah intervensi (H10)	EKJN 750mg	5	10.6520	.56420	.25232
	Aquades (-)	5	7.9160	.56119	.25097
TLR-4 hari ke-30	EKJN 750mg	5	7.4060	.70451	.31507
	Aquades (-)	5	7.5880	.73741	.32978
Jumlah koloni bakteri setelah intervensi (H10)	EKJN 750mg	5	.0000	.00000	.00000
	Aquades (-)	5	6.0000	2.82843	1.26491
Jumlah koloni bakteri hari ke-30	EKJN 750mg	5	.0000	.00000	.00000
	Aquades (-)	5	1.2000	1.30384	.58310

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
IL-6 setelah intervensi (H10)	Equal variances assumed	1.802	.216
	Equal variances not assumed		
IL-6 hari ke-30	Equal variances assumed	.197	.669
	Equal variances not assumed		
TLR-4 setelah intervensi (H10)	Equal variances assumed	.179	.683
	Equal variances not assumed		
TLR-4 hari ke-30	Equal variances assumed	.008	.929
	Equal variances not assumed		
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	36.000	.000
	Equal variances not assumed		
Jumlah koloni bakteri hari ke-30	Equal variances assumed	15.540	.004
	Equal variances not assumed		

Independent Samples Test

		t-test for Equality of Means		
		t	df	Sig. (2-tailed)
IL-6 setelah intervensi (H10)	Equal variances assumed	6.195	8	.000
	Equal variances not assumed	6.195	6.503	.001
IL-6 hari ke-30	Equal variances assumed	4.291	8	.003
	Equal variances not assumed	4.291	7.896	.003
TLR-4 setelah intervensi (H10)	Equal variances assumed	7.688	8	.000
	Equal variances not assumed	7.688	8.000	.000
TLR-4 hari ke-30	Equal variances assumed	-.399	8	.700
	Equal variances not assumed	-.399	7.983	.700
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-4.743	8	.001
	Equal variances not assumed	-4.743	4.000	.009
Jumlah koloni bakteri hari ke-30	Equal variances assumed	-2.058	8	.074
	Equal variances not assumed	-2.058	4.000	.109

Independent Samples Test

		t-test for Equality of Means	
		Mean Difference	Std. Error Difference
IL-6 setelah intervensi (H10)	Equal variances assumed	172.66200	27.86894
	Equal variances not assumed	172.66200	27.86894
IL-6 hari ke-30	Equal variances assumed	98.96000	23.06292
	Equal variances not assumed	98.96000	23.06292
TLR-4 setelah intervensi (H10)	Equal variances assumed	2.73600	.35588
	Equal variances not assumed	2.73600	.35588
TLR-4 hari ke-30	Equal variances assumed	-.18200	.45609
	Equal variances not assumed	-.18200	.45609
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-6.00000	1.26491
	Equal variances not assumed	-6.00000	1.26491
Jumlah koloni bakteri hari ke-30	Equal variances assumed	-1.20000	.58310
	Equal variances not assumed	-1.20000	.58310

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
IL-6 setelah intervensi (H10)	Equal variances assumed	108.39611	236.92789
	Equal variances not assumed	105.72654	239.59746
IL-6 hari ke-30	Equal variances assumed	45.77681	152.14319
	Equal variances not assumed	45.65440	152.26560
TLR-4 setelah intervensi (H10)	Equal variances assumed	1.91534	3.55666
	Equal variances not assumed	1.91534	3.55666
TLR-4 hari ke-30	Equal variances assumed	-1.23375	.86975
	Equal variances not assumed	-1.23413	.87013
Jumlah koloni bakteri setelah intervensi (H10)	Equal variances assumed	-8.91689	-3.08311
	Equal variances not assumed	-9.51196	-2.48804
Jumlah koloni bakteri hari ke-30	Equal variances assumed	-2.54462	.14462
	Equal variances not assumed	-2.81893	.41893

```
T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5
KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH
30 (PAIRED)
/CRITERIA=CI(.9500)
/MISSING=ANALYSIS.
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T-Test

Notes

Output Created		25-Jun-2019 14:09:20
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	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	20
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5 KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH30 (PAIRED) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.
Resources	Processor Time	00:00:00.000
	Elapsed Time	00:00:00.021

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0)	145.1230	20	51.45389	11.50544
	IL-6 sebelum intervensi (H5)	385.7310	20	105.08966	23.49876
Pair 2	IL-6 sebelum intervensi (H5)	385.7310	20	105.08966	23.49876
	IL-6 setelah intervensi (H10)	365.7680	20	102.20890	22.85460
Pair 3	IL-6 setelah intervensi (H10)	365.7680	20	102.20890	22.85460
	IL-6 hari ke-30	244.5440	20	61.76477	13.81102
Pair 4	Baseline TLR-4 (H0)	6.5670	20	.76671	.17144
	TLR-4 sebelum intervensi (H5)	10.7950	20	1.76973	.39572
Pair 5	TLR-4 sebelum intervensi (H5)	10.7950	20	1.76973	.39572
	TLR-4 setelah intervensi (H10)	10.0990	20	1.97576	.44179
Pair 6	TLR-4 setelah intervensi (H10)	10.0990	20	1.97576	.44179
	TLR-4 hari ke-30	7.3020	20	.81240	.18166
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5)	23.7000	20	6.85258	1.53228
	Jumlah koloni bakteri setelah intervensi (H10)	2.6500	20	3.24889	.72647
Pair 8	Jumlah koloni bakteri setelah intervensi (H10)	2.6500	20	3.24889	.72647
	Jumlah koloni bakteri hari ke-30	.3000	20	.80131	.17918

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Baseline IL-6 (H0) & IL-6 sebelum intervensi (H5)	20	-.055	.818
Pair 2	IL-6 sebelum intervensi (H5) & IL-6 setelah intervensi (H10)	20	.997	.000
Pair 3	IL-6 setelah intervensi (H10) & IL-6 hari ke-30	20	.252	.284
Pair 4	Baseline TLR-4 (H0) & TLR-4 sebelum intervensi (H5)	20	-.427	.060
Pair 5	TLR-4 sebelum intervensi (H5) & TLR-4 setelah intervensi (H10)	20	.940	.000
Pair 6	TLR-4 setelah intervensi (H10) & TLR-4 hari ke-30	20	-.378	.101
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) & Jumlah koloni bakteri setelah intervensi (H10)	20	-.010	.968
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) & Jumlah koloni bakteri hari ke-30	20	.528	.017

Paired Samples Test

		Paired Differences		
		Mean	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-240.60800	119.51685	26.72478
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	19.96300	9.06634	2.02729
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	121.22400	105.27379	23.53994
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-4.22800	2.20876	.49389
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.69600	.67899	.15183
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	2.79700	2.40332	.53740
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	21.05000	7.61214	1.70213
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	2.35000	2.90689	.65000

Paired Samples Test

		Paired Differences		t	df
		95% Confidence Interval of the Difference			
		Lower	Upper		
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-296.54361	-184.67239	-9.003	19
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	15.71982	24.20618	9.847	19
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	71.95435	170.49365	5.150	19
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-5.26173	-3.19427	-8.561	19
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.37822	1.01378	4.584	19
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	1.67221	3.92179	5.205	19
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	17.48741	24.61259	12.367	19
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	.98953	3.71047	3.615	19

Paired Samples Test

		Sig. (2-tailed)
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	.000
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	.000
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	.000
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	.000
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.000
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.000
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	.000
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	.002

USE ALL.

COMPUTE filter_\$(kelompok = 1).

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VARIABLE LABEL filter_$ 'kelompok = 1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5
KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH
30 (PAIRED)
  /CRITERIA=CI(.9500)
  /MISSING=ANALYSIS.

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T-Test

Notes

Output Created	25-Jun-2019 14:20:35	
Comments		
Input	Data	E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav
	Active Dataset	DataSet1
	Filter	kelompok = 1 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	5
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax	T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5 KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH30 (PAIRED) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.	
Resources	Processor Time	00:00:00.000
	Elapsed Time	00:00:00.036

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0)	157.2640	5	59.70581	26.70125
	IL-6 sebelum intervensi (H5)	358.3000	5	59.46515	26.59362
Pair 2	IL-6 sebelum intervensi (H5)	358.3000	5	59.46515	26.59362
	IL-6 setelah intervensi (H10)	338.6680	5	64.89488	29.02187
Pair 3	IL-6 setelah intervensi (H10)	338.6680	5	64.89488	29.02187
	IL-6 hari ke-30	284.6840	5	60.58226	27.09321
Pair 4	Baseline TLR-4 (H0)	6.6140	5	.95965	.42917
	TLR-4 sebelum intervensi (H5)	9.2480	5	.30573	.13673
Pair 5	TLR-4 sebelum intervensi (H5)	9.2480	5	.30573	.13673
	TLR-4 setelah intervensi (H10)	8.9600	5	.38256	.17108
Pair 6	TLR-4 setelah intervensi (H10)	8.9600	5	.38256	.17108
	TLR-4 hari ke-30	7.5040	5	1.12751	.50424
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5)	24.6000	5	3.84708	1.72047
	Jumlah koloni bakteri setelah intervensi (H10)	3.0000	5	2.91548	1.30384
Pair 8	Jumlah koloni bakteri setelah intervensi (H10)	3.0000	5	2.91548	1.30384
	Jumlah koloni bakteri hari ke-30	.0000	5	.00000	.00000

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Baseline IL-6 (H0) & IL-6 sebelum intervensi (H5)	5	-.090	.886
Pair 2	IL-6 sebelum intervensi (H5) & IL-6 setelah intervensi (H10)	5	.997	.000
Pair 3	IL-6 setelah intervensi (H10) & IL-6 hari ke-30	5	.763	.133
Pair 4	Baseline TLR-4 (H0) & TLR-4 sebelum intervensi (H5)	5	.577	.308
Pair 5	TLR-4 sebelum intervensi (H5) & TLR-4 setelah intervensi (H10)	5	.758	.137
Pair 6	TLR-4 setelah intervensi (H10) & TLR-4 hari ke-30	5	.091	.884
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) & Jumlah koloni bakteri setelah intervensi (H10)	5	-.045	.943
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) & Jumlah koloni bakteri hari ke-30	5	.	.

Paired Samples Test

		Paired Differences		
		Mean	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-201.03600	87.96268	39.33811
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	19.63200	7.05812	3.15649
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	53.98400	43.38438	19.40208
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-2.63400	.82203	.36762
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.28800	.24984	.11173
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	1.45600	1.15719	.51751
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	21.60000	4.92950	2.20454
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	3.00000	2.91548	1.30384

Paired Samples Test

		Paired Differences		t	df
		95% Confidence Interval of the Difference			
		Lower	Upper		
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-310.25609	-91.81591	-5.110	4
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	10.86818	28.39582	6.220	4
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	.11518	107.85282	2.782	4
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-3.65468	-1.61332	-7.165	4
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	-.02222	.59822	2.578	4
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.01916	2.89284	2.813	4
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	15.47921	27.72079	9.798	4
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	-.62004	6.62004	2.301	4

Paired Samples Test

	Sig. (2-tailed)
Pair 1 Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	.007
Pair 2 IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	.003
Pair 3 IL-6 setelah intervensi (H10) - IL-6 hari ke-30	.050
Pair 4 Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	.002
Pair 5 TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.061
Pair 6 TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.048
Pair 7 Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	.001
Pair 8 Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	.083

USE ALL.

COMPUTE filter_\$(kelompok = 2).

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VARIABLE LABEL filter_$ 'kelompok = 2 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5
KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH
30 (PAIRED)
  /CRITERIA=CI(.9500)
  /MISSING=ANALYSIS.

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T-Test

Notes

Output Created	25-Jun-2019 14:39:10	
Comments		
Input	Data	E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav
	Active Dataset	DataSet1
	Filter	kelompok = 2 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	5
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax	T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5 KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH30 (PAIRED) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.	
Resources	Processor Time	00:00:00.016
	Elapsed Time	00:00:00.090

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0)	171.8060	5	58.07643	25.97257
	IL-6 sebelum intervensi (H5)	434.0980	5	51.26307	22.92554
Pair 2	IL-6 sebelum intervensi (H5)	434.0980	5	51.26307	22.92554
	IL-6 setelah intervensi (H10)	409.5600	5	53.60485	23.97282
Pair 3	IL-6 setelah intervensi (H10)	409.5600	5	53.60485	23.97282
	IL-6 hari ke-30	293.9560	5	34.30732	15.34270
Pair 4	Baseline TLR-4 (H0)	6.7420	5	.73169	.32722
	TLR-4 sebelum intervensi (H5)	11.2260	5	.57752	.25828
Pair 5	TLR-4 sebelum intervensi (H5)	11.2260	5	.57752	.25828
	TLR-4 setelah intervensi (H10)	10.6520	5	.56420	.25232
Pair 6	TLR-4 setelah intervensi (H10)	10.6520	5	.56420	.25232
	TLR-4 hari ke-30	7.4060	5	.70451	.31507
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5)	17.2000	5	2.28035	1.01980
	Jumlah koloni bakteri setelah intervensi (H10)	.0000	5	.00000	.00000
Pair 8	Jumlah koloni bakteri setelah intervensi (H10)	.0000 ^a	5	.00000	.00000
	Jumlah koloni bakteri hari ke-30	.0000 ^a	5	.00000	.00000

a. The correlation and t cannot be computed because the standard error of the difference is 0.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Baseline IL-6 (H0) & IL-6 sebelum intervensi (H5)	5	-.556	.330
Pair 2	IL-6 sebelum intervensi (H5) & IL-6 setelah intervensi (H10)	5	.990	.001
Pair 3	IL-6 setelah intervensi (H10) & IL-6 hari ke-30	5	.220	.722
Pair 4	Baseline TLR-4 (H0) & TLR-4 sebelum intervensi (H5)	5	-.538	.350
Pair 5	TLR-4 sebelum intervensi (H5) & TLR-4 setelah intervensi (H10)	5	.734	.158
Pair 6	TLR-4 setelah intervensi (H10) & TLR-4 hari ke-30	5	-.457	.439
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) & Jumlah koloni bakteri setelah intervensi (H10)	5	.	.

Paired Samples Test

		Paired Differences		
		Mean	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-262.29200	96.50110	43.15661
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	24.53800	7.71365	3.44965
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	115.60400	56.92053	25.45564
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-4.48400	1.15040	.51448
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.57400	.41669	.18635
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	3.24600	1.08528	.48535
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	17.20000	2.28035	1.01980

Paired Samples Test

		Paired Differences		t	df
		95% Confidence Interval of the Difference			
		Lower	Upper		
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-382.11395	-142.47005	-6.078	4
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	14.96024	34.11576	7.113	4
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	44.92782	186.28018	4.541	4
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-5.91242	-3.05558	-8.716	4
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.05661	1.09139	3.080	4
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	1.89845	4.59355	6.688	4
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	14.36857	20.03143	16.866	4

Paired Samples Test

		Sig. (2-tailed)
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	.004
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	.002
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	.010
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	.001
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.037
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.003
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	.000

```

USE ALL.
COMPUTE filter_$(kelompok = 3).
VARIABLE LABEL filter_$ 'kelompok = 3 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
    
```

```
T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5
KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH
30 (PAIRED)
/CRITERIA=CI(.9500)
/MISSING=ANALYSIS.
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T-Test

Notes

Output Created	25-Jun-2019 14:44:15	
Comments		
Input	Data	E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav
	Active Dataset	DataSet1
	Filter	kelompok = 3 (FILTER)
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	Split File	<none>
	N of Rows in Working Data File	5
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax	T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5 KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH30 (PAIRED) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.	
Resources	Processor Time	00:00:00.047
	Elapsed Time	00:00:00.040

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0)	121.1460	5	35.97681	16.08932
	IL-6 sebelum intervensi (H5)	502.0100	5	35.41963	15.84014
Pair 2	IL-6 sebelum intervensi (H5)	502.0100	5	35.41963	15.84014
	IL-6 setelah intervensi (H10)	477.9460	5	41.50279	18.56061
Pair 3	IL-6 setelah intervensi (H10)	477.9460	5	41.50279	18.56061
	IL-6 hari ke-30	204.5400	5	40.69278	18.19836
Pair 4	Baseline TLR-4 (H0)	5.8860	5	.43935	.19648
	TLR-4 sebelum intervensi (H5)	13.3160	5	.46253	.20685
Pair 5	TLR-4 sebelum intervensi (H5)	13.3160	5	.46253	.20685
	TLR-4 setelah intervensi (H10)	12.8680	5	.46655	.20865
Pair 6	TLR-4 setelah intervensi (H10)	12.8680	5	.46655	.20865
	TLR-4 hari ke-30	6.7100	5	.46771	.20917
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5)	30.4000	5	7.40270	3.31059
	Jumlah koloni bakteri setelah intervensi (H10)	1.6000	5	3.04959	1.36382
Pair 8	Jumlah koloni bakteri setelah intervensi (H10)	1.6000	5	3.04959	1.36382
	Jumlah koloni bakteri hari ke-30	.0000	5	.00000	.00000

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Baseline IL-6 (H0) & IL-6 sebelum intervensi (H5)	5	-.333	.584
Pair 2 IL-6 sebelum intervensi (H5) & IL-6 setelah intervensi (H10)	5	.976	.004
Pair 3 IL-6 setelah intervensi (H10) & IL-6 hari ke-30	5	-.379	.529
Pair 4 Baseline TLR-4 (H0) & TLR-4 sebelum intervensi (H5)	5	.803	.102
Pair 5 TLR-4 sebelum intervensi (H5) & TLR-4 setelah intervensi (H10)	5	-.207	.738
Pair 6 TLR-4 setelah intervensi (H10) & TLR-4 hari ke-30	5	-.387	.520
Pair 7 Jumlah koloni bakteri sebelum intervensi (H5) & Jumlah koloni bakteri setelah intervensi (H10)	5	-.080	.899
Pair 8 Jumlah koloni bakteri setelah intervensi (H10) & Jumlah koloni bakteri hari ke-30	5	.	.

Paired Samples Test

	Paired Differences		
	Mean	Std. Deviation	Std. Error Mean
Pair 1 Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-380.86400	58.28189	26.06445
Pair 2 IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	24.06400	10.33181	4.62053
Pair 3 IL-6 setelah intervensi (H10) - IL-6 hari ke-30	273.40600	68.25648	30.52523
Pair 4 Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-7.43000	.28425	.12712
Pair 5 TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.44800	.72185	.32282
Pair 6 TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	6.15800	.77799	.34793
Pair 7 Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	28.80000	8.22800	3.67967
Pair 8 Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	1.60000	3.04959	1.36382

Paired Samples Test

		Paired Differences		t	df
		95% Confidence Interval of the Difference			
		Lower	Upper		
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-453.23052	-308.49748	-14.612	4
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	11.23536	36.89264	5.208	4
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	188.65439	358.15761	8.957	4
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-7.78295	-7.07705	-58.448	4
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	-4.4830	1.34430	1.388	4
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	5.19200	7.12400	17.699	4
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	18.58359	39.01641	7.827	4
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	-2.18657	5.38657	1.173	4

Paired Samples Test

	Sig. (2-tailed)
Pair 1 Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	.000
Pair 2 IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	.006
Pair 3 IL-6 setelah intervensi (H10) - IL-6 hari ke-30	.001
Pair 4 Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	.000
Pair 5 TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.238
Pair 6 TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.000
Pair 7 Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	.001
Pair 8 Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	.306

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VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMAT filter_$ (f1.0).
FILTER BY filter_$.
EXECUTE.
T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5
KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH
30 (PAIRED)
  /CRITERIA=CI(.9500)
  /MISSING=ANALYSIS.

```

T-Test

Notes

Output Created		25-Jun-2019 14:49:53
Comments		
Input	Data	E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav
	Active Dataset	DataSet1
	Filter	kelompok = 4 (FILTER)
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	5
Missing Value Handling	Definition of Missing	User defined missing values are treated as missing.
	Cases Used	Statistics for each analysis are based on the cases with no missing or out-of-range data for any variable in the analysis.
Syntax		T-TEST PAIRS=BaselineIL6 IL6H5 IL6H10 BaselineTLR4 TLR4H5 TLR4H10 KulturH5 KulturH10 WITH IL6H5 IL6H10 IL6H30 TLR4H5 TLR4H10 TLR4H30 KulturH10 KulturH30 (PAIRED) /CRITERIA=CI(.9500) /MISSING=ANALYSIS.
Resources	Processor Time	00:00:00.000
	Elapsed Time	00:00:00.029

[DataSet1] E:\MyDATA\pascaS3\SEMESTER 4\HASIL\dataview list sampel.sav

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Baseline IL-6 (H0)	130.2760	5	47.69968	21.33195
	IL-6 sebelum intervensi (H5)	248.5160	5	27.18325	12.15672
Pair 2	IL-6 sebelum intervensi (H5)	248.5160	5	27.18325	12.15672
	IL-6 setelah intervensi (H10)	236.8980	5	31.77908	14.21204
Pair 3	IL-6 setelah intervensi (H10)	236.8980	5	31.77908	14.21204
	IL-6 hari ke-30	194.9960	5	38.50324	17.21917
Pair 4	Baseline TLR-4 (H0)	7.0260	5	.50875	.22752
	TLR-4 sebelum intervensi (H5)	9.3900	5	.77473	.34647
Pair 5	TLR-4 sebelum intervensi (H5)	9.3900	5	.77473	.34647
	TLR-4 setelah intervensi (H10)	7.9160	5	.56119	.25097
Pair 6	TLR-4 setelah intervensi (H10)	7.9160	5	.56119	.25097
	TLR-4 hari ke-30	7.5880	5	.73741	.32978
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5)	22.6000	5	6.06630	2.71293
	Jumlah koloni bakteri setelah intervensi (H10)	6.0000	5	2.82843	1.26491
Pair 8	Jumlah koloni bakteri setelah intervensi (H10)	6.0000	5	2.82843	1.26491
	Jumlah koloni bakteri hari ke-30	1.2000	5	1.30384	.58310

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Baseline IL-6 (H0) & IL-6 sebelum intervensi (H5)	5	.564	.322
Pair 2 IL-6 sebelum intervensi (H5) & IL-6 setelah intervensi (H10)	5	.989	.001
Pair 3 IL-6 setelah intervensi (H10) & IL-6 hari ke-30	5	.873	.053
Pair 4 Baseline TLR-4 (H0) & TLR-4 sebelum intervensi (H5)	5	.232	.708
Pair 5 TLR-4 sebelum intervensi (H5) & TLR-4 setelah intervensi (H10)	5	.624	.261
Pair 6 TLR-4 setelah intervensi (H10) & TLR-4 hari ke-30	5	.949	.014
Pair 7 Jumlah koloni bakteri sebelum intervensi (H5) & Jumlah koloni bakteri setelah intervensi (H10)	5	-.423	.478
Pair 8 Jumlah koloni bakteri setelah intervensi (H10) & Jumlah koloni bakteri hari ke-30	5	.407	.497

Paired Samples Test

	Paired Differences		
	Mean	Std. Deviation	Std. Error Mean
Pair 1 Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-118.24000	39.38755	17.61465
Pair 2 IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	11.61800	6.32511	2.82868
Pair 3 IL-6 setelah intervensi (H10) - IL-6 hari ke-30	41.90200	18.86633	8.43728
Pair 4 Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-2.36400	.82242	.36780
Pair 5 TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	1.47400	.61039	.27298
Pair 6 TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.32800	.27068	.12105
Pair 7 Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	16.60000	7.70065	3.44384
Pair 8 Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	4.80000	2.58844	1.15758

Paired Samples Test

		Paired Differences		t	df
		95% Confidence Interval of the Difference			
		Lower	Upper		
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	-167.14610	-69.33390	-6.713	4
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	3.76433	19.47167	4.107	4
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	18.47636	65.32764	4.966	4
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	-3.38517	-1.34283	-6.427	4
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.71610	2.23190	5.400	4
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	-.00810	.66410	2.710	4
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	7.03838	26.16162	4.820	4
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	1.58603	8.01397	4.147	4

Paired Samples Test

		Sig. (2-tailed)
Pair 1	Baseline IL-6 (H0) - IL-6 sebelum intervensi (H5)	.003
Pair 2	IL-6 sebelum intervensi (H5) - IL-6 setelah intervensi (H10)	.015
Pair 3	IL-6 setelah intervensi (H10) - IL-6 hari ke-30	.008
Pair 4	Baseline TLR-4 (H0) - TLR-4 sebelum intervensi (H5)	.003
Pair 5	TLR-4 sebelum intervensi (H5) - TLR-4 setelah intervensi (H10)	.006
Pair 6	TLR-4 setelah intervensi (H10) - TLR-4 hari ke-30	.054
Pair 7	Jumlah koloni bakteri sebelum intervensi (H5) - Jumlah koloni bakteri setelah intervensi (H10)	.009
Pair 8	Jumlah koloni bakteri setelah intervensi (H10) - Jumlah koloni bakteri hari ke-30	.014

FILTER OFF.

USE ALL.

EXECUTE .

Tabel 1 Antibiotik yang diberikan pada demam tifoid tanpa komplikasi menurut WHO 2003.

Susceptibility	Optimal therapy			Alternative effective drugs		
	Antibiotic	Daily dose mg/kg	Days	Antibiotic	Daily dose mg/kg	Days
Fully sensitive	Fluoroquinolone e.g. ofloxacin or ciprofloxacin	15	5-7 ^a	Chloramphenicol Amoxicillin TMP-SMX	50-75 75-100 8-40	14-21 14 14
Multidrug resistance	Fluoroquinolone or cefixime	15 15-20	5-7 7-14	Azithromycin Cefixime	8-10 15-20	7 7-14
Quinolone resistance ^b	Azithromycin or ceftriaxone	8-10 75	7 10-14	Cefixime	20	7-14

^a Three-day courses are also effective and are particularly so in epidemic containment.

^b The optimum treatment for quinolone-resistant typhoid fever has not been determined. Azithromycin, the third-generation cephalosporins, or a 10-14 day course of high-dose fluoroquinolones, is effective. Combinations of these are now being evaluated.

Tabel 2 Antibiotik yang diberikan pada demam tifoid berat menurut WHO 2003

Susceptibility	Optimal parenteral drug			Alternative effective parenteral drug		
	Antibiotic	Daily dose mg/kg	Days	Antibiotic	Daily dose mg/kg	Days
Fully sensitive	Fluoroquinolone e.g. ofloxacin	15	10-14	Chloramphenicol Amoxicillin TMP-SMX	100 100 8-40	14-21 14 14
Multidrug resistant	Fluoroquinolone	15	10-14	Ceftriaxone or cefotaxime	60 80	10-14
Quinolone resistant	Ceftriaxone or cefotaxime	60 80	10-14	Fluoroquinolone	20	7-14

DAFTAR PUBLIKASI

PUBLIKASI ARTIKEL ILMIAH PADA JURNAL				
NO	TAHUN	JUDUL ARTIKEL	PENULIS	NAMA JURNAL
1	2020	Effects of lime (<i>Citrus aurantifolia</i>) peel to expression of mRNA TLR-4 in Balb/c mice infected <i>Salmonella typhi</i>	Author	Journal of Advanced Pharmaceutical Technology & Research P-ISSN : 2231-4040 E-ISSN : 0976-2094 Vol. 11 Issue 4: Oct-Des 2020 Status : Accepted Scopus Q2
2	2020	Antibacterial and anti-inflammatory effects of lime (<i>Citrus aurantifolia</i>) peel extract in mice balb/c induced salmonella typhi	Author	Journal of Biological Research - Bollettino della Società Italiana di Biologia Sperimentale eISSN 2284-0230 pISSN 1826-8838 Status : Accepted Scopus Q3
3	2020	The Role of IL-6, TNF- α , and VDR in Inhibiting the Growth of <i>Salmonella Typhi</i> : in vivo Study	Co-Author	The Open Microbiology Journal DOI: 10.2174/1874285802014010065, 2020, 14, 65-71
4	2019	THE EFFECTS OF CURCUMIN AND VITAMIN D COMBINATION AS INHIBITOR TOWARD SALMONELLA TYPHI BACTERIA GROWTH IN VIVO	Co-Author	International Journal of Applied Pharmaceutics ISSN - 0975 – 7058 Vol 11, Special Issue 5, 2019 DOI: http://dx.doi.org/10.22159/ijap.2019.v11s5.T0093
5	2019	Activity of Antimicrobial Peptide; Cathelicidin, on Bacterial Infection	Co-Author	The Open Biochemistry Journal DOI: 10.2174/1874091X01913010045, 2019, 13, 45-53
6	2019	ANTIBACTERIAL ACTIVITIES OF SAPODILLA FRUIT EXTRACT INHIBITING SALMONELLA TYPHI ON MICE BALB/c	Co-Author	International Journal of Applied Pharmaceutics ISSN - 0975 – 7058 Vol 11, Special Issue 5, 2019 DOI: http://dx.doi.org/10.22159/ijap.2019.v11s5.T0095
7	2019	Molecular Impact on High Motility Group Box-1 (HMGB-1) in Pamps and Damp	Co-Author	Indian Journal of Public Health Research & Development, August 2019, Vol. 10, No. 8
PROSIDING SEMINAR INTERNASIONAL				
No	TAHUN	JUDUL ARTIKEL	NAMA KEGIATAN	PENYELENGGARA
1	2019	Lime Peel Extract Effects in Decreasing Levels of Inteleukin 6 in Mice Infected with <i>Salmonella Typhi</i>	International Conference on BioMedical Sciences (ICBMS19) 27-28 SEPTEMBER 2019, Istanbul TURKEY	Akdeniz University, Antalya, Turkey.
2	2019	Effect of Lime Peel Extract (<i>Citrus Aurantifolia</i>) on the Colonization of <i>Salmonella Typhi</i> Bacteria (Study in Vivo)	The 2019 4th International Conference on Pharmacy and Pharmaceutical Science (ICPPS 2019), Meiji University, Tokyo, Japan during March 28-30, 2019	Meiji University, Tokyo, Japan and Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEEES) and Biology and Bioinformatics Society (BBS)

CURRICULUM VITAE

1. Identitas Diri

1	Nama Lengkap	Dr. dr. Vivien Novarina A. Kasim, M.Kes
2	Jenis Kelamin	Perempuan
3	Jabatan Fungsional	Lektor
4	NIP	19830519 200812 2 002
5	NIDN	0019058301
6	Tempat dan tanggal lahir	Gorontalo, 19 Mei 1983
8	Alamat e-mail	vivienkasim@gmail.com viviennovarina@ung.ac.id vivien_kasim@yahoo.com
9	Nomor Telepon (Hp)	081342419399
10	Nomor Orcid	https://orcid.org/0000-0002-7908-3456
12	Alamat Kantor	Jalan Jend. Sudirman No.6, Dulalowo Timur, Kota Tengah, Kota Gorontalo, Gorontalo 96128
13	Nomor Telepon/fax	(0435) 821698
14	Mata kuliah yang diampu	1. Biokimia 2. Ilmu Gizi 3. Herbal Medicine 4. Sistem Imunologi 5. Sistem Endokrin 6. Sistem Gastrointestinal



2. Riwayat Pendidikan

Nama Perguruan Tinggi	S1	Profesi	S2	S3
	Universitas Hasanuddin	Universitas Hasanuddin	Universitas Hasanuddin	Universitas Hasanuddin
Bidang Ilmu	Pendidikan Dokter	Dokter Umum	Gizi Kesmas	Ilmu Kedokteran
Tahun Masuk – Lulus	2001 - 2006	2006 - 2008	2010 - 2012	2017-2020
Judul Skripsi/Tesis/ Disertasi	Gambaran desa sehat di kecamatan Barombong Kota Makassar	-	Suplementasi Protein Albumin Ikan Gabus Terhadap Status Gizi dan TNF α pada Pasien Stroke	Efek Ekstrak Kulit Jeruk Nipis (<i>Citrus aurantifolia</i>) terhadap ekspresi mRNA gen Toll-like Receptor 4 (TLR-4) dan Soluble Interleukin 6 (IL-6) pada Balb/c yang diinduksi <i>Salmonella typhi</i>
Nama Pembimbing/	Dr. dr. M. Tahir	-	(1) Prof. Dr. dr. Nurpdji A. Taslim,	(1) Prof. dr. Mochammad Hatta,

CURRICULUM VITAE

Promotor	Abdullah, MSc, MSPH		MPH, Sp.GK (2) Prof. dr. Veni Hadju, Ph.D, Sp.GK	Ph.D, Sp.MK(K) (2) Prof. dr. Rosdiana Natzir, Ph.D, Sp.Biok (3) Prof. dr. Veni Hadju, M.Sc, Ph.D
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3. Riwayat Pekerjaan

No.	Pekerjaan	Tahun
1.	Kasie Pelayanan Penunjang Medik RSI Gorontalo	2008-2010
2.	Sekretaris Jurusan Keperawatan Universitas Negeri Gorontalo	2014-2017
3.	Manajer Bidang Umum dan Keuangan RSI Gorontalo	2016-2017
4.	Task force Akreditasi Prodi S3 Ilmu Kedokteran FK Unhas	2018-2019
5.	Dosen Tetap Universitas Negeri Gorontalo	2008-sekarang

4. Penelitian

No	Tahun	Judul penelitian	Pendanaan	
			Sumber	Jmlh (Juta/Rp)
1	2013	Hubungan Klasifikasi Hipertensi dengan Obesitas	PNBP	5
2	2014	Status Gizi dan Imunitas Pasien Stroke di RSUD Prof. dr. Aloe Saboe Kota Gorontalo	PNBP	5
3	2015	Pemanfaatan Tanaman Obat Berbasis Penyakit Di Kecamatan Suwawa Kabupaten Bone Bolango	PNBP	20
4	2016	Suplemetasi Ekstrak Ikan Gabus Terhadap Status Gizi dan Status Imunitas Pasien Stroke di RSUD Prof. dr. Aloe Saboe Kota Gorontalo	PEKERTI- Kemenristek- Dikti	95
5	2017	Supplementation Of Snakehead Fish Extract Toward Malondialdehyde (Mda) Level In Post-Stroke Patient	PEKERTI- Kemenristek- Dikti	97,5
6	2018- 2020	Efek Ekstrak Kulit Jeruk Nipis (<i>Citrus aurantifolia</i>) terhadap ekspresi mRNA gen Toll-like Receptor 4 (TLR-4) dan Soluble Interleukin 6 (IL-6) pada Balb/c yang diinduksi <i>Salmonella typhi</i> (Disertasi)	BUDI-DN LPDP	155

CURRICULUM VITAE

5. Pengabdian Kepada Masyarakat

No	Tahun	Judul pengabdian	Pendanaan	
			Sumber	Jmlh (Juta/Rp)
1	2013	Pemeriksaan tekanan darah sebagai deteksi dini gangguan kardiovaskuler	PNBP	3
2	2014	Pemberdayaan proses keperawatan dalam peningkatan derajat kesehatan ibu dan anak	PNBP	25
3	2015	Pemberdayaan Proses Keperawatan dalam Peningkatan Status Gizi Masyarakat	PNBP	25
4	2015	Pemeriksaan Status Gizi dan Gangguan Dismenore Sebagai Deteksi Dini Anemia Pada Remaja	PNBP	2
5	2016	Menuju Desa Siaga Sehat Jiwa” DI Desa Karya Mukti Kecamatan Mootilango Kabupaten Gorontalo	PNBP	25
6	2016	<i>Health Education</i> Perawatan Payudara Dalam Meningkatkan Produksi Asi Pada Ibu Hamil Dan Menyusui	PNBP	2
7	2017	Pemberdayaan Lingkungan Pada Masyarakat Sadar Gizi Untuk Ketahanan Pangan Desa	KKN Kebangsaan- Kemenristek- Dikti	11
8	2017	<i>Health Education</i> 1000 Hari Pertama Kelahiran Pada Wanita Hamil, Menyusui Dan Wanita Usia Subur	PNBP	2

5. PENULISAN ARTIKEL ILMIAH DALAM JURNAL

No	Tahun	Judul Artikel Ilmiah	Volume/Nomor	Nama Jurnal
1	2014	Hubungan Klasifikasi Hipertensi dengan Obesitas	Vol. 9 No. 2 Agustus 2014	Jurnal Health & Sport

CURRICULUM VITAE

No	Tahun	Judul Artikel Ilmiah	Volume/Nomor	Nama Jurnal
2	2015	Efektivitas Minuman Kunyit Asam Terhadap Penurunan Nyeri Haid Pada Siswi Di Sma Negeri 3 Gorontalo Utara	Vol. 8 Nomor 2 Juli 2015	Jurnal Sainstek
3	2016	Hubungan Peran Ibu Dalam Stimulasi Dini Dengan Perkembangan Anak Usia <i>Toddler</i> Di Desa Hutabohu Kecamatan Limboto Barat Kabupaten Gorontalo	Vol. 8 Nomor 4 Maret 2016	Jurnal Sainstek
4	2016	Pengaruh Pemberian Susus Kedelai Terhadap Kadar Glukosa Darah pada Penderita Diabetes Melitus di Wilayah Kerja PKM Telaga Kab. Gorontalo	Vol. 8 Nomor 5 Juli 2016	Jurnal Sainstek
5	2017	Suplementasi Ekstrak Albumin Ikan Gabus Terhadap Status Gizi dan Imunitas Pasien Stroke	Vol. 13 No. 3 Januari 2017 ISSN 1693-900X (Print), ISSN 2502-4140 (Online)	Jurnal Gizi Klinik Indonesia (SINTA 2)
6	2017	Mapping of Health Disorders Related to Mercury on Community around the Bone River, Gorontalo Province	Vol. 36 No. 4 2017	International Journal of Science: Basic of Applied Research
7	2017	Pemanfaatan Tanaman Obat Sebagai Terapi Penyakit Diare	Vol. 14 No. 1 2017	Jurnal Health & Sport
8	2020	Effects of lime (<i>Citrus aurantifolia</i>) peel to expression of mRNA TLR-4 in Balb/c mice infected <i>Salmonella typhi</i>	Vol. 11 issue 4 2020 DOI:10.4103/japtr.JAPTR_48_20	Journal of Advanced Pharmaceutical Technology & Research (JAPTR) (Scopus Q2)
9	2020	Antibacterial and anti-inflammatory effects of lime (<i>citrus aurantifolia</i>) peel extract in mice balb/c induced salmonella typhi	Vol. 93 No. 2 2020, Advance online, https://doi.org/10.4081/jbr.0.8951	Journal of Biological Research – Bollettino della Società Italiana di Biologia Sperimentale (Scopus Q3)

CURRICULUM VITAE

No	Tahun	Judul Artikel Ilmiah	Volume/Nomor	Nama Jurnal
10	2020	The role of IL-6, TNF- α , and VDR in inhibiting the growth of salmonella typhi: In vivo study	Vol.14(1) 2020, pp. 65-71	Open Microbiology Journal (Scopus Q3)
11	2019	The effects of curcumin and vitamin d combination as inhibitor toward Salmonella typhi bacteria growth in vivo	Vol. 11(Special Issue 5) 2019, pp. 116-120	International Journal of Applied Pharmaceutics (Scopus Q3)
12	2019	Antibacterial activities of sapodilla fruit extract inhibiting Salmonella typhi on mice BALB/c	Vol.11(Special Issue 5), pp. 121-126	International Journal of Applied Pharmaceutics (Scopus Q3)
13	2019	Molecular impact on high motility group box-1 (HMGB-1) in pamps and damp	Vol. 10(8) 2019, pp. 1109-1114	Indian Journal of Public Health Research and Development
14	2019	Activity of antimicrobial peptide; cathelicidin, on bacterial infection	Vol.13(1) 2019, pp. 45-53	Open Biochemistry Journal

6. CONFERENCE (ORAL PRESENTATION)

No.	Nama Kegiatan	Tempat -Tahun	Scope
1.	7th International Symposium on Wellness, Healthy Lifestyle and Nutrition 2016 (ISWHLN)	Jogjakarta - 2016	International
2.	4th International Conference on Pharmacy and Pharmaceutical Science (ICPPS)	Tokyo - 2019	International
3.	International Conference on BioMedical Sciences (ICBMS)	Istanbul - 2019	International