

DAFTAR PUSTAKA

1. Kemenkes RI. Demam Berdarah Dengue Indonesia. *Pedoman Pencegah dan Pengendali demam berdarah di Indones*. 2017;5(7):9.
 2. Prasetyowati H, Hendri J, Wahono T. Status Resistensi *Aedes aegypti* (Linn.) terhadap Organofosfat di Tiga Kotamadya DKI Jakarta. *Balaba J Litbang Pengendali Penyakit Bersumber Binatang Banjarnegara*. 2016;12(1):23-30. doi:10.22435/blb.v12i1.4454.23-30
 3. Ruri Khallaj Al-Farabi. EFEKTIVITAS TEMEPHOS DALAM PENGENDALIAN VEKTOR KEJADIAN DEMAM BERDARAH DENGUE DI WILAYAH KERJA PUSKESMAS PEKKABATA KABUPATEN POLEWALI MANDAR TAHUN 2022. Published online 2022.
 4. Santoso L, Archiarafa Z, Martini M. Menilai Efektivitas Fogging Fokus Menggunakan Thermalfog Dan Ultralow Volume (Ulv) Dengan Insektisida Malathion Dalam Pengendalian Vektor Demam Berdarah (Studi Di Wilayah Kerja Puskesmas Tlogosari Wetan Kota Semarang). *J Kesehat Masy*. 2016;4(1):226-231.
 5. Dwicahya B, Arsin AA, Ishak H, Hamid F, Mallongi A. *Aedes Sp* . Mosquito Resistance and the Effectiveness of Biolarvicides on Dengue Vector Mortality. 2023;15(4):541-546.
 6. Kraemer MUG, Sinka ME, Duda KA, et al. The global distribution of the arbovirus vectors *Aedes aegypti* and *Ae. Albopictus*. *Elife*. 2015;4(JUNE2015):1-18. doi:10.7554/eLife.08347
 7. Fuadzy H, Hendri J. INDEKS ENTOMOLOGI DAN KERENTANAN LARVA *Aedes aegypti* TERHADAP TEMEFOS DI KELURAHAN KARSAMENAK KECAMATAN KAWALU KOTA TASIKMALAYA. *Vektora J Vektor dan Reserv Penyakit*. 2015;7(2):57-64. doi:10.22435/vk.v7i2.4504.57-64
 8. Hamid PH, Prastowo J, Ghiffari A, Taubert A, Hermosilla C. *Aedes aegypti* resistance development to commonly used insecticides in Jakarta, Indonesia. *PLoS One*. 2017;12(12):1-11. doi:10.1371/journal.pone.0189680
 9. Sunaryo S, Widiastuti D. Resistensi *Aedes aegypti* terhadap Insektisida Kelompok Organopospat dan Sintetik Piretroid di Provinsi Sumatera Utara dan Provinsi Jambi. *Balaba J Litbang Pengendali Penyakit Bersumber Binatang Banjarnegara*. Published online 2018:95-106. doi:10.22435/blb.v14i1.304
 10. Handayani D, Hidayatullah FS, Anwar C, et al. KEPADATAN VEKTOR DAN STATUS RESISTENSI LARVA *Aedes aegypti* DI DESA PANCUR PUNGAH KECAMATAN MUARA DUA KABUPATEN OKUS TAHUN 2019. *J Kedokt dan Kesehat Publ Ilm Fak Kedokt Univ Sriwij*. 2020;7(2):14-20. doi:10.32539/jkk.v7i2.9710
 11. Soeniono S.J, Pandean M. Status Resistensi Vektor Demam Berdarah *Aedes aegypti* terhadap Malathion di Kota Tomohon Resistance *Aedes aegypti* Against Malathion , in Tomohon City. 2017;(April
- Handayani D, Haidah N. Deteksi Konvensional Resistensi *Aedes aegypti* Vektor DBD Di Kabupaten Kediri Terhadap Malathion Dan (134).
- Handayani D, Haidah N, Soeniono S, Soeniatyanti K, Ambarningrum TB, Yusmalinar S, Ahmad I. Status



dan perkembangan resistensi *Aedes aegypti* (Linnaeus) (Diptera: Culicidae) strain Bandung, Bogor, Makassar, Palu, dan VCRU terhadap insektisida permetrin dengan seleksi lima generasi. *J Entomol Indones*. 2016;13(1):1-8. doi:10.5994/jei.13.1.1

14. M. Rasyid Ridha, Wulan Sembiring, Abdullah Fadilly SS. INDIKATOR ENTOMOLOGI DAN STATUS RESISTENSI VEKTOR DEMAM BERDARAH DENGUE (*Aedes Aegypti* L) TERHADAP BEBERAPA GOLONGAN INSEKTISIDA DI KOTA BANJARBARU. Published online 2018.
15. Mukti DAW. Resistensi nyamuk *Aedes aegypti* Sebagai Vektor DBD Terhadap Bahan Aktif Racun Nyamuk Formulasi Bakar. *Skripsi*. Published online 2016:1-103.
16. Hamid PH, Prastowo J, Widyasari A, Taubert A, Hermosilla C. Knockdown resistance (kdr) of the voltage-gated sodium channel gene of *Aedes aegypti* population in Denpasar, Bali, Indonesia. *Parasites and Vectors*. 2017;10(1):1-9. doi:10.1186/s13071-017-2215-4
17. Hamid PH, Ninditya VI, Prastowo J, Haryanto A, Taubert A, Hermosilla C. Current Status of *Aedes aegypti* Insecticide Resistance Development from Banjarmasin, Kalimantan, Indonesia. *Biomed Res Int*. 2018;2018. doi:10.1155/2018/1735358
18. Satoto TBT, Satrisno H, Lazuardi L, et al. Insecticide resistance in *Aedes aegypti*: An impact from human urbanization? *PLoS One*. 2019;14(6):1-13. doi:10.1371/journal.pone.0218079
19. Kementerian Kesehatan RI. *Strategi Nasional Penanggulangan Dengue 2021-2025*; 2019.
20. WHO. Guidelines for laboratory and field testing of mosquito larvicides. *World Heal Organ*. Published online 2005.
21. Neves RT, Rondon JN, Silva LIM da, et al. Efeito Larvicida De Ricinus Communis L. *Rev Eletrônica em Gestão, Educ e Tecnol Ambient*. 2014;18(1):127-131. doi:10.5902/2236117010837
22. Sastriawan A. EFEKTIVITAS SERAI DAPUR (*Cymbopogon citratus*) SEBAGAI LARVASIDA PADA LARVA NYAMUK *Aedes* sp INSTAR III/IV. *Fak Kedokt dan Ilmu Kesehat*. 2015;Program St(0115-06-23344; 1413 PSPD k):49.
23. Sumi Arcani N, Sudarmaja I, Swastika I. Efektifitas Ekstrak Etanol Serai Wangi (*Cymbopogon Nardus* L) Sebagai Larvasida *Aedes Aegypti*. *E-Jurnal Med Udayana*. 2017;6(1):1-4.
24. Nisa K, Firdaus O, Ahmadi A, Hairani H. Uji Efektifitas Ekstrak Biji Dan Daun Mengkudu (*Morinda Citrifolia* L.) Sebagai Larvasida *Aedes* Sp. *Sel*. 2015;2(2):43-48. doi:10.22435/sel.v2i2.4636.43-48
25. Haditomo I. Efek Larvasida Ekstrak Daun Cengkeh (*Syzygium aromaticum* L.) Terhadap *Aedes aegypti* L. *[skripsi] SurakartaUniversitas Sebel* ed online 2010:1-39.
26. Ahmad AR, Malik A. UJI AKTIVITAS LARVASIDA EKSTRAK KEPYAR (*Ricinus communis* L.) TERHADAP LARVA *Aedes aegypti*. *J Fitofarmaka Indones*. 2016;3(1):141-145. doi:10.30605/fitofarm.v3i1.174
27. W, Prastowo D, Boesri H, Oksariyanti A, Joharina AS. Uji Efektifitas Ekstrak Daun Tembakau (*Nicotiana tabacum* L) dari Semarang,



- Temanggung, dan Kendal Sebagai Larvasida *Aedes aegypti* L. *Balaba J Litbang Pengendali Penyakit Bersumber Binatang Banjarnegara*. Published online 2018:23-30. doi:10.22435/blb.v14i1.293
28. Ervina N. UJI AKTIVITAS EKSTRAK ETHANOL DAUN SINGKONG (Manihot utilissima Pohl) SEBAGAI LARVASIDA *Aedes aegypti*. Published online 2014.
 29. Tyas DW. (Carica papaya) terhadap larva nyamuk *Aedes aegypti* L. Published online 2013:1-80.
 30. Riyadi Z, Julizar J, Rahmatini R. Uji Efektivitas Ekstrak Etanol Biji Rambutan (*Nephelium lappaceum* L.) sebagai Larvasida Alami pada Larva Nyamuk *Aedes aegypti*. *J Kesehatan Andalas*. 2018;7(2):233. doi:10.25077/jka.v7i2.807
 31. Yuliana A, Rinaldi RA, Rahayuningsih N, Gustaman F. Efektivitas Larvasida Granul Ekstrak Etanol Daun Pisang Nangka (*Musa x paradisiaca* L.) terhadap Larva Nyamuk *Aedes aegypti*. *ASPIRATOR - J Vector-borne Dis Stud*. 2021;13(1):69-78. doi:10.22435/asp.v13i1.4042
 32. Koneri R, Pontororing HH. Uji Ekstrak Biji Mahoni (*Swietenia macrophylla*) Terhadap Larva *Aedes aegypti* Vektor Penyakit Demam Berdarah Assay of Mahogany (*Swietenia macrophylla*) Seed Extract on Larvae of *Aedes aegyptias* Dengue Hemorrhagic Fever Vector. *J MKMI*. 2016;12(4):216-223. <http://journal.unhas.ac.id/index.php/mkmi/article/view/1541>
 33. Mareta Rosabella Purnamasari, I Made Sudarmaja IKS. POTENSI EKSTRAK ETANOL DAUN PANDAN WANGI (*PANDANUS AMARYLLIFOLIUS* ROXB.) SEBAGAI LARVASIDA ALAMI BAGI AEDES AEGYPTI. *E-Jurnal Med Udayana*. 2017;6(6).
 34. Dewi RS. Efektivitas Ekstrak Daun Lidah Buaya (*Aloe vera* (L) Burm. f.) Sebagai Larvasida *Aedes aegypti*. *J Edurance*. 2020;5(2):331-337.
 35. Widayari R, Oktaviyeni F, Maghfirandi R. Efektifitas Ekstrak Etanol Kulit Jeruk Manis (*Citrus x aurantium* L.) sebagai Larvasida terhadap Larva Nyamuk *Aedes aegypti*. *J Insa Farm Indones*. 2018;1(1):9-18.
 36. Maryanti E, Marta R Della, Hamidy MY. Efektivitas Ekstrak Etanol Daun Jeruk Purut (*Citrus hystrix* DC) Sebagai Larvasida Nyamuk *Aedes aegypti*. *J Ilmu Kedokt*. 2017;5(2):118. doi:10.26891/jik.v5i2.2011.118-124
 37. Makkiah M, Salaki CL, Assa B. Efektivitas Ekstrak Serai Wangi (*Cymbopogon nardus* L.) sebagai Larvasida Nyamuk *Aedes aegypti*. *J Bios Logos*. 2019;10(1):1. doi:10.35799/jbl.10.1.2020.27977
 38. Ekawati ER. PEMANFAATAN KULIT BUAH JERUK NIPIS (*Citrus aurantifolia*) SEBAGAI LARVASIDA *Aedes aegypti* INSTAR III. *Biota*. 2017;3(1):1. doi:10.19109/biota.v3i1.926
 39. Siharis FS, Himanirwati H, Regikal R. Uji Aktivitas Larvasida Ekstrak Etanol Daun Kirinyuh (*Chromolaena odorata*) Terhadap Larva Nyamuk *Aedes aegypti* Instar III. *J Mandala Pharmacoon Indones*. 2018;4(1):20-27. doi:10.24127/mpi.v4i1.20
 40. Nur A, Ansori M. Potensi Larvasida dari Ekstrak Daun Jeruk (Citrus maxima) terhadap *Aedes aegypti* dan *Culex quinquefasciatus*. *J Penyakit*. 2018;12(1):19-24.
 41. Hanasyah T, Hanafiah M. DAYA LARVASIDA EKSTRAK ETIL ALKOHOL KEMUNING (*Murraya paniculata* (L) Jack) TERHADAP LARVA NYAMUK *Aedes aegypti*. *J Med Vet*. 2013;7(1):27-29.



- doi:10.21157/j.med.vet..v7i1.2915
42. Pratiwi D, Prahastiwi EA, Safitri M. UJI AKTIVITAS LARVASIDA EKSTRAK ETIL ASETAT HERBA ANTING-ANTING (*Alcalypha indica* . L) TERHADAP LARVA NYAMUK *Aedes aegypti* THE TEST OF ETHYL ACETATE EXTRACT LARVASIDAL ACTIVITY FORM ANTING-ANTING HERBA (*Alcalypha indica* . L) TO MOSQUITO LARVAE *Aedes a.* 2015;2(1):16-23.
 43. Sogandi S, Gunarto F. Efek Larvasida Fraksi Etil Asetat Daun Bangun-bangun (*Plectranthus amboinicus*) terhadap Mortalitas Larva *Aedes aegypti*. *ASPIRATOR - J Vector-borne Dis Stud.* 2020;12(1):27-36. doi:10.22435/asp.v12i1.1288
 44. KUSUMAWATI WD, Subagiyo A, FIRDAUST M. PENGARUH BEBERAPA DOSIS DAN JENIS EKSTRAK LARVASIDA ALAMI TERHADAP KEMATIAN LARVA NYAMUK *Aedes aegypti*. *Bul Keslingmas.* 2018;37(3):283-295. doi:10.31983/keslingmas.v37i3.3875
 45. Yuliasih Y, Widawati M. Aktivitas Larvasida Berbagai Pelarut pada Ekstrak Biji Kayu Besi Pantai (*Pongamia pinnata*) terhadap Mortalitas Larva *Aedes spp.* *Balaba J Litbang Pengendali Penyakit Bersumber Binatang Banjarnegara.* 2017;13(2):125-132. doi:10.22435/blb.v13i2.5807.125-132
 46. Susilawati S, Hermansyah H. AKTIVITAS LARVASIDA EKSTRAK METANOL BUAH PARE (*Momordica charantia* L.) TERHADAP LARVA *Aedes aegypti*. *Molekul.* 2015;10(1). doi:10.20884/1.jm.2015.10.1.171
 47. Ammari NA, Wahongan GJP, Bernadus JBB. Uji Potensi Ekstrak Daun Pepaya (*Carica papaya* linn) sebagai Larvasida terhadap Larva *Aedes sp.* Di Manado. *J e-Biomedik.* 2021;9(1):7-12. doi:10.35790/ebm.v9i1.31733
 48. Dharajiya DT, Shah A, Galvadiya BP, et al. Genome-wide microsatellite markers in castor (*Ricinus communis* L.): Identification, development, characterization, and transferability in Euphorbiaceae. *Ind Crops Prod.* 2020;151. doi:10.1016/j.indcrop.2020.112461
 49. Waris M, Nasir S, Abbas S, et al. Evaluation of larvicidal efficacy of *Ricinus communis* (Castor) and synthesized green silver nanoparticles against *Aedes aegypti* L. *Saudi J Biol Sci.* 2020;27(9):2403-2409. doi:10.1016/j.sjbs.2020.04.025
 50. Aouinty B, Oufara S, Mellouki F, Mahari S. Mosquitocidal activities of dichloromethane and ethyl acetate extract from leaves of *Ricinus communis* L. *Eur J Sci Res.* 2006;13(1).
 51. Elimam AM, Elmalik KH, Ali FS. Larvicidal , adult emergence inhibition and oviposition deterrent effects of foliage extract from *Ricinus communis* L . against *Anopheles arabiensis* and *Culex quinquefasciatus* in Sudan. 2009;26(2):130-139.
 52. Utami WW, Ahmad AR, Malik A. Uji Aktivitas Larvasida Ekstrak Daun Jarak Kenyar (*Ricinus communis* L.) Terhadap Larva Nyamuk *Aedes aegypti*. *J* Published online 2016. masi.umi.ac.id/index.php/fitofarmakaindo/article/view/174
 - Omar S, Jacob JW, et al. Toxicity of six plant extracts and alkaloids from *Ricinus communis* against the malaria vector *Gambiae*. *Parasites and Vectors.* 2014;7(1):1-8. 156-3305-7-312
 - Of A, Extract A, Two OF, Towards P. Larvicide and Growth



- Retarding Activity of Alkaloidal Extract of Two Plants Towards Aedes. 2016;05(01):998-1004.
55. Ghebriel O, Adugna H. In vitro studies of larvicidal effects of some plant extracts against Anopheles gambiae larvae (Diptera: Culicidae). *J Med Plants Res.* 2017;11(4):66-72. doi:10.5897/jmpr2016.6165
 56. Hameed AK, ; Jihad A. Ahmed AHS and ASAQ. Egyptian Journal of Veterinary Sciences. 2019;51(1):43-54. doi:10.21608/ejvs.2019.17122.1098
 57. Kumar S, Wahab N, Mishra M, Warikoo R. Evaluation of 15 local plant species as larvicidal agents against an Indian strain of dengue fever mosquito, Aedes aegypti L. (Diptera: Culicidae). *Front Physiol.* 2012;3 APR(April):1-6. doi:10.3389/fphys.2012.00104
 58. Leeja L. Larvicidal Activity and Phytochemical Analysis of Some Selected Plant Extracts Against Filarial Vector Culex Quinquefasciatus Say (Diptera : Culicidae). 2020;(September). doi:10.21276/ijpbbs.2020.10.3.24
 59. Dantas JO, Araújo-Piovezan TG, Santos DP, Alves AEO, Pinheiro SSC, Ribeiro GT. Extracts of Potential Plants in the Control of the Aedes aegypti Population. *Ensaio e Ciência Ciências Biológicas, Agrárias e da Saúde.* 2019;23(2):104. doi:10.17921/1415-6938.2019v23n2p104-108
 60. Rathy M C, Sajith U, Harilal C C. Efficacy of Phytochemicals as Sustainable Sources of Larvicidal Formulations for the Control of Culex sitiens. *Int Res J Environ Sci Int Sci Congr Assoc.* 2015;4(10):16-21. <https://www.researchgate.net/publication/301201110>
 61. Ani OC, Ama E, Nnamonu EI. Comparative study on larvicidal potentials of Cymbopogon citratus stapf, Ricinus communis L. and Allium sativum L. on fourth instar larvae of Anopheles mosquitoes. *J Basic Appl Zool.* 2022;83(1). doi:10.1186/s41936-022-00314-6
 62. Aouinty B, Chennaoui M, Aboufadi S, Mellouki F. Toxicity Investigation of Aqueous Extract From Different Parts of Ricinus Communis Against Culex Pipiens Larvae. *Am J Innov Res Appl.* Published online 2018:35-40.
 63. Kehail MA, Bashir NH, Abdelrahman EE, Abdelrahim AM. Larvicidal activity of three plants powders and aqueous extracts on Anopheles and Culex mosquito larvae (Diptera: Culicidae). ~ 37 ~ *Int J Mosq Res.* 2017;4(4):37-41. <http://repo.uofg.edu.sd/handle/123456789/825>
 64. Basheer AGM. Ricinus communis (CASTOR) as larvicide on Anopheles arabiensis Patton. *International J Adv Pharmacy, Biol Chem.* 2014;3(2):319-328.
 65. Wamakot N, Komalamisra N, Apiwathnasorn C, Morales RE, Thanomsab BW, Attrapadung. *Larvicidal and Adulticidal Activities of Castor Oil against the Dengue Vector, Aedes Aegypti.* Vol 35.; 2018.
 66. Jadhav KB, Nagarkar JM. Development of Karanj Oil and Castor Oil Nanoemulsions and Its Encapsulation Into Beads for Controlled Release Activity. *J Adv Sci Res.* 2022;13(02):93-100. doi:10.21961/asr.202213213
 67. ...a DT, Beltrán-Sastoque IM, Corredor-Páramo Y, Moreno- ... Eficiencia del extracto de Ricinus communis para el control ... Culex-Efficiency of Ricinus communis by the mosquito Culex ... *científica.* 2014;2(19):86. doi:10.14483/23448350.6496
 68. ... In Vitro Effects of Some Plant Extracts on the Development



- of *Culex quinquefasciatus* in the Laboratory. *J Mosq Res.* 2016;(March). doi:10.5376/jmr.2016.06.0036
69. Mekhlif AF, Kafi IM. Sub-larvicidal effect of selected native medicinal flora against developed mosquito vector , *Culex pipiens molestus* forskal (*Diptera : Culicidae*). *Int J Mosq Res.* 2020;(January). https://www.researchgate.net/profile/Atallah-Mekhlif-2/publication/346427570_Sub-larvicidal_effect_of_selected_native_medicinal_flora_against_developed_mosquito_vector_Culex_pipiens_molestus_forskal_Diptera_Culicidae/links/5fc143d2a6fdcc6cc676512e/Sub-lar
 70. Devita N, Isti'annah S. EFEK LARVISIDA RESIDU MINYAK ATSIRI BUNGACENGKEH (*Syzygium aromaticum* L.) TERHADAP LARVA INSTAR III NYAMUK *Aedes aegypti* DI LABORATORIUM. *J Kedokt dan Kesehat Indones.* 2014;6(3). doi:10.20885/jkki.vol6.iss3.art5
 71. Yusnita Mirna Anggraeni, P BC, Rendro Wianto. Uji Daya Bunuh Ekstrak Kristal Endotoksin *Bacillus thuringiensis israelensis* (H-14) terhadap Jentik *Aedes aegypti*, *Anopheles aconitus* dan *Culex quinquefasciatus*. *J Sain Vet.* 2013;31(1).
 72. Yunus R, Satoto TBT. Efikasi *Bacillus thuringiensis israelensis* yang Ditumbuhkan pada Media Air Cucian Beras Mekongga terhadap Larva *Aedes aegypti* Strain Kendari. *J Vektora.* 2017;9(1).
 73. ISTIANAH, Siti, Umniyati SR. Efek Residu temefos (Abate) dan piriproksifen (Sumilarv) terhadap larva aedes aegypti dalam pot tanaman air. Published online 2009. https://etd.repository.ugm.ac.id/home/detail_pencarian/43287
 74. Araújo FG, Peixoto MG, Pinto BCT, Teixeira TP. Distribution of guppies *Poecilia reticulata* (Peters, 1860) and *Phalloceros caudimaculatus* (Hensel, 1868) along a polluted stretch of the Paraíba do Sul River, Brazil. *Brazilian J Biol.* 2009;69(1). doi:10.1590/s1519-69842009000100005
 75. Apriyani N, Setyaningrum E, Susanto GN. Pengaruh *Bacillus thuringiensis israelensis* Sebagai Larvasida Vektor Demam Berdarah Dengue (DBD) Terhadap Ikan Guppy (*Poecilia reticulata*). *BioWallacea J Penelit Biol (Journal Biol Res.* 2019;6(1). doi:10.33772/biowallacea.v6i1.8747
 76. Mutmainah S, Prasetyo E, Sugiarti L. DAYA PREDASI IKAN CUPANG (*Betta splendens*) DAN IKAN GUPPY (*Poecilia reticulata*) TERHADAP LARVA INSTAR III NYAMUK *Aedes aegypti* SEBAGAI UPAYA PENGENDALIAN VEKTOR PENYAKIT DEMAM BERDARAH DENGUE (DBD). *J Sains Nat.* 2017;4(2). doi:10.31938/jsn.v4i2.81
 77. Dani NP, Budiharjo A, Listyawati S. Komposisi pakan buatan untuk meningkatkan pertumbuhan dan kandungan protein Ikan Tawes (*Puntius javanicus* Blkr.). *BioSMART.* 2005;7(2).
 78. Arfab H, Mariam S, Alimuddin . Effect of Temperature on Reproduction and Guppy (*Poecilia reticulata* Peters). *J Akuakultur Indones.* 10.19027/jai.4.1-4
 79. Harah WF. The determination of effective concentration of *Comoea cairica* leaves extract against laboratory and field *Aedes albopictus* and *aedes aegypti* mosquito larvae. *Trop* 2013;38(3). doi:10.47665/tb.38.3.087





PEMERINTAH KABUPATEN BANGGAI
DINAS PENANAMAN MODAL DAN
PELAYANAN TERPADU SATU PINTU (DPMPTSP)
JL. JEND. AHMAD YANI NO. 12 TELP. 0461 -21620 LUWUK – KAB. BANGGAI
SULAWESI TENGAH

IZIN PENELITIAN

Nomor : 503/288/DPMPTSP/IP/XII/2023

- Dasar : 1. Surat Permohonan Izin Penelitian Sdr. Bambang Dwicahya,
Tanggal 15 Desember 2023
2. Rekomendasi Badan Kesatuan Bangsa dan Politik Kabupaten Banggai
Nomor : 070/230.2/BKB-P/2023, tanggal 18 Desember 2023.

Diberikan Izin Penelitian kepada :

Nama : **BAMBANG DWICAHYA**
Pekerjaan : Dosen
NPM/NIM : **K013211025**
Alamat : Jl. Eurphobia Kel. Hanga-Hanga Kec. Luwuk Selatan
Lembaga : Universitas Hasanuddin Makassar
Fakultas : Kesehatan Masyarakat (Program Doktor)
Penanggung Jawab : Dekan Fakultas Kesehatan Masyarakat
Judul Penelitian : Efektivitas Ekstrak Daun Jarak Kepyar (*Ricinus Communis*
Linn) Sebagai Biolarvasida Terhadap *Aedes Aegypti* Dan
Aedes Albopictus Pada Pengujian Laboratorium Dan
Lapangan
Daerah Penelitian : Kabupaten Banggai

Dengan ketentuan-ketentuan Sebagai berikut :

1. Tidak dibenarkan mengadakan kegiatan yang tidak sesuai dengan penelitian yang dimaksud;
2. Mentaati peraturan perundang-undangan yang berlaku serta mengindahkan norma dan adat istiadat setempat;
3. Apabila masa berlaku izin penelitian ini sudah berakhir dan pelaksanaannya belum selesai maka diwajibkan mengajukan perpanjangan Izin Penelitian;
4. Apabila tidak mentaati ketentuan seperti tersebut di atas maka Izin Penelitian ini dicabut dan dinyatakan tidak berlaku.
5. Izin Penelitian ini mulai berlaku selama 1 (satu) tahun sejak tanggal dikeluarkan sampai dengan **18 Desember 2024**.

Dikeluarkan di Luwuk
Pada Tanggal 18 Desember 2023



PALA DINAS PENANAMAN MODAL DAN
PELAYANAN TERPADU SATU PINTU
KABUPATEN BANGGAI

Dr. YULUS LEMBA KURAPA
Kepala Dinas
NIP. 19670103 199303 1 011





KEMENTERIAN PENDIDIKAN, KEBUDAYAAN
RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
FAKULTAS KESEHATAN MASYARAKAT

Jln.Perintis Kemerdekaan Km.10 Makassar 90245, Telp.(0411) 585658,
E-mail : fkm.unhas@gmail.com, website: <https/fkm.unhas.ac.id/>

REKOMENDASI PERSETUJUAN ETIK

Nomor : 4263/UN4.14.1/TP.01.02/2023

Tanggal : 03 Juli 2023

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

No.Protokol	12623093017	No. Sponsor Protokol	
Peneliti Utama	Bambang Dwicahya	Sponsor	Pribadi
Judul Peneliti	Efektifitas Daun Jarak Keyar (<i>Ricinus Communis Linn</i>) sebagai <i>Biolarvasida</i> terhadap <i>Aedes Aegypti</i> dan <i>Aedes Albopictus</i> pada Pengujian Laboratorium dan Lapangan		
No.Versi Protokol	1	Tanggal Versi	12 Juni 2023
No.Versi PSP	1	Tanggal Versi	12 Juni 2023
Tempat Penelitian	Kabupaten Banggai dan Kota Palu, Sulawesi Tengah		
Judul Review	<input type="checkbox"/> Exempted <input type="checkbox"/> Expedited <input checked="" type="checkbox"/> Fullboard	Masa Berlaku 03 Juli 2023 Sampai 03 Juli 2024	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr.Veni Hadju,M.Sc,Ph.D	Tanda tangan 	Tanggal 03 Juli 2023 
Sekretaris komisi Etik Penelitian	Nama : Dr. Wahiduddin, SKM.,M.Kes	Tanda tangan 	Tanggal 03 Juli 2023 

Kewajiban Peneliti Utama :

1. Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
2. 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
3. Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
4. Menyerahkan laporan akhir setelah Penelitian berakhir
5. Melaporakn penyimpangan dari protocol yang disetujui (protocol deviation/violation)
6. Mematuhi semua peraturan yang ditentukan



DAUN MUDA JARAK KEPYAR

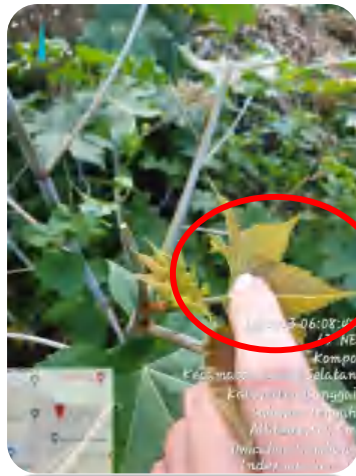
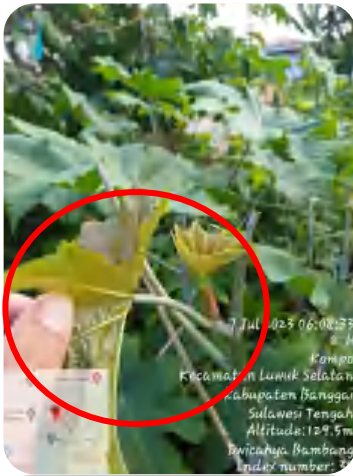


Umur Daun Jarak Kepyar Hari Pertama

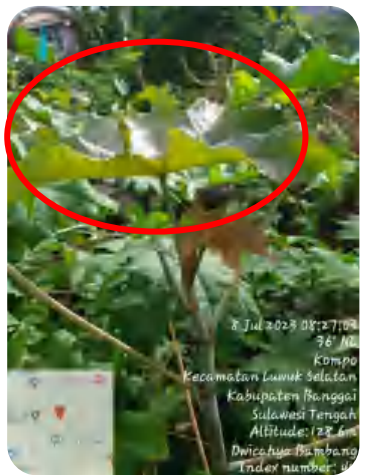
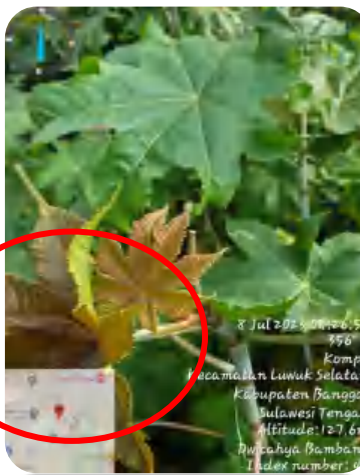


Umur Daun Jarak Kepyar Hari Ke-2

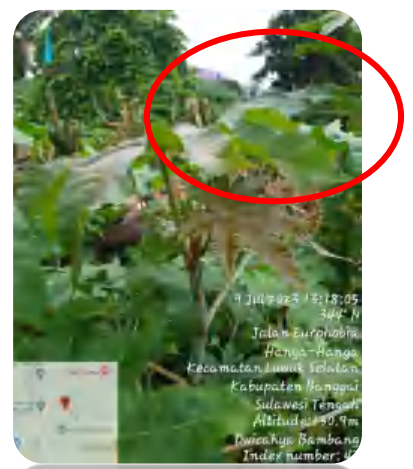




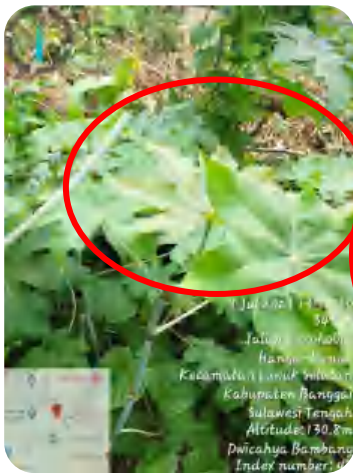
Umur Daun Jarak Kepyar Hari ke-3



Umur Daun Jarak Kepyar Hari ke-4

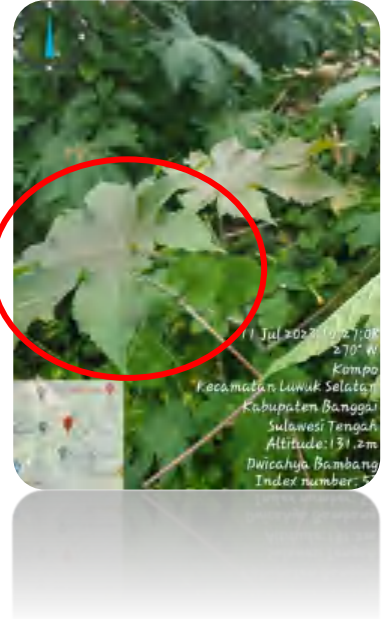
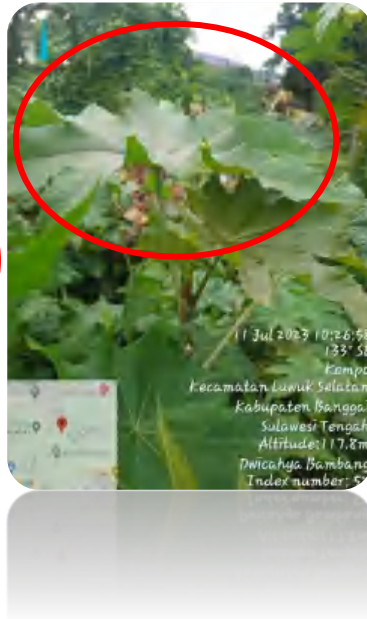


Umur Daun Jarak Kepyar Hari ke-5

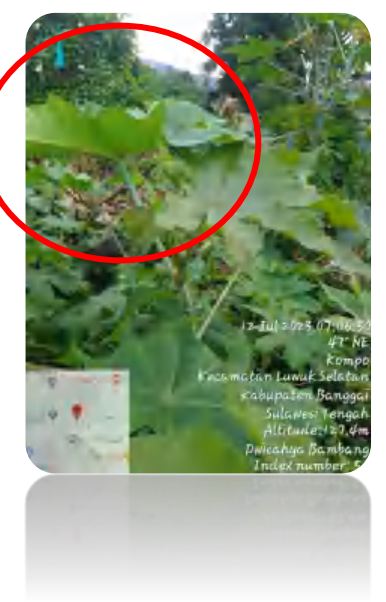


Umur Daun Jarak Kepyar Hari ke-6





Umur Daun Jarak Kepar Hari ke-7



Umur Daun Jarak Kepar Hari ke-8





Umur Daun Jarak Kepyar Hari ke-9



Umur Daun Jarak Kepyar Hari ke-10



DAUN TUA JARAK KEPYAR



Optimization Software:
www.balesio.com

Pengeringan Daun Jarak Keyar



Optimization Software:
www.balesio.com

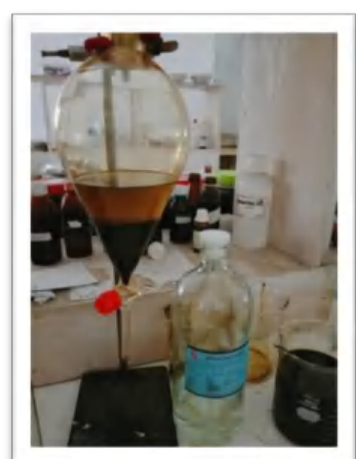
PEMBUATAN EKSTRAK DAUN JARAK KEPYAR



Daun yang telah dihaluskan menggunakan mesin blender



Daun yang telah halus diberikan pelarut



Penyaringan larutan ekstrak daun jarak kepyar



Pemeriksaan Senyawa Fitokomia



**PERLAKUAN PADA LARVA *Aedes* SP.
(LABORATORIUM POLTEKKES KEMENKES PALU)**



Foto Bersama Kepala Lab. Kesling



Perlakuan ekstrak daun jarak kepyar



Perlakuan ekstrak daun jarak kepyar



Optimization Software:
www.balesio.com



Perlakuan ekstrak daun jarak kepyar



Pengamatan Mortalitas Larva



Pengamatan Mortalitas Larva



Pengamatan Mortalitas Larva

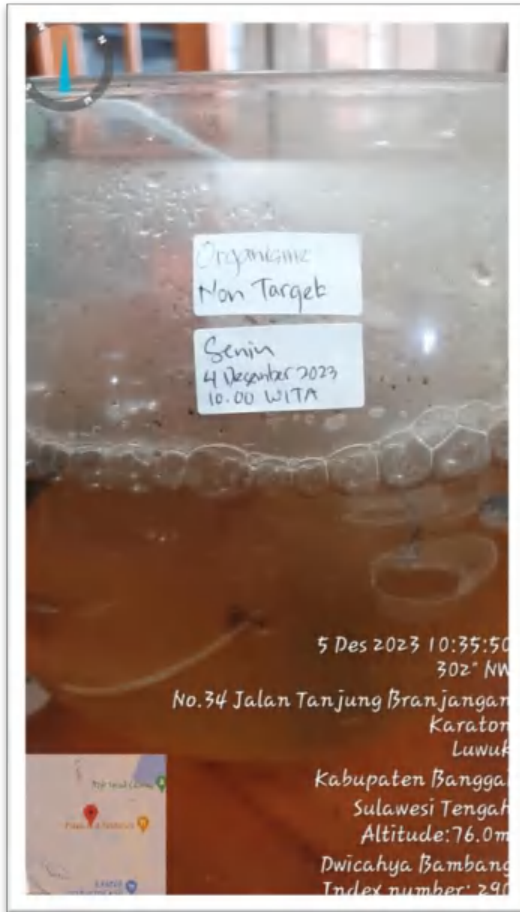
PERLAKUAN PADA LARVA *AEDES SP.*
(LABORATORIUM FKM UNIVERSITAS TOMPOTIKA LUWUK)



Perlakuan untuk menguji Efek Residu ekstrak daun jarak kepyar



**PERLAKUAN PADA IKAN GUPPY
(LABORATORIUM FKM UNIVERSITAS TOMPOTIKA LUWUK)**



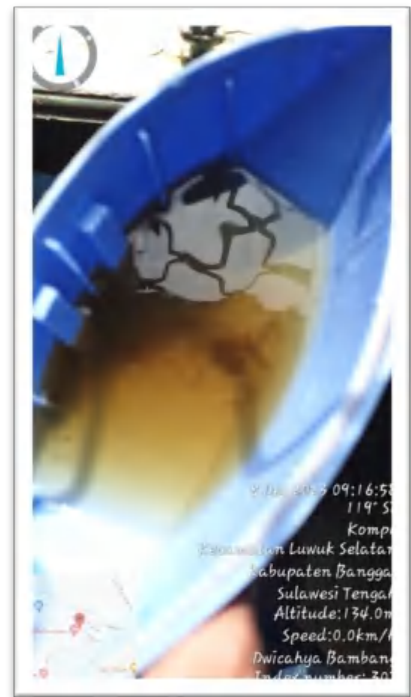
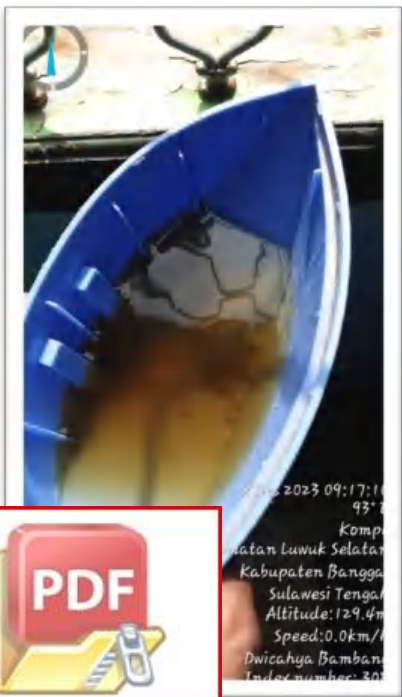
Perlakuan terhadap Organisme non target (ikan guppy)



**PERLAKUAN PADA LARVA *Aedes aegypti* DAN *Aedes albopictus*
(UJI LAPANGAN SKALA KECIL)**

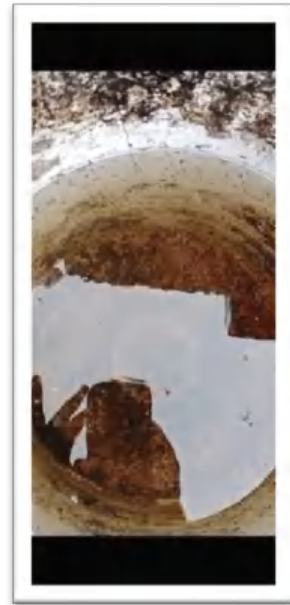


Perlakuan terhadap Larva *Aedes aegypti*

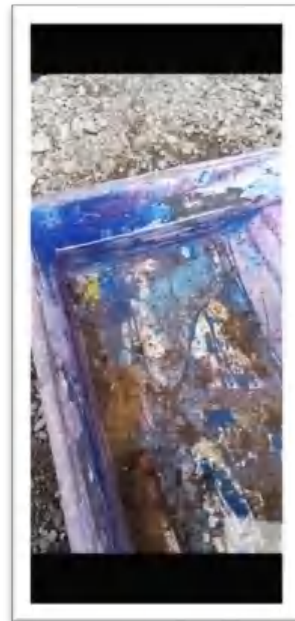


Optimization Software:
www.balesio.com

Perlakuan terhadap Larva *Aedes aegypti*



Perlakuan terhadap Larva *Aedes albopictus*



Perlakuan terhadap Larva *Aedes albopictus*



**PERLAKUAN PADA LARVA *Aedes* SP.
(LABORATORIUM POLTEKKES KEMENKES PALU)**



Foto Bersama Kepala Lab. Kesling



Perlakuan ekstrak daun jarak kepyar



Perlakuan ekstrak daun jarak kepyar





Perlakuan ekstrak daun jarak kepyar



Pengamatan Mortalitas Larva



Pengamatan Mortalitas Larva



Pengamatan Mortalitas Larva

PERLAKUAN PADA LARVA *AEDES SP.*
(LABORATORIUM FKM UNIVERSITAS TOMPOTIKA LUWUK)



Perlakuan untuk menguji Efek Residu ekstrak daun jarak kepyar



**PERLAKUAN PADA IKAN GUPPY
(LABORATORIUM FKM UNIVERSITAS TOMPOTIKA LUWUK)**



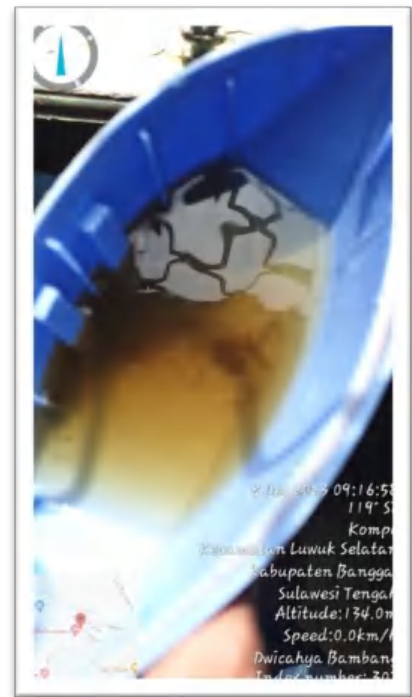
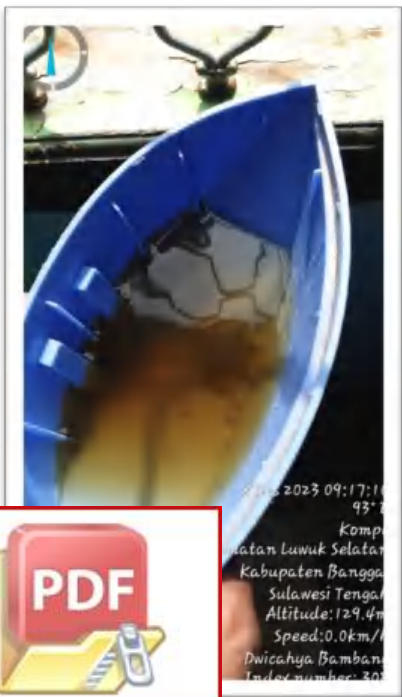
Perlakuan terhadap Organisme non target (ikan guppy)



**PERLAKUAN PADA LARVA *Aedes Aegypti* DAN *Aedes Albopictus*
(UJI LAPANGAN SKALA KECIL)**



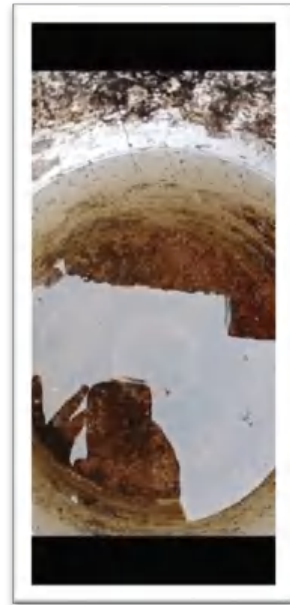
Perlakuan terhadap Larva *Aedes aegypti*



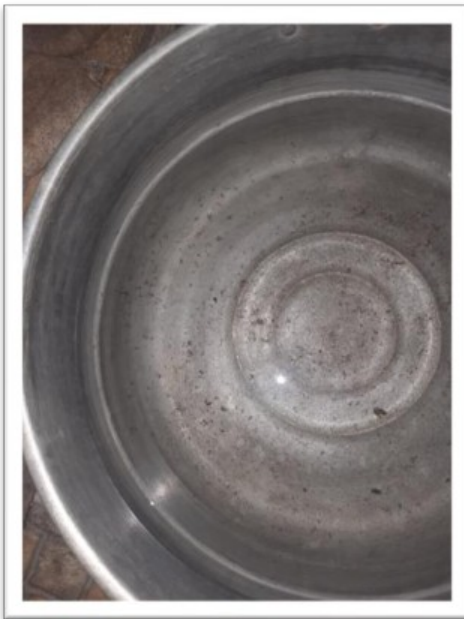
PDF

Optimization Software:
www.balesio.com

Perlakuan terhadap Larva *Aedes aegypti*



Perlakuan terhadap Larva *Aedes albopictus*



Perlakuan terhadap Larva *Aedes albopictus*



HASIL ANALISIS LETHAL CONCENTRATION
EKSTRAK DAUN TUA DAN DAUN MUDA
DAUN JARAK KEPYAR

LC	DAUN MUDA				DAUN TUA			
	HEKSAN	ETIL ASETAT	ETANOL	AIR	HEKSAN	ETIL ASETAT	ETANOL	AIR
50	210.082	200.422	210.082	410.225	288.152	188.822	131.403	232.998
90	762.405	299.305	587.854	819.174	498.447	3180.812	452.954	345.193



DAUN MUDA

1. PELARUT ETANOL

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	13	Yes

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PR		2.868	.875	3.277	.001	1.153	4.583
		-6.660	2.080	-3.202	.001	-8.740	-4.580

a. = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)



Optimization Software:
www.balesio.com

Covariances and Correlations of Parameter Estimates

		konsentrasi	Natural Response
PROBIT	Konsentrasi	.766	.802
	Natural Response	.078	.012

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.000	.110

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	4.272	1	.039 ^a

a. Since the significance level is less than .050, a heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	5	7.483	-2.483	.100
	2	2.000	75	15	13.320	1.680	.178
	3	2.176	75	31	25.306	5.694	.337
	4	2.301	75	31	35.668	-4.668	.476

Confidence Limits

	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^b		
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
PF	.010	32.448	.	.	1.511	.	.
		40.387	.	.	1.606	.	.
		46.403	.	.	1.667	.	.
		51.513	.	.	1.712	.	.
		56.082	.	.	1.749	.	.
		60.288	.	.	1.780	.	.
	.070	64.236	.	.	1.808	.	.



LAMPIRAN 7

.080	67.988	.	.	1.832	.	.
.090	71.592	.	.	1.855	.	.
.100	75.077	.	.	1.876	.	.
.150	91.407	.	.	1.961	.	.
.200	106.884	.	.	2.029	.	.
.250	122.234	.	.	2.087	.	.
.300	137.888	.	.	2.140	.	.
.350	154.179	.	.	2.188	.	.
.400	171.414	.	.	2.234	.	.
.450	189.920	.	.	2.279	.	.
.500	210.082	.	.	2.322	.	.
.550	232.384	.	.	2.366	.	.
.600	257.473	.	.	2.411	.	.
.650	286.253	.	.	2.457	.	.
.700	320.072	.	.	2.505	.	.
.750	361.065	.	.	2.558	.	.
.800	412.918	.	.	2.616	.	.
.850	482.832	.	.	2.684	.	.
.900	587.854	.	.	2.769	.	.
.910	616.472	.	.	2.790	.	.
.920	649.144	.	.	2.812	.	.
.930	687.070	.	.	2.837	.	.
.940	732.053	.	.	2.865	.	.
.950	786.962	.	.	2.896	.	.
.960	856.757	.	.	2.933	.	.
.970	951.101	.	.	2.978	.	.
.980	1092.790	.	.	3.039	.	.
.990	1360.169	.	.	3.134	.	.

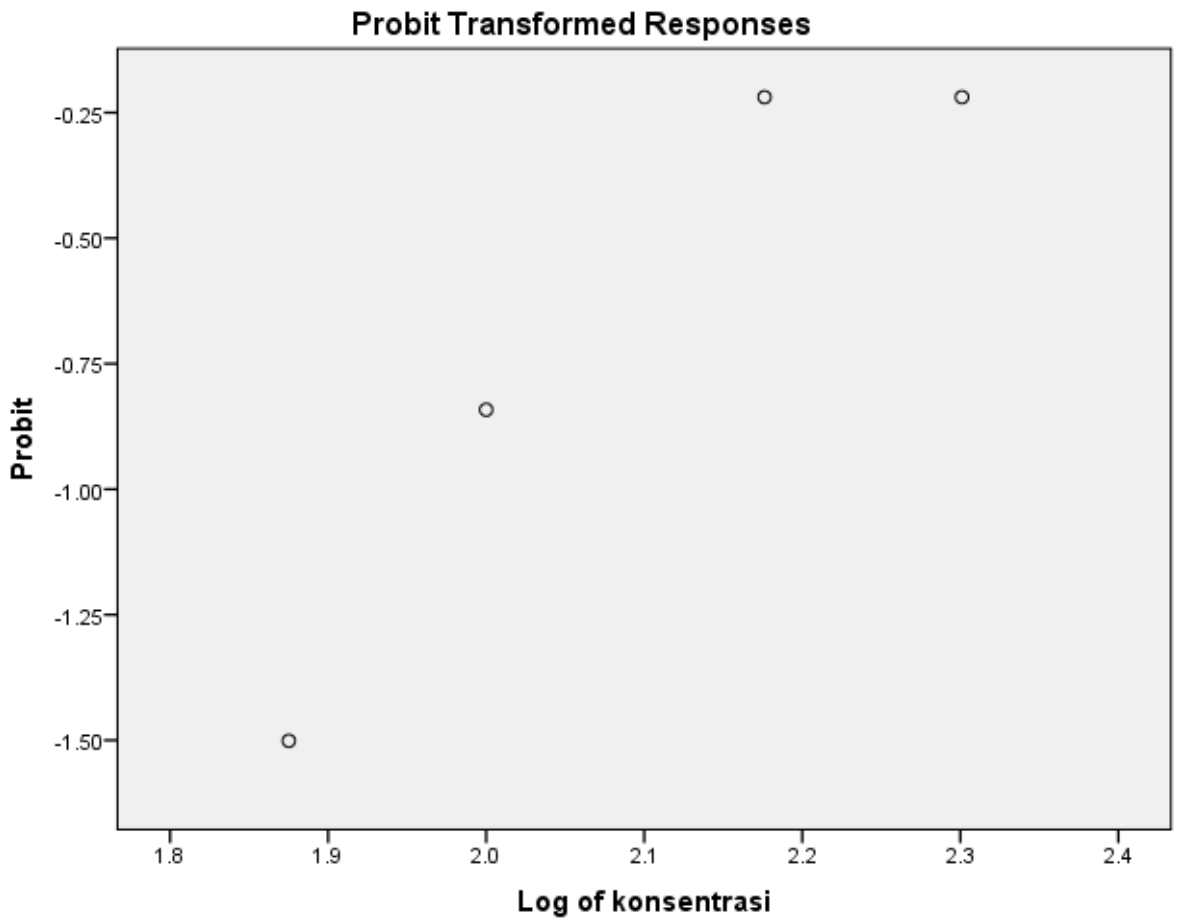
a.

ed.

b.



Optimization Software:
www.balesio.com



2. PELARUT HEKSANA

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	19	Yes

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PROBIT ^a	konsentrasi	2.642	2.752	.960	.337	-2.751	8.035
	Intercept	-6.334	6.684	-.948	.343	-13.018	.349

a. PROBIT model: $PROBIT(p) = Intercept + BX$ (Covariates X are transformed using the base 10.000 logarithm.)

Correlations of Parameter Estimates

	konsentrasi	Natural Response
PROBIT	7.571	.972
Constant	.729	.074

Correlations (above).



Optimization Software:
www.balesio.com

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.064	.272

a. Control group is not provided.

Chi-Square Tests

	Chi-Square	df ^b	Sig.
PROBIT Pearson Goodness-of-Fit Test	.772	1	.379 ^a

a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	10	10.666	-.666	.142
	2	2.000	75	17	15.098	1.902	.201
	3	2.176	75	22	24.408	-2.408	.325
	4	2.301	75	34	32.847	1.153	.438

Confidence Limits

	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^a			
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	
	.010	32.867	.	.	1.517	.	.	
	.020	41.680	.	.	1.620	.	.	
	.030	48.460	.	.	1.685	.	.	
	.040	54.278	.	.	1.735	.	.	
	.050	59.522	.	.	1.775	.	.	
PR		4.382	.	.	1.809	.	.	
		8.970	.	.	1.839	.	.	
		3.354	.	.	1.865	.	.	
		7.582	.	.	1.890	.	.	
		1.690	.	.	1.912	.	.	
		1.143	.	.	2.005	.	.	
		.200	119.857	.	.	2.079	.	.

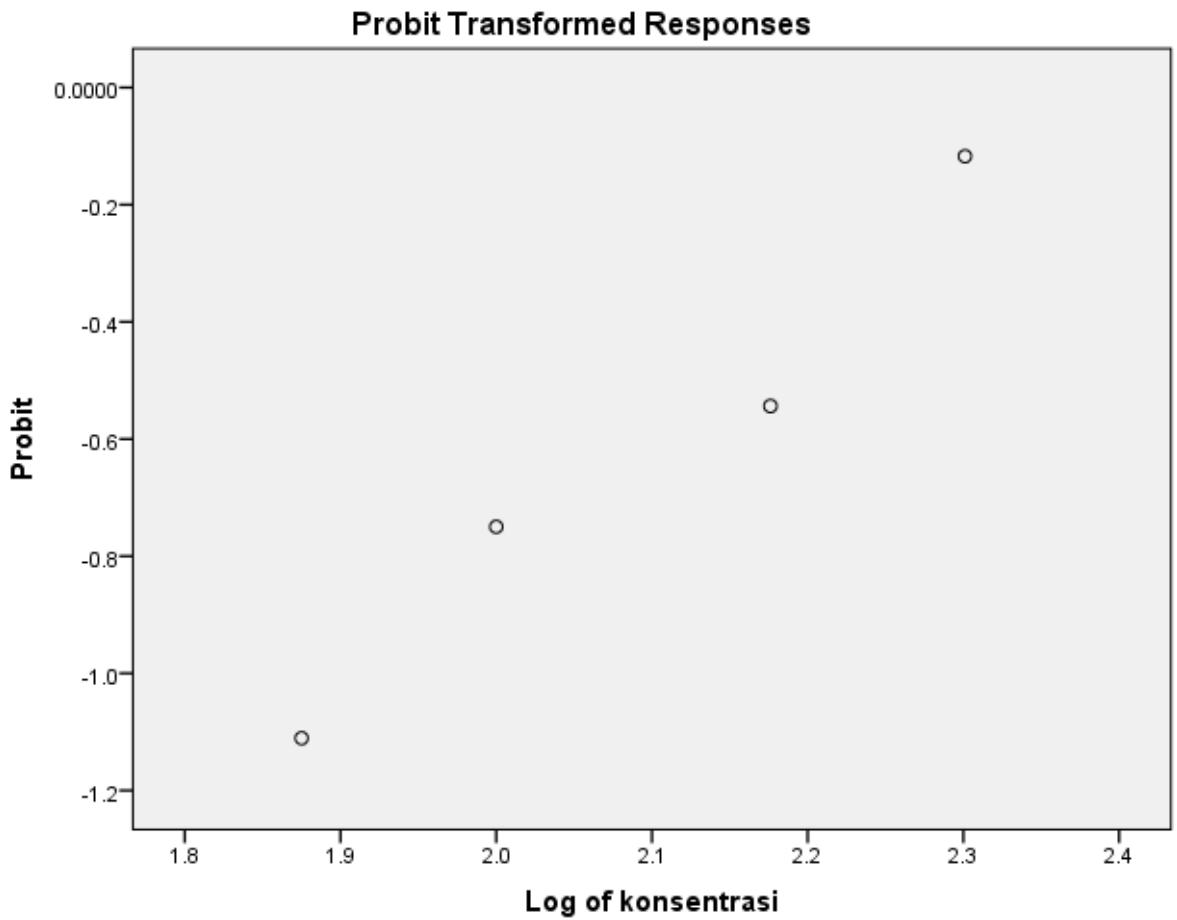


LAMPIRAN 7

.250	138.648	.	.	2.142	.	.
.300	158.021	.	.	2.199	.	.
.350	178.382	.	.	2.251	.	.
.400	200.123	.	.	2.301	.	.
.450	223.676	.	.	2.350	.	.
.500	249.561	.	.	2.397	.	.
.550	278.442	.	.	2.445	.	.
.600	311.213	.	.	2.493	.	.
.650	349.143	.	.	2.543	.	.
.700	394.129	.	.	2.596	.	.
.750	449.201	.	.	2.652	.	.
.800	519.628	.	.	2.716	.	.
.850	615.772	.	.	2.789	.	.
.900	762.405	.	.	2.882	.	.
.910	802.771	.	.	2.905	.	.
.920	849.049	.	.	2.929	.	.
.930	903.018	.	.	2.956	.	.
.940	967.359	.	.	2.986	.	.
.950	1046.355	.	.	3.020	.	.
.960	1147.445	.	.	3.060	.	.
.970	1285.202	.	.	3.109	.	.
.980	1494.263	.	.	3.174	.	.
.990	1894.931	.	.	3.278	.	.

a. Logarithm base = 10.





3. PELARUT ETIL ASETAT

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	20	No ^a

a. Parameter estimates did not converge.

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PROBIT ^a	konsentrasi	7.358	3.006	2.448	.014	1.466	13.250
	Intercept	-16.938	6.857	-2.470	.014	-23.795	-10.081

a. $\log = \text{Intercept} + BX$ (Covariates X are transformed using the base 10.000)

log



Covariances and Correlations of Parameter Estimates

		Konsentrasi	Natural Response
PROBIT	konsentrasi	9.037	.548
	Natural Response	.066	.002

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.200	.040

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	.234	1	.628 ^a


a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	14	15.036	-1.036	.200
	2	2.000	75	17	15.774	1.226	.210
	3	2.176	75	25	25.620	-.620	.342
	4	2.301	75	45	44.831	.169	.598

Confidence Limits

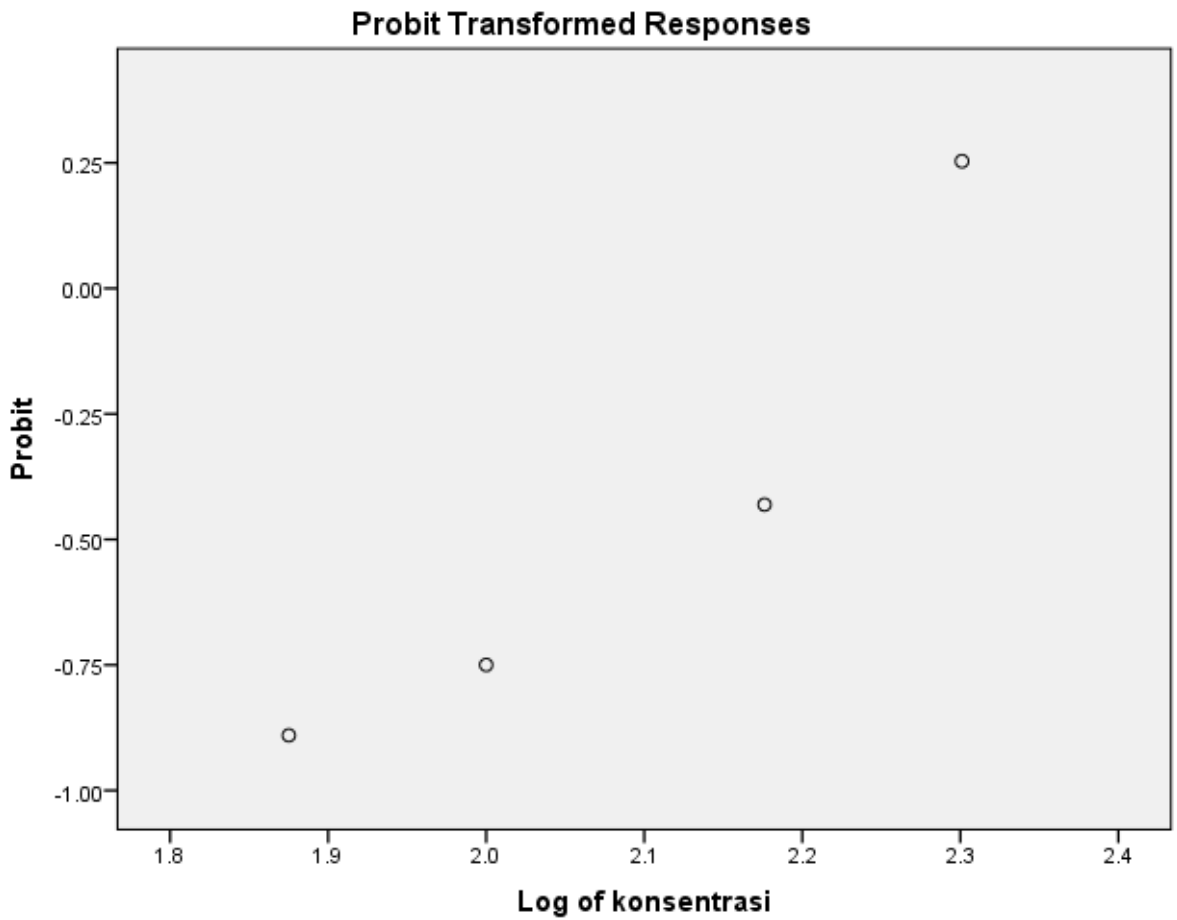
	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^a		
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
PF	 <p>Optimization Software: www.balesio.com</p>	6.780	6.282	132.145	1.986	.798	2.121
		5.398	9.625	138.753	2.023	.983	2.142
		1.260	12.615	143.149	2.046	1.101	2.156
		5.883	15.460	146.571	2.064	1.189	2.166
		9.785	18.238	149.434	2.078	1.261	2.174
		.060	23.210	20.990	151.932	2.091	1.322	2.182

LAMPIRAN 7

.070	126.293	23.741	154.172	2.101	1.376	2.188
.080	129.119	26.506	156.221	2.111	1.423	2.194
.090	131.744	29.297	158.122	2.120	1.467	2.199
.100	134.208	32.121	159.907	2.128	1.507	2.204
.150	144.907	46.963	167.730	2.161	1.672	2.225
.200	154.016	63.357	174.647	2.188	1.802	2.242
.250	162.285	81.627	181.441	2.210	1.912	2.259
.300	170.089	101.901	188.842	2.231	2.008	2.276
.350	177.655	123.840	198.053	2.250	2.093	2.297
.400	185.146	145.896	211.632	2.268	2.164	2.326
.450	192.694	164.756	234.163	2.285	2.217	2.370
.500	200.422	178.212	269.540	2.302	2.251	2.431
.550	208.460	187.670	318.689	2.319	2.273	2.503
.600	216.958	195.143	382.949	2.336	2.290	2.583
.650	226.106	201.786	466.216	2.354	2.305	2.669
.700	236.164	208.214	575.882	2.373	2.319	2.760
.750	247.521	214.846	725.141	2.394	2.332	2.860
.800	260.811	222.089	938.947	2.416	2.347	2.973
.850	277.205	230.518	1270.726	2.443	2.363	3.104
.900	299.305	241.273	1861.865	2.476	2.383	3.270
.910	304.901	243.910	2042.113	2.484	2.387	3.310
.920	311.100	246.795	2257.867	2.493	2.392	3.354
.930	318.062	249.994	2521.634	2.503	2.398	3.402
.940	326.021	253.602	2852.967	2.513	2.404	3.455
.950	335.342	257.763	3284.522	2.525	2.411	3.516
.960	346.634	262.720	3875.945	2.540	2.419	3.588
.970	361.038	268.920	4751.341	2.558	2.430	3.677
	1.117	277.354	6229.252	2.581	2.443	3.794
	5.055	291.119	9548.151	2.618	2.464	3.980

a.





4. ETANOL AIR

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	20	No ^a

a. Parameter estimates did not converge.

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PF		4.267	3.612	1.181	.237	-2.812	11.345
		-11.149	8.235	-1.354	.176	-19.384	-2.915

a. \log = Intercept + BX (Covariates X are transformed using the base 10.000)



Optimization Software:
www.balesio.com

Covariances and Correlations of Parameter Estimates

		konsentrasi	Natural Response
PROBIT	konsentrasi	13.044	.315
	Natural Response	.027	.001

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.081	.024

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	1.640	1	.200 ^a

a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	8	6.095	1.905	.081
	2	2.000	75	4	6.346	-2.346	.085
	3	2.176	75	8	8.186	-.186	.109
	4	2.301	75	13	12.353	.647	.165



Confidence Limits

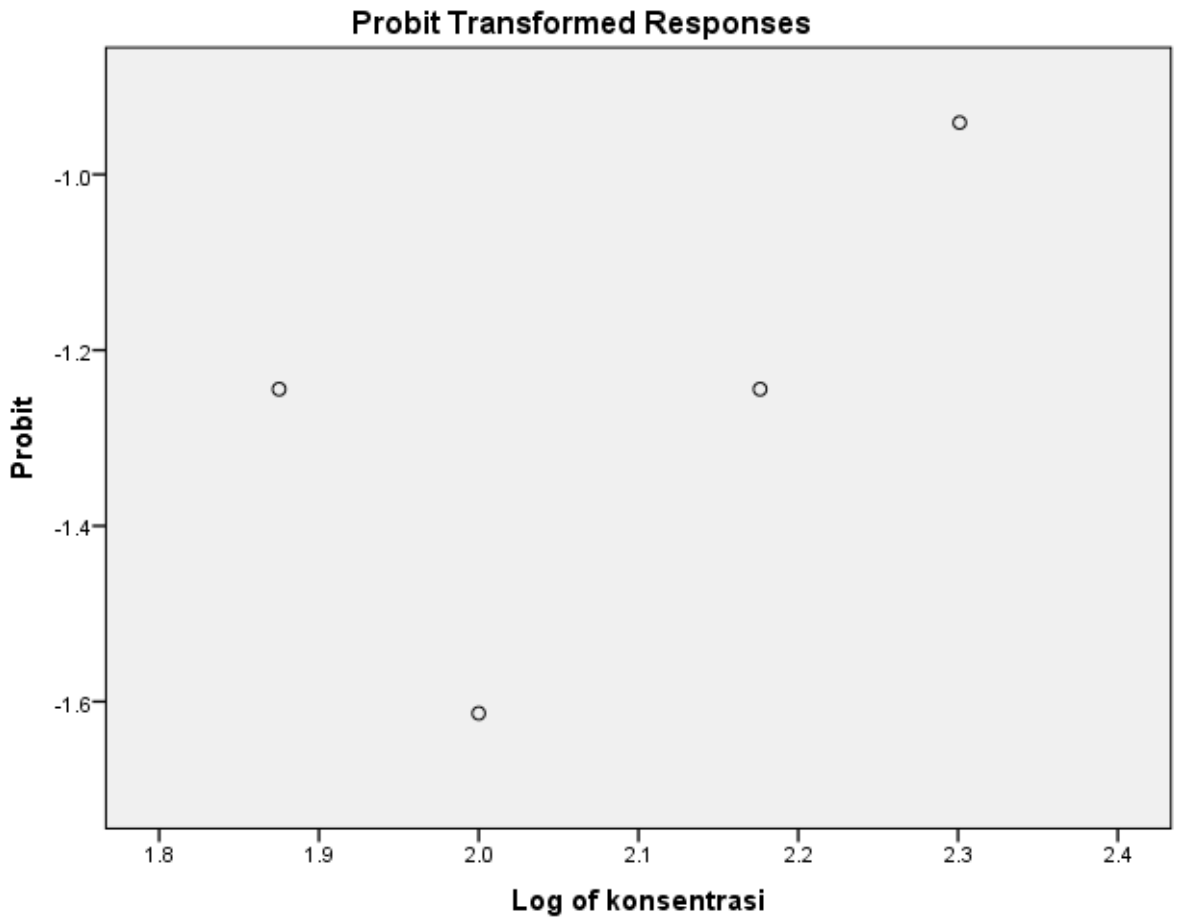
	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^a		
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
	.010	116.897	.	.	2.068	.	.
	.020	135.422	.	.	2.132	.	.
	.030	148.671	.	.	2.172	.	.
	.040	159.484	.	.	2.203	.	.
	.050	168.858	.	.	2.228	.	.
	.060	177.269	.	.	2.249	.	.
	.070	184.988	.	.	2.267	.	.
	.080	192.185	.	.	2.284	.	.
	.090	198.972	.	.	2.299	.	.
	.100	205.432	.	.	2.313	.	.
	.150	234.485	.	.	2.370	.	.
	.200	260.479	.	.	2.416	.	.
	.250	285.065	.	.	2.455	.	.
	.300	309.115	.	.	2.490	.	.
	.350	333.208	.	.	2.523	.	.
PROBIT	.400	357.804	.	.	2.554	.	.
	.450	383.329	.	.	2.584	.	.
	.500	410.225	.	.	2.613	.	.
	.550	439.009	.	.	2.642	.	.
	.600	470.325	.	.	2.672	.	.
	.650	505.043	.	.	2.703	.	.
	.700	544.408	.	.	2.736	.	.
	.750	590.338	.	.	2.771	.	.
	.800	646.057	.	.	2.810	.	.
	.850	717.676	.	.	2.856	.	.
	.900	819.174	.	.	2.913	.	.
	.950	945.768	.	.	2.927	.	.
	.975	1075.639	.	.	2.942	.	.
	.990	1209.703	.	.	2.959	.	.
	.995	1349.315	.	.	2.977	.	.



LAMPIRAN 7

.950	996.603	.	.	2.999	.	.
.960	1055.179	.	.	3.023	.	.
.970	1131.928	.	.	3.054	.	.
.980	1242.665	.	.	3.094	.	.
.990	1439.602	.	.	3.158	.	.

a. Logarithm base = 10.



DAUN JARAK TUA

1. PELARUT ETANOL

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	15	Yes

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PR		2.385	1.391	1.714	.086	-.342	5.111
		-5.052	3.566	-1.417	.157	-8.617	-1.486

a. \log = Intercept + BX (Covariates X are transformed using the base 10.000)



Covariances and Correlations of Parameter Estimates

		konsentrasi	Natural Response
PROBIT	konsentrasi	1.935	.943
	Natural Response	.633	.233

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.000	.482

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	2.424	1	.119 ^a

a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	21	21.053	-.053	.281
	2	2.000	75	27	29.149	-2.149	.389
	3	2.176	75	47	41.589	5.411	.555
	4	2.301	75	47	50.116	-3.116	.668

Confidence Limits

	% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^a		
	Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
PROBIT	3.899	.	.	1.143	.	.
	8.085	.	.	1.257	.	.
	1.372	.	.	1.330	.	.
	.040	24.233	.	1.384	.	.



LAMPIRAN 7

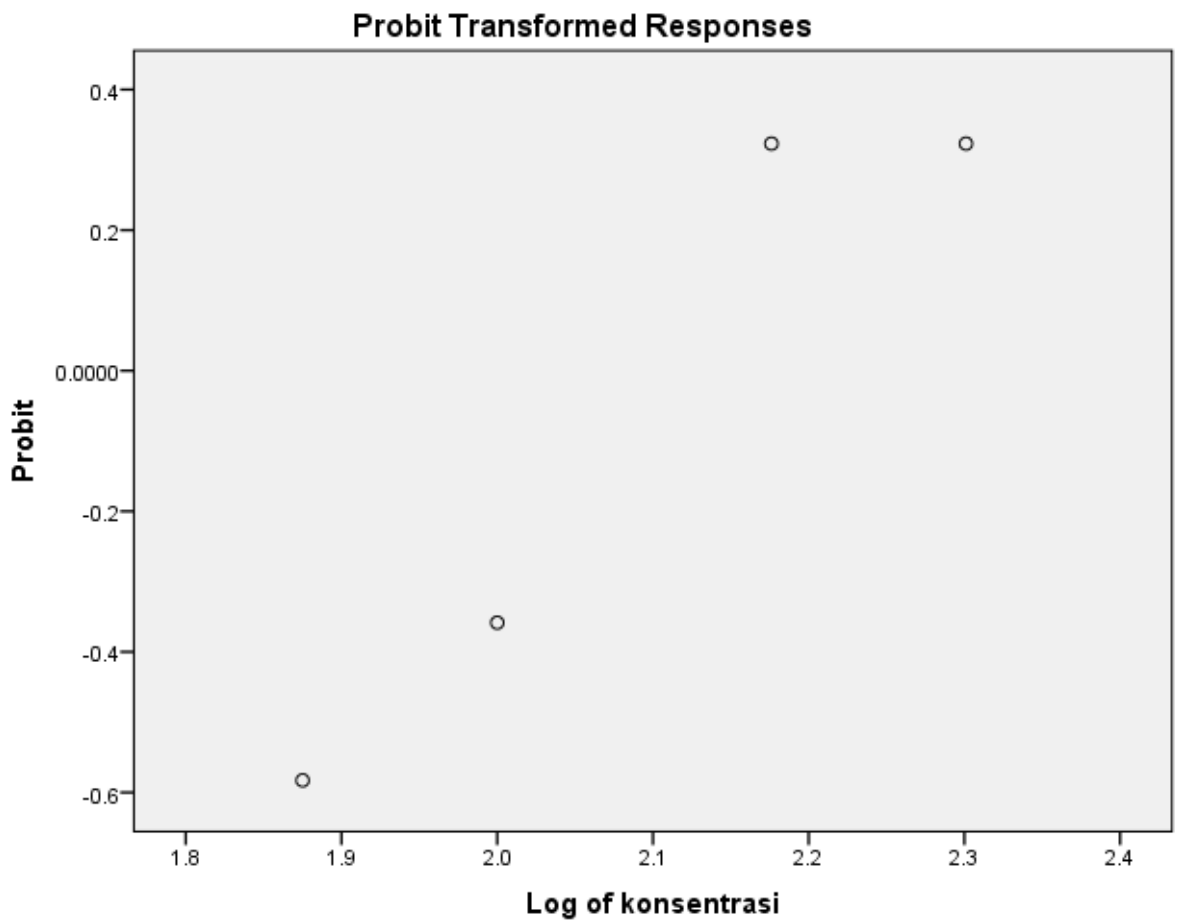
.050	26.841	.	.	1.429	.	.
.060	29.280	.	.	1.467	.	.
.070	31.601	.	.	1.500	.	.
.080	33.834	.	.	1.529	.	.
.090	36.002	.	.	1.556	.	.
.100	38.120	.	.	1.581	.	.
.150	48.301	.	.	1.684	.	.
.200	58.298	.	.	1.766	.	.
.250	68.508	.	.	1.836	.	.
.300	79.193	.	.	1.899	.	.
.350	90.576	.	.	1.957	.	.
.400	102.887	.	.	2.012	.	.
.450	116.388	.	.	2.066	.	.
.500	131.403	.	.	2.119	.	.
.550	148.356	.	.	2.171	.	.
.600	167.823	.	.	2.225	.	.
.650	190.633	.	.	2.280	.	.
.700	218.035	.	.	2.339	.	.
.750	252.040	.	.	2.401	.	.
.800	296.182	.	.	2.472	.	.
.850	357.485	.	.	2.553	.	.
.900	452.954	.	.	2.656	.	.
.910	479.604	.	.	2.681	.	.
.920	510.335	.	.	2.708	.	.
.930	546.403	.	.	2.738	.	.
.940	589.707	.	.	2.771	.	.
	3.300	.	.	2.808	.	.
	2.520	.	.	2.853	.	.
	7.906	.	.	2.907	.	.
	4.759	.	.	2.980	.	.
	2.265	.	.	3.094	.	.



Optimization Software:
www.balesio.com

LAMPIRAN 7

a. Logarithm base = 10.



2. PELARUT HEKSANA

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	20	No ^a

a. Parameter estimates did not converge.

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PF		5.385	3.622	1.487	.137	-1.714	12.484
		-13.244	8.140	-1.627	.104	-21.384	-5.105

a. log = Intercept + BX (Covariates X are transformed using the base 10.000)



Optimization Software:
www.balesio.com

Covariances and Correlations of Parameter Estimates

		konsentrasi	Natural Response
PROBIT	konsentrasi	13.119	-.018
	Natural Response	-.002	.001

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.292	.035

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	4.810	1	.028 ^a

a. Since the significance level is less than .050, a heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	26	21.943	4.057	.293
	2	2.000	75	19	22.254	-3.254	.297
	3	2.176	75	19	25.267	-6.267	.337
	4	2.301	75	36	32.337	3.663	.431

Confidence Limits

	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^b		
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
PR		6.560	.	.	2.028	.	.
		9.734	.	.	2.078	.	.
		8.925	.	.	2.110	.	.
		6.302	.	.	2.135	.	.
		2.612	.	.	2.154	.	.



Optimization Software:
www.balesio.com

LAMPIRAN 7

.060	148.212	.	.	2.171	.	.
.070	153.303	.	.	2.186	.	.
.080	158.010	.	.	2.199	.	.
.090	162.416	.	.	2.211	.	.
.100	166.581	.	.	2.222	.	.
.150	184.989	.	.	2.267	.	.
.200	201.059	.	.	2.303	.	.
.250	215.954	.	.	2.334	.	.
.300	230.269	.	.	2.362	.	.
.350	244.379	.	.	2.388	.	.
.400	258.567	.	.	2.413	.	.
.450	273.077	.	.	2.436	.	.
.500	288.152	.	.	2.460	.	.
.550	304.059	.	.	2.483	.	.
.600	321.123	.	.	2.507	.	.
.650	339.766	.	.	2.531	.	.
.700	360.585	.	.	2.557	.	.
.750	384.487	.	.	2.585	.	.
.800	412.971	.	.	2.616	.	.
.850	448.847	.	.	2.652	.	.
.900	498.447	.	.	2.698	.	.
.910	511.227	.	.	2.709	.	.
.920	525.482	.	.	2.721	.	.
.930	541.616	.	.	2.734	.	.
.940	560.221	.	.	2.748	.	.
.950	582.221	.	.	2.765	.	.
.960	609.175	.	.	2.785	.	.
.970	644.028	.	.	2.809	.	.
.980	693.464	.	.	2.841	.	.
	9.199	.	.	2.892	.	.

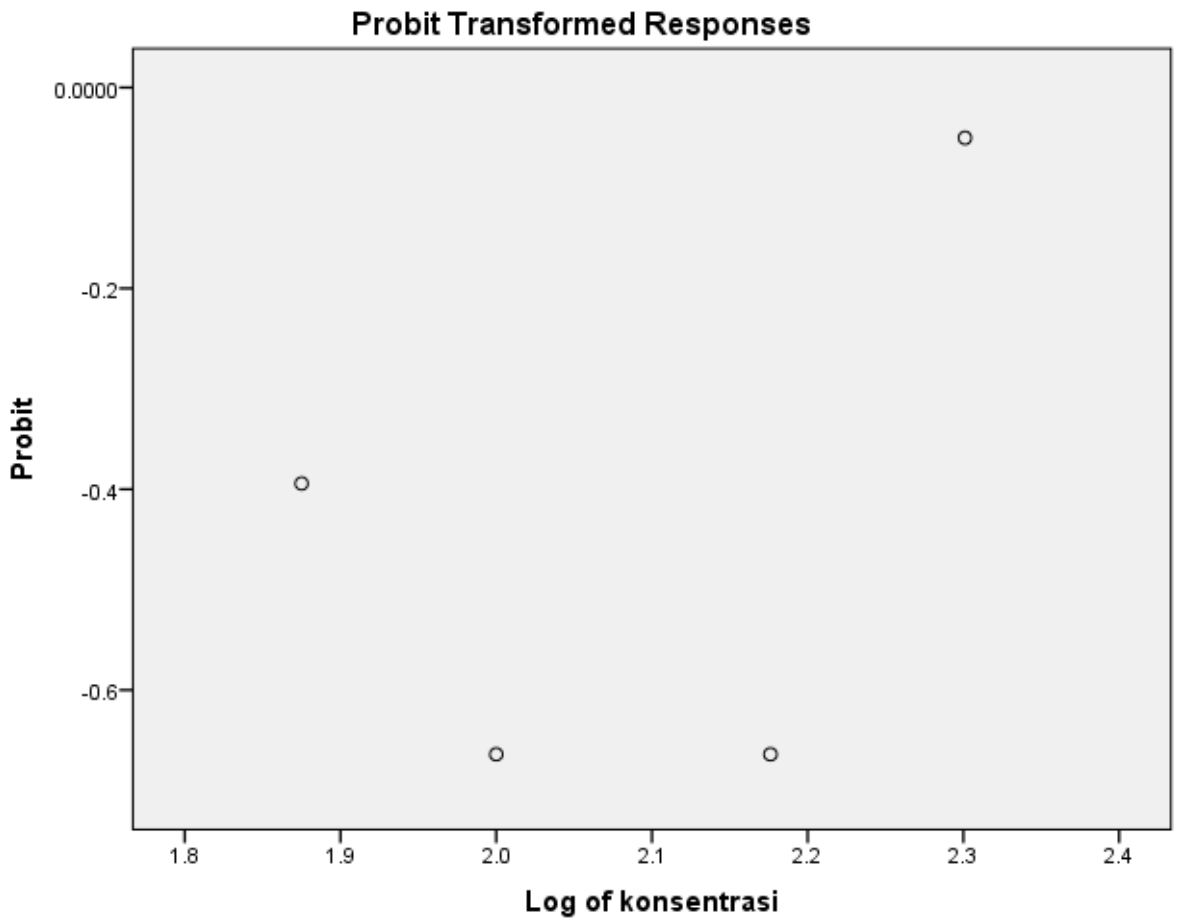
a.

b.



Optimization Software:
www.balesio.com

ed.



3. PELARUT ETIL ASETAT

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	18	Yes

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PROBIT ^a	konsentrasi	1.045	1.041	1.004	.316	-.996	3.086
		-2.378	3.257	-.730	.465	-5.636	.879

a. = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)



Covariances and Correlations of Parameter Estimates

		konsentrasi	Natural Response
PROBIT	konsentrasi	1.084	.901
	Natural Response	.725	.598

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.000	.773

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	6.873	1	.009 ^a

a. Since the significance level is less than .050, a heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	20	25.321	-5.321	.338
	2	2.000	75	38	28.988	9.012	.387
	3	2.176	75	31	34.381	-3.381	.458
	4	2.301	75	38	38.281	-.281	.510

Confidence Limits

	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^b		
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound
PR	1.121	.	.	.	.050	.	.
	2.044	.	.	.	.311	.	.
	2.993	.	.	.	.476	.	.
	3.986	.	.	.	.601	.	.
	5.034	.	.	.	.702	.	.



Optimization Software:
www.balesio.com

LAMPIRAN 7

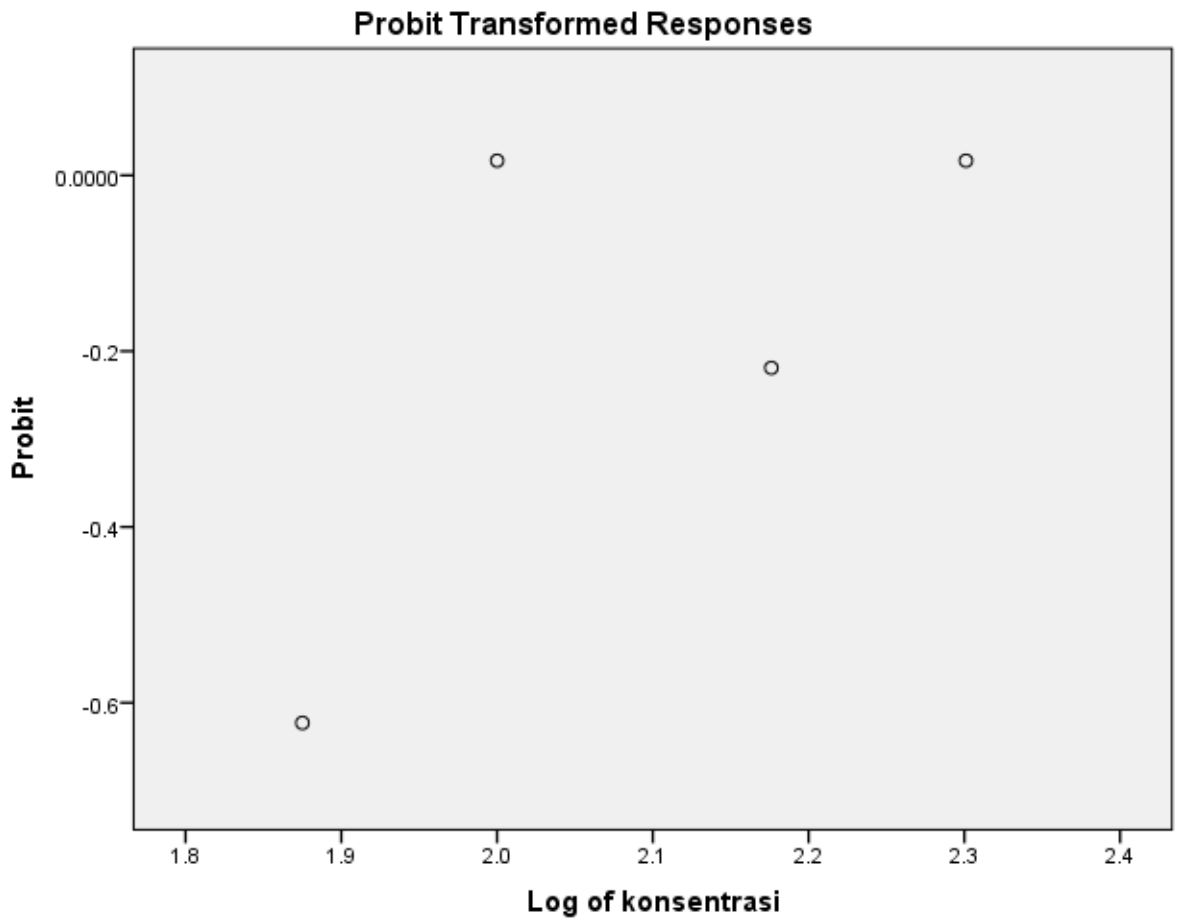
.060	6.139	.	.	.788	.	.
.070	7.306	.	.	.864	.	.
.080	8.538	.	.	.931	.	.
.090	9.838	.	.	.993	.	.
.100	11.209	.	.	1.050	.	.
.150	19.238	.	.	1.284	.	.
.200	29.552	.	.	1.471	.	.
.250	42.711	.	.	1.631	.	.
.300	59.454	.	.	1.774	.	.
.350	80.777	.	.	1.907	.	.
.400	108.041	.	.	2.034	.	.
.450	143.150	.	.	2.156	.	.
.500	188.822	.	.	2.276	.	.
.550	249.066	.	.	2.396	.	.
.600	329.999	.	.	2.519	.	.
.650	441.383	.	.	2.645	.	.
.700	599.681	.	.	2.778	.	.
.750	834.757	.	.	2.922	.	.
.800	1206.453	.	.	3.082	.	.
.850	1853.327	.	.	3.268	.	.
.900	3180.812	.	.	3.503	.	.
.910	3624.079	.	.	3.559	.	.
.920	4175.905	.	.	3.621	.	.
.930	4880.131	.	.	3.688	.	.
.940	5807.916	.	.	3.764	.	.
.950	7083.205	.	.	3.850	.	.
.960	8943.651	.	.	3.952	.	.
.970	11913.296	.	.	4.076	.	.
.980	17440.372	.	.	4.242	.	.
	1.070	.	.	4.502	.	.

a. ed.

b.



Optimization Software:
www.balesio.com



4. ETANOL AIR

Probit Analysis

[DataSet0]

Warnings

Relative Median Potency Estimates are not displayed because there is no grouping variable in the model.

Data Information

		N of Cases
Valid		4
	Missing	0
	LOG Transform Cannot be	0
Rejected	Done	0
	Number of Responses >	0
	Number of Subjects	0
Control Group		0

Convergence Information

	Number of Iterations	Optimal Solution Found
PROBIT	20	No ^a

a. Parameter estimates did not converge.

Parameter Estimates

	Parameter	Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
PR		7.507	3.848	1.951	.051	-.035	15.049
		-17.772	8.783	-2.024	.043	-26.555	-8.990

a. log = Intercept + BX (Covariates X are transformed using the base 10.000)



Optimization Software:
www.balesio.com

Covariances and Correlations of Parameter Estimates

		konsentrasi	Natural Response
PROBIT	Konsentrasi	14.807	.339
	Natural Response	.040	.001

Covariances (below) and Correlations (above).

Natural Response Rate Estimate^a

	Estimate	Std. Error
PROBIT	.165	.030

a. Control group is not provided.

Chi-Square Tests

		Chi-Square	df ^b	Sig.
PROBIT	Pearson Goodness-of-Fit Test	1.573	1	.210 ^a

a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.

b. Statistics based on individual cases differ from statistics based on aggregated cases.

Cell Counts and Residuals

	Number	konsentrasi	Number of Subjects	Observed Responses	Expected Responses	Residual	Probability
PROBIT	1	1.875	75	11	12.406	-1.406	.165
	2	2.000	75	15	12.581	2.419	.168
	3	2.176	75	14	17.127	-3.127	.228
	4	2.301	75	33	31.760	1.240	.423

Confidence Limits

	Probability	95% Confidence Limits for konsentrasi			95% Confidence Limits for log(konsentrasi) ^a			
		Estimate	Lower Bound	Upper Bound	Estimate	Lower Bound	Upper Bound	
PR		4.148	.	.	2.057	.	.	
		4.103	.	.	2.094	.	.	
		0.864	.	.	2.117	.	.	
		6.192	.	.	2.134	.	.	
		0.685	.	.	2.148	.	.	
		.060	144.627	.	.	2.160	.	.



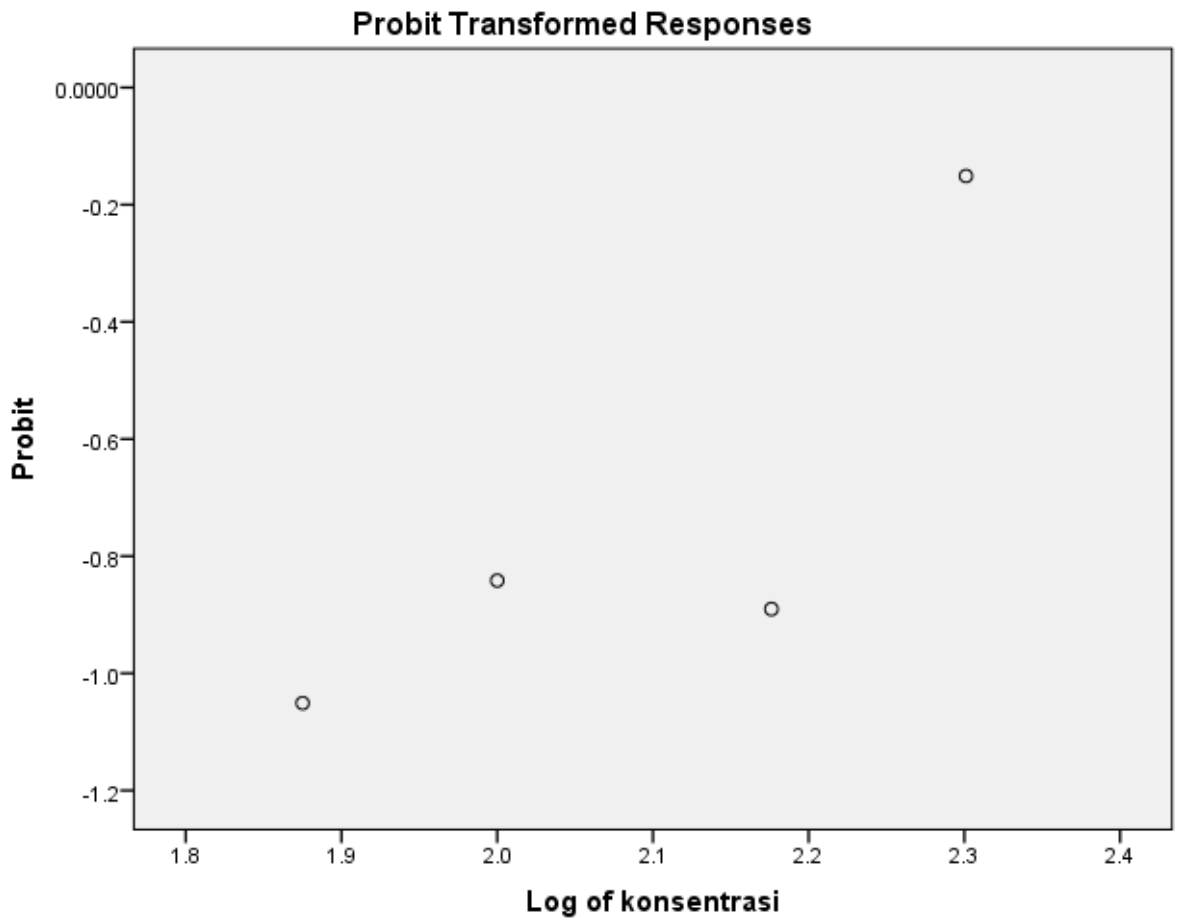
LAMPIRAN 7

.070	148.173	.	.	2.171	.	.
.080	151.422	.	.	2.180	.	.
.090	154.439	.	.	2.189	.	.
.100	157.269	.	.	2.197	.	.
.150	169.548	.	.	2.229	.	.
.200	179.988	.	.	2.255	.	.
.250	189.455	.	.	2.278	.	.
.300	198.381	.	.	2.297	.	.
.350	207.026	.	.	2.316	.	.
.400	215.578	.	.	2.334	.	.
.450	224.188	.	.	2.351	.	.
.500	232.998	.	.	2.367	.	.
.550	242.153	.	.	2.384	.	.
.600	251.825	.	.	2.401	.	.
.650	262.228	.	.	2.419	.	.
.700	273.656	.	.	2.437	.	.
.750	286.548	.	.	2.457	.	.
.800	301.620	.	.	2.479	.	.
.850	320.192	.	.	2.505	.	.
.900	345.193	.	.	2.538	.	.
.910	351.518	.	.	2.546	.	.
.920	358.521	.	.	2.555	.	.
.930	366.383	.	.	2.564	.	.
.940	375.367	.	.	2.574	.	.
.950	385.883	.	.	2.586	.	.
.960	398.614	.	.	2.601	.	.
.970	414.843	.	.	2.618	.	.
.980	437.444	.	.	2.641	.	.
.990	475.591	.	.	2.677	.	.

a.



Optimization Software:
www.balesio.com



Data Mortalitas Larva Uji pada Uji Laboratorium Daun Muda

Jumlah Larva setiap wadah sebesar
25 Ekor

Jumlah air dalam wadah sebesar 100ml

Pelarut Etanol

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Muda Jarak Kepar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	-	-	-	-	-	-	-	-	-	1	-	-	23	25	24	-	-	-
2	-	-	-	-	-	1	1	1	1	1	-	-	2	-	1	-	-	-
3	-	-	-	-	-	1	1	2	-	-	2	1	-	-	-	-	-	-
4	-	-	-	-	1	-	-	1	2	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	1	1	2	1	1	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-
8	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-
12	1	-	-	-	-	1	-	1	-	1	1	-	-	-	-	-	-	-
13	-	-	1	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	1	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-
16	-	-	-	1	-	1	1	1	-	1	-	-	-	-	-	-	-	-
17	-	1	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-
18	-	-	-	1	-	-	2	-	-	1	-	2	-	-	-	-	-	-
19	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	1	-	-	2	-	2	-	-	-	-	-	-	-
21	-	-	-	-	1	-	-	1	-	1	1	-	-	-	-	-	-	-
22	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-
24	-	-	-	-	1	-	-	-	1	-	2	1	-	-	-	-	-	-
Jmln	2	2	1	4	5	6	8	12	11	12	11	8	25	25	25	0	0	0



Optimization Software:
www.balesio.com

LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Muda

Jumlah Larva setiap wadah
sebesar 25 Ekor

Jumlah air dalam wadah
sebesar 100ml

Pelarut Heksana

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Muda Jarak Kepyar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	-	-	-	-	-	-	-	-	-	-	-	-	25	25	24	-	-	-
2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-
3	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
6	1	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-
7	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
10	1	-	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	1	-	-	-	-	-	-	2	-	1	1	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
14	1	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-
15	-	-	-	1	-	-	1	-	-	2	1	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	1	-	-	1	1	-	-	-	-	-	-
17	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	1	-	-	2	1	-	1	-	-	-	-	-	-
19	-	-	-	-	1	-	-	1	-	-	1	2	-	-	-	-	-	-
20	-	-	-	-	1	1	-	2	2	2	1	1	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
22	-	-	-	-	1	-	-	-	1	-	1	1	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	1	2	1	-	2	3	1	-	-	-	-	-	-
Jmln	5	3	2	7	6	4	4	6	12	12	11	11	25	25	25	0	0	0



LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Muda

Jumlah Larva setiap wadah
sebesar 25 Ekor

Jumlah air dalam wadah sebesar
100ml

Pelarut Etil Asetat

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Muda Jarak Kepyar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	-	-	-	-	-	-	-	-	-	-	-	-	25	25	25	-	-	-
2	-	-	-	-	-	-	5	2	-	1	1	1	-	-	-	-	-	-
3	-	-	-	-	-	2	2	1	2	1	2	-	-	-	-	-	-	-
4	1	-	-	-	-	2	-	1	-	1	-	-	-	-	-	-	-	-
5	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-
6	-	1	1	1	1	1	-	2	-	-	2	1	-	-	-	-	-	-
7	1	1	1	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-
13	1	-	1	-	-	-	-	-	1	2	1	1	-	-	-	-	-	-
14	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-
15	-	1	-	-	1	1	-	2	1	1	1	2	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	1	1	-	1	-	-	-	1	1	-	-	-	-	-	-
18	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
19	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	1	-	1	-	1	-	2	3	2	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-
jmlh	5	5	4	5	3	9	9	11	5	16	17	12	25	25	25	0	0	0



LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Muda

Jumlah Larva setiap wadah sebesar
25 Ekor

Jumlah air dalam wadah sebesar
100ml

Pelarut Aquades

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Muda Jarak Kepar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	-	-	-	-	-	-	-	-	-	-	-	-	24	25	25	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-
16	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
17	-	1	-	-	-	2	-	-	-	1	1	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
19	-	-	-	1	-	-	1	1	-	1	-	1	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
21	-	-	-	-	-	-	-	1	-	1	1	1	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	1	-	-	-	1	-	-	-	2	-	-	-	-	-	-
Jmlh	4	3	1	2	0	2	2	4	2	4	3	6	25	25	25	0	0	0





LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Tua

Jumlah Larva setiap wadah
sebesar 25 Ekor

Jumlah air dalam wadah sebesar
100ml Pelarut Etanol

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Tua Jarak Kepyar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	1	1	-	-	2	-	1	3	-	3	2	3	25	25	25	-	-	-
2	1	-	2	-	3	-	-	-	3	4	1	-	-	-	-	-	-	-
3	1	-	-	-	1	-	-	-	2	-	1	-	-	-	-	-	-	-
4	-	1	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-
5	-	-	-	-	2	-	2	1	4	-	1	-	-	-	-	-	-	-
6	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
7	-	1	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-
8	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-
9	-	-	-	1	3	1	1	1	-	-	1	-	-	-	-	-	-	-
10	-	-	1	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-
11	-	-	-	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-
12	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
13	-	-	-	1	1	1	1	-	1	-	2	1	-	-	-	-	-	-
14	1	1	-	-	-	-	-	1	-	2	1	3	-	-	-	-	-	-
15	-	-	1	-	-	2	1	1	-	1	1	1	-	-	-	-	-	-
16	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-
17	1	-	-	-	-	1	1	-	1	-	1	-	-	-	-	-	-	-
18					-	-	-	2	1	2	1	1	-	-	-	-	-	-
19					-	1	1	1	-	-	1	1	-	-	-	-	-	-
20					-	-	-	3	1	-	2	1	-	-	-	-	-	-
21					-	-	1	-	-	1	1	-	-	-	-	-	-	-
22					-	-	1	-	-	-	-	-	-	-	-	-	-	-
23					-	1	1	-	-	-	-	-	-	-	-	-	-	-
24					-	1	-	-	-	-	-	-	-	-	-	-	-	-
Jmlh	9	6	6	4	14	9	14	17	16	15	20	12	25	25	25	0	0	0



LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Tua

Jumlah Larva setiap wadah
sebesar 25 Ekor

Jumlah air dalam wadah sebesar
100ml

Pelarut Heksana

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Tua Jarak Keypar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	1	-	-	-	-	-	1	-	-	-	1	1	25	25	25	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	1	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-
4	-	1	-	1	1	-	2	-	1	1	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
7	1	-	1	-	-	-	-	1	-	-	2	2	-	-	-	-	-	-
8	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
9	1	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
10	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-
12	2	-	-	-	-	-	-	1	-	1	2	-	-	-	-	-	-	-
13	-	-	1	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-
15	-	1	-	-	1	1	1	-	-	-	-	1	-	-	-	-	-	-
16	2	-	1	-	-	1	-	-	1	1	1	-	-	-	-	-	-	-
17	3	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
18	-	-	-	-	-	1	1	-	1	-	1	1	-	-	-	-	-	-
19	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-
20	-	-	-	2	1	2	1	1	-	3	2	2	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Jmlh	16	5	5	6	7	6	8	5	6	11	14	11	25	25	25	0	0	0



LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Tua

Jumlah Larva setiap wadah
sebesar 25 Ekor

Jumlah air dalam wadah sebesar
100ml

Pelarut Etil Asetat

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Tua Jarak Kepar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	-	-	1	4	1	2	2	1	-	1	1	-	24	25	24	-	-	-
2	-	-	1	1	-	1	-	1	1	-	2	-	1	-	1	-	-	-
3	2	1	3	1	2	-	-	-	-	-	-	1	-	-	-	-	-	-
4	-	1	1	-	2	2	-	-	-	-	-	1	-	-	-	-	-	-
5	-	-	-	1	-	-	2	-	-	1	-	-	-	-	-	-	-	-
6	-	-	1	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-
7	-	-	-	-	1	-	1	1	-	-	3	-	-	-	-	-	-	-
8	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-
9	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
10	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	1	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-
12	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-
13	1	-	-	3	1	-	-	-	-	2	-	-	-	-	-	-	-	-
14	-	-	-	-	-	1	-	1	-	-	1	2	-	-	-	-	-	-
15	-	-	-	-	1	1	2	-	1	1	1	2	-	-	-	-	-	-
16	-	1	-	-	1	-	-	1	1	1	1	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-
18	-	-	-	2	-	-	1	2	-	2	-	1	-	-	-	-	-	-
19	-	-	-	1	1	-	1	-	1	1	1	1	-	-	-	-	-	-
20	-	-	-	-	-	-	1	2	1	-	-	4	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
22	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Jmlh	5	5	10	17	10	11	13	11	7	10	13	15	25	25	25	0	0	0



LAMPIRAN 6

Data Mortalitas Larva Uji pada Uji Laboratorium Daun Tua

Jumlah Larva setiap wadah sebesar
25 Ekor

Jumlah air dalam wadah sebesar
100ml

Pelarut Air

Jam ke	JUMLAH LARVA YANG MATI PADA PERLAKUAN (Daun Tua Jarak Kepyar)												KONTROL POSITIF			KONTROL NEGATIF		
	75 ppm			100 ppm			150ppm			200ppm			Temephos 0.01g			Tanpa Perlakuan		
	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3	R1	R2	R3
1	-	-	-	-	-	-	-	-	1	2	-	-	23	25	25	-	-	-
2	-	-	-	1	-	-	1	-	-	-	-	1	2	-	-	-	-	-
3	-	-	-	-	-	-	2	-	2	1	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
6	-	-	-	1	-	1	1	-	-	1	-	-	--	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
8	-	-	-	-	-	1	-	-	1	3	-	3	-	-	-	-	-	-
9	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
10	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	1	-	-	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-
13	-	1	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-
14	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-
15	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-
16	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
19	-	-	-	1	-	-	-	1	-	-	1	1	-	-	-	-	-	-
20	-	-	-	1	1	1	-	-	-	3	-	4	-	-	-	-	-	-
21	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Jmlh				9	2	4	7	2	5	12	3	21	25	25	25	0	0	0



Uji Nilai LC90 pada Larva Aedes sp.

Jam	% RATA-RATA MORTALITAS LARVA							
	DAUN MUDA				DAUN TUA			
	Aquades	Etil Asetat	Heksana	Etanol	Aquades	Etil Asetat	Heksana	Etanol
1	1,333333333	25,33333	22,666667	1,333333	0	0	18,66667	0
2	1,333333333	64	70,666667	5,333333	0	0	56	2,666667
3	2,666666667	84	74,666667	13,33333	1,333333	1,333333	57,33333	5,333333
4	4	85,33333	81,33333	18,66667	1,333333	1,333333	64	9,333333
5	5,333333333	88	84	22,66667	2,666667	2,666667	64	13,33333
6	5,333333333	89,33333	85,33333	24	2,666667	4	65,33333	17,33333
7	8	94,66667	89,33333	24	5,333333	4	65,33333	26,66667
8	9,333333333	96	89,33333	24	6,666667	4	65,33333	30,66667
9	13,33333333	97,33333	89,33333	24	8	6,666667	65,33333	38,66667
10	16	97,33333	89,33333	24	9,333333	6,666667	65,33333	44
11	22,66666667	98,66667	89,33333	24	12	6,666667	65,33333	46,66667
12	36	98,66667	89,33333	24	13,33333	6,666667	65,33333	48
13	40	98,66667	89,33333	24	16	6,666667	66,66667	49,33333
14	42,66666667	98,66667	89,33333	24	21,33333	6,666667	66,66667	49,33333
15	45,33333333	98,66667	89,33333	24	22,66667	6,666667	66,66667	49,33333
16	45,33333333	98,66667	89,33333	28	24	6,666667	66,66667	49,33333
17	45,33333333	98,66667	89,33333	29,33333	30,66667	8	66,66667	49,33333
18	48	98,66667	89,33333	29,33333	34,66667	8	68	49,33333
19	49,33333333	98,66667	89,33333	29,33333	34,66667	8	68	50,66667
20	49,33333333	98,66667	89,33333	29,33333	36	9,333333	68	50,66667
21	53,33333333	98,66667	89,33333	30,66667	37,33333	9,333333	68	50,66667
22	54,66666667	98,66667	89,33333	33,33333	40	10,66667	68	50,66667
23	57,33333333	98,66667	89,33333	33,33333	40	10,66667	68	50,66667
24	58,66666667	98,66667	89,33333	34,66667	41,33333	10,66667	68	50,66667
25	60	98,66667	89,33333	36	41,33333	13,33333	72	50,66667
26	60	98,66667	89,33333	36	42,66667	17,33333	72	50,66667
27	64	98,66667	89,33333	36	42,66667	17,33333	72	50,66667
28	69,33333333	98,66667	89,33333	36	45,33333	17,33333	72	52
29	72	98,66667	89,33333	38,66667	46,66667	17,33333	72	54,66667
30	78,66666667	98,66667	89,33333	40	48	17,33333	72	58,66667
31	81,33333333	98,66667	89,33333	41,33333	50,66667	17,33333	72	61,33333
		98,66667	89,33333	45,33333	54,66667	17,33333	72	61,33333
		98,66667	89,33333	46,66667	57,33333	17,33333	73,33333	61,33333
		98,66667	89,33333	46,66667	58,66667	17,33333	73,33333	61,33333
		98,66667	89,33333	46,66667	60	17,33333	73,33333	62,66667
		98,66667	89,33333	48	62,66667	18,66667	73,33333	65,33333
		98,66667	89,33333	48	62,66667	20	73,33333	66,66667
		98,66667	89,33333	48	62,66667	20	73,33333	66,66667
39	98,66666667	98,66667	89,33333	48	65,33333	21,33333	73,33333	66,66667



Optimization Software:
www.balesio.com

LAMPIRAN 8

40	98,66666667	98,66667	89,333333	50,66667	66,66667	21,33333	74,66667	68
41	98,66666667	98,66667	89,333333	54,66667	70,66667	21,33333	74,66667	70,66667
42	98,66666667	98,66667	89,333333	54,66667	74,66667	21,33333	74,66667	70,66667
43	98,66666667	98,66667	89,333333	57,33333	78,66667	21,33333	74,66667	70,66667
44	100	98,66667	89,333333	57,33333	81,33333	22,66667	74,66667	70,66667
45	100	98,66667	89,333333	57,33333	82,66667	24	74,66667	72
46	100	98,66667	89,333333	58,66667	85,33333	28	74,66667	73,33333
47	100	98,66667	89,333333	58,66667	88	33,33333	74,66667	74,66667
48	100	98,66667	89,333333	58,66667	93,33333	36	74,66667	74,66667



STANDAR DEVIASI RATA-RATA MORTALITAS LARVA PADA EKSTRAK DAUN MUDA

1. Standar Deviasi Pelarut Etanol

Frequencies

		Statistics			
		Ethanol 75 ppm daun muda	Ethanol 100 ppm daun muda	Ethanol 150 ppm daun muda	Ethanol 200 ppm daun muda
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.13690	.19105	.37443	.38739

2. Standar Deviasi Pelarut Heksana

Frequencies

		Statistics			
		Heksana 75 ppm daun muda	Heksana 100 ppm daun muda	Heksana 150 ppm daun muda	Heksana 200 ppm daun muda
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.16619	.34730	.33906	.50074

3. Standar Deviasi Pelarut Etil Asetat

Frequencies

		Statistics			
		Etil Asetat 75 ppm daun muda	Etil Asetat 100 ppm daun muda	Etil Asetat 150 ppm daun muda	Etil Asetat 200 ppm daun muda
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.27656	.31900	.57712	.59173

4. Standar Deviasi Pelarut Aquades

→ Frequencies

		Statistics			
		Pelarut Air 75 ppm daun muda	Pelarut Air 100 ppm daun muda	Pelarut Air 150 ppm daun muda	Pelarut Air 200 ppm daun muda
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.18763	.16057	.18763	.31128



STANDAR DEVIASI RATA-RATA MORTALITAS LARVA PADA EKSTRAK DAUN TUA

1. Standar Deviasi Pelarut Etanol

Frequencies

		Statistics			
		Ethanol 75 ppm daun tua	Ethanol 100 ppm daun tua	Ethanol 150 ppm daun tua	Ethanol 200 ppm daun tua
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.28398	.44382	.50553	.68551

2. Standar Deviasi Pelarut Heksana

Frequencies

		Statistics			
		Heksana 75 ppm daun tua	Heksana 100 ppm daun tua	Heksana 150 ppm daun tua	Heksana 200 ppm daun tua
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.33352	.39810	.31060	.52925

3. Standar Deviasi Pelarut Etil Asetat

Frequencies

		Statistics			
		Etil Asetat 75 ppm daun tua	Etil Asetat 100 ppm daun tua	Etil Asetat 150 ppm daun tua	Etil Asetat 200 ppm daun tua
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.50363	.55499	.41136	.41629

4. Standar Deviasi Pelarut Aquades

→ Frequencies

		Statistics			
		Pelarut Air 75 ppm daun tua	Pelarut Air 100 ppm daun tua	Pelarut Air 150 ppm daun tua	Pelarut Air 200 ppm daun tua
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		.19526	.27471	.29227	.62210



UJI RESIDU EKSTRAK DAUN JARAK KEPYAR

(Salinitas 0%, pH 7, Suhu 28°C)

	DAUN MUDA				DAUN TUA				Kontrol
	Heksana	Etil Asetat	Etanol	Air	Heksana	Etil Asetat	Etanol	Air	Tanpa Perlakuan
Konsentrasi (ppm)	762.405	299.305	587.854	819.174	498.447	3180.812	452.954	345.193	0
Mortalitas Larva Hari ke-1	25	25	8	12	25	2	12	10	0
Mortalitas Larva Hari ke-4	21	23	8	12	23	1	12	9	0
Mortalitas Larva Hari ke-7	20	20	8	11	21	1	12	8	0
Mortalitas Larva Hari ke-14	20	19	7	10	20	1	11	8	0
Mortalitas Larva Hari ke-21	16	15	5	8	17	1	9	6	0
Mortalitas	0	0	0	0	0	0	0	0	0
Mortalitas	0	0	0	0	0	0	0	0	0



LAMPIRAN 9

(Salinitas 0%, pH 7, Suhu 28°C) **Persentase**

	DAUN MUDA				DAUN TUA				Kontrol Tanpa Perlakuan
	Heksan	Etil Asetat	Etanol	Air	Heksan	Etil Asetat	Etanol	Air	
Konsentrasi (ppm)	762,405	299.305	587.854	819.174	498.447	3180.812	452.954	345.193	0
Mortalitas Larva (%) Hari ke-1	100	100	32	48	100	8	48	40	0
Mortalitas Larva (%) Hari ke-4	84	92	32	48	92	4	48	36	0
Mortalitas Larva (%) Hari ke-7	80	80	32	44	84	4	48	32	0
Mortalitas Larva (%) Hari ke-14	80	76	28	40	80	4	44	32	0
Mortalitas Larva (%) Hari ke-21	64	60	20	32	68	4	36	24	0
Mortalitas Larva (%) Hari ke-28	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0



LAMPIRAN 9

	DAUN MUDA				DAUN TUA			
	Heksan	Etil Asetat	Etanol	Air	Heksan	Etil Asetat	Etanol	Air
Konsentrasi (ppm)	762,405	299.305	587.854	819.174	498.447	3180.812	452.954	345.193
p	0,02	0,01	0,01	0,01	0,02	0,10	0,03	0,01
Hasil Uji	Bermakna	Bermakna	Bermakna	Bermakna	Bermakna	Tidak Bermakna	Bermakna	Bermakna



STANDAR DEVIASI RATA-RATA MORTALITAS LARVA UJI RESIDU**1. Standar Deviasi Jumlah Larva yang Mati pada Daun Muda Jarak Kepyar**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Etanol	12	1.00	12.00	6.8333	4.08619
Heksana	12	2.00	12.00	6.9167	3.65459
EtilAsetat	12	3.00	17.00	8.4167	4.73782
PelarutAir	12	.00	6.00	2.7500	1.60255
Valid N (listwise)	12				

2. Standar Deviasi Jumlah Larva yang Mati pada Daun Tua Jarak Kepyar

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Etanol	12	4.00	20.00	11.8333	5.00606
Heksana	12	5.00	16.00	8.3333	3.77391
EtilAsetat	12	5.00	17.00	10.5833	3.67939
PelarutAir	12	2.00	21.00	6.3333	5.56504
Valid N (listwise)	12				

3. Standar Deviasi Daun Muda Excel

Statistics					
		Etanol	Aquades	Etil Asetat	Heksana
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		1,99738	5,34570	4,05835	4,70610

4. Standar Deviasi Daun Tua Excel

Statistics					
		Etanol	Aquades	Etil Asetat	Heksana
N	Valid	24	24	24	24
	Missing	0	0	0	0
Std. Deviation		4,57669	3,75581	1,25879	2,51081



Analisis Probit

Daun Tua Ethanol

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	157.052	1	157.052	27.126	.003 ^b
	Residual	28.948	5	5.790		
	Total	186.000	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari

Daun Tua Etil Asetat

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.178	1	2.178	16.049	.010 ^b
	Residual	.679	5	.136		
	Total	2.857	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari



Daun Tua Heksana

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	594.642	1	594.642	35.305	.002 ^b
	Residual	84.215	5	16.843		
	Total	678.857	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari

Daun Tua Air

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	94.150	1	94.150	43.966	.001 ^b
	Residual	10.707	5	2.141		
	Total	104.857	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari



Daun Muda Ethanol

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	72.335	1	72.335	42.441	.001 ^b
	Residual	8.522	5	1.704		
	Total	80.857	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari

Daun Muda Etil Asetat

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	594.864	1	594.864	50.541	.001 ^b
	Residual	58.850	5	11.770		
	Total	653.714	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari



Daun Muda Heksana

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	553.607	1	553.607	33.713	.002 ^b
	Residual	82.107	5	16.421		
	Total	635.714	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari

Daun Muda Air

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.968	1	152.968	40.800	.001 ^b
	Residual	18.746	5	3.749		
	Total	171.714	6			

a. Dependent Variable: Mortalitas

b. Predictors: (Constant), Hari



Mortalitas Larva *Aedes Aegypti* pada Uji Lapangan

Jumlah Sampel 25 ekor

Jam	Etil Asetat daun Muda				Heksana daun Tua				Etil Asetat daun Muda + Temephos				Heksana daun Tua + Temephos				Kontrol
	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	
1	10	13	14	12,333333	7	8	6	7	25	25	25	25	24	25	25	24,666667	0
2	18	17	15	16,666667	15	14	14	14,333333	25	25	25	25	25	25	25	25	0
3	20	18	17	18,333333	15	16	16	15,666667	25	25	25	25	25	25	25	25	0
4	22	23	20	21,666667	17	16	17	16,666667	25	25	25	25	25	25	25	25	0
5	23	24	21	22,666667	17	16	18	17	25	25	25	25	25	25	25	25	0
6	24	24	22	23,333333	19	19	18	18,666667	25	25	25	25	25	25	25	25	0
7	25	24	25	24,666667	20	21	20	20,333333	25	25	25	25	25	25	25	25	0
8	25	25	25	25	20	22	21	21	25	25	25	25	25	25	25	25	0
9	25	25	25	25	21	24	25	23,333333	25	25	25	25	25	25	25	25	0
10	25	25	25	25	22	24	25	23,666667	25	25	25	25	25	25	25	25	0
11	25	25	25	25	24	25	25	24,666667	25	25	25	25	25	25	25	25	0
12	25	25	25	25	24	25	25	24,666667	25	25	25	25	25	25	25	25	0
13	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
14	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
15	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
16	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
17	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
18	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
19	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
2				25	25	25	25	25	25	25	25	25	25	25	25	25	0
2				25	25	25	25	25	25	25	25	25	25	25	25	25	0
2				25	25	25	25	25	25	25	25	25	25	25	25	25	0
2				25	25	25	25	25	25	25	25	25	25	25	25	25	0
2				25	25	25	25	25	25	25	25	25	25	25	25	25	0



Persentase Mortalitas Larva *Aedes Aegypti* pada Uji Lapangan

Jumlah Sampel 25 ekor

Jam	Etil Asetat daun Muda				Heksana daun Tua				Etil Asetat daun Muda + Temephos				Heksana daun Tua + Temephos				Kontrol
	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	
1	40	52	56	49,333333	28	32	24	28	100	100	100	100	96	100	100	98,666667	0
2	72	68	60	66,666667	60	56	56	57,333333	100	100	100	100	100	100	100	100	0
3	80	72	68	73,333333	60	64	64	62,666667	100	100	100	100	100	100	100	100	0
4	88	92	80	86,666667	68	64	68	66,666667	100	100	100	100	100	100	100	100	0
5	92	96	84	90,666667	68	64	72	68	100	100	100	100	100	100	100	100	0
6	96	96	88	93,333333	76	76	72	74,666667	100	100	100	100	100	100	100	100	0
7	100	96	100	98,666667	80	84	80	81,333333	100	100	100	100	100	100	100	100	0
8	100	100	100	100	80	88	84	84	100	100	100	100	100	100	100	100	0
9	100	100	100	100	84	96	100	93,333333	100	100	100	100	100	100	100	100	0
10	100	100	100	100	88	96	100	94,666667	100	100	100	100	100	100	100	100	0
11	100	100	100	100	96	100	100	98,666667	100	100	100	100	100	100	100	100	0
12	100	100	100	100	96	100	100	98,666667	100	100	100	100	100	100	100	100	0
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
14	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
17	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0



Mortalitas Larva *Aedes Albopictus* pada Uji Lapangan

Jumlah Sampel 25 ekor

Jam	Etil Asetat daun Muda				Heksana daun Tua				Etil Asetat daun Muda + Temephos				Heksana daun Tua + Temephos				Kontrol
	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	
1	6	8	8	7,3333333	4	5	5	4,6666667	25	25	25	25	24	25	25	24,6666667	0
2	12	15	15	14	8	10	11	9,6666667	25	25	25	25	25	25	25	25	0
3	15	19	20	18	13	15	15	14,3333333	25	25	25	25	25	25	25	25	0
4	19	20	20	19,6666667	15	16	18	16,3333333	25	25	25	25	25	25	25	25	0
5	20	21	24	21,6666667	16	18	18	17,3333333	25	25	25	25	25	25	25	25	0
6	22	21	24	22,3333333	18	18	18	18	25	25	25	25	25	25	25	25	0
7	23	24	24	23,6666667	19	21	20	20	25	25	25	25	25	25	25	25	0
8	23	23	25	23,6666667	20	22	21	21	25	25	25	25	25	25	25	25	0
9	24	25	25	24,6666667	21	22	23	22	25	25	25	25	25	25	25	25	0
10	25	25	25	25	21	23	23	22,3333333	25	25	25	25	25	25	25	25	0
11	25	25	25	25	24	25	24	24,3333333	25	25	25	25	25	25	25	25	0
12	25	25	25	25	24	25	25	24,6666667	25	25	25	25	25	25	25	25	0
13	25	25	25	25	24	25	25	24,6666667	25	25	25	25	25	25	25	25	0
14	25	25	25	25	24	25	25	24,6666667	25	25	25	25	25	25	25	25	0
15	25	25	25	25	24	25	25	24,6666667	25	25	25	25	25	25	25	25	0
16	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
17	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
18	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
19	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	0
20				25	25	25	25	25	25	25	25	25	25	25	25	25	0
21				25	25	25	25	25	25	25	25	25	25	25	25	25	0
22				25	25	25	25	25	25	25	25	25	25	25	25	25	0
23				25	25	25	25	25	25	25	25	25	25	25	25	25	0
24				25	25	25	25	25	25	25	25	25	25	25	25	25	0



Persentase Mortalitas Larva *Aedes Albopictus* pada Uji Lapangan

Jumlah Sampel 25 ekor

Jam	Etil Asetat daun Muda				Heksana daun Tua				Etil Asetat daun Muda + Temephos				Heksana daun Tua + Temephos				Kontrol
	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	P1	P2	P3	Rerata	
1	24	32	32	29,333333	16	20	20	18,666667	100	100	100	100	96	100	100	98,666667	0
2	48	60	60	56	32	40	44	38,666667	100	100	100	100	100	100	100	100	0
3	60	76	80	72	52	60	60	57,333333	100	100	100	100	100	100	100	100	0
4	76	80	80	78,666667	60	64	72	65,333333	100	100	100	100	100	100	100	100	0
5	80	84	96	86,666667	64	72	72	69,333333	100	100	100	100	100	100	100	100	0
6	88	84	96	89,333333	72	72	72	72	100	100	100	100	100	100	100	100	0
7	92	96	96	94,666667	76	84	80	80	100	100	100	100	100	100	100	100	0
8	92	92	100	94,666667	80	88	84	84	100	100	100	100	100	100	100	100	0
9	96	100	100	98,666667	84	88	92	88	100	100	100	100	100	100	100	100	0
10	100	100	100	100	84	92	92	89,333333	100	100	100	100	100	100	100	100	0
11	100	100	100	100	96	100	96	97,333333	100	100	100	100	100	100	100	100	0
12	100	100	100	100	96	100	100	98,666667	100	100	100	100	100	100	100	100	0
13	100	100	100	100	96	100	100	98,666667	100	100	100	100	100	100	100	100	0
14	100	100	100	100	96	100	100	98,666667	100	100	100	100	100	100	100	100	0
15	100	100	100	100	96	100	100	98,666667	100	100	100	100	100	100	100	100	0
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
17	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0
2				100	100	100	100	100	100	100	100	100	100	100	100	100	0



Hasil Analisis Uji Pengaruh Mortalitas Larva Sebelum Pemaparan dan Setelah 24 jam Pemaparan

Standar Deviasi

Frequencies

		Statistics							
		Etil Asetat Daun Muda Aedes Albopictus	Heksana Daun Tua Aedes Albopictus	Etil Asetat Daun Muda + Temephos Aedes Albopictus	Heksana Daun Tua + Temephos Aedes Albopictus	Etil Asetat Daun Muda Aedes Aegypti	Heksana Daun Tua Aedes Aegypti	Etil Asetat Daun Muda + Temephos Aedes Aegypti	Heksana Daun Tua + Temephos Aedes Aegypti
N	Valid	24	24	24	24	24	24	24	24
	Missing	0	0	0	0	0	0	0	0
	Std. Deviation	17.26072	21.95112	.00000	.27217	12.96844	19.00038	.00000	.27217

1. Etil Asetat Daun Muda terhadap *Aedes Albopictus*

Test Statistics^a

Etil Asetat Daun Muda Sesudah
Perlakuan - Etil Asetat Daun Muda
Sebelum Perlakuan

Z	-4.414 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on negative ranks.

2. Heksana Daun Tua terhadap *Aedes Albopictus*

Test Statistics^a

Heksana Daun Tua Sesudah
Perlakuan - Heksana Daun Tua
Sebelum Perlakuan

Z	-4.314 ^b
Asymp. Sig. (2-tailed)	.000

- . Wilcoxon Signed Ranks Test
- . Based on negative ranks.



3. Etil Asetat Daun Muda + Temephos terhadap *Aedes Albopictus*

Test Statistics^a

Etil Asetat Daun Muda + temephos Sesudah
Perlakuan - Etil Asetat Daun Muda + temephos
Sebelum Perlakuan

Z	-4.899 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

4. Heksana Daun Tua + Temephos terhadap *Aedes Albopictus*

Test Statistics^a

Heksana Daun Tua + temephos Sesudah
Perlakuan - Heksana Daun Tua + temephos
Sebelum Perlakuan

Z	-4.811 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

5. Etil Asetat Daun Muda terhadap *Aedes Aegypti*

Test Statistics^a

Etil Asetat daun Muda Sesudah
Perlakuan - Etil Asetat daun Muda
Sebelum Perlakuan

Z	-4.476 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.



6. Heksana Daun Tua terhadap *Aedes Aegypti*

Test Statistics^a

Heksana daun tua Sesudah
Perlakuan - Heksana daun tua
Sebelum Perlakuan

Z	-4.350 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

7. Etil Asetat Daun Muda + Temephos terhadap *Aedes Aegypti*

Test Statistics^a

Etil Asetat Daun Muda + Temephos Sebelum
Perlakuan - Etil Asetat Daun Muda + Temephos
Sesudah Perlakuan

Z	-4.899 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

8. Heksana Daun Tua + Temephos terhadap *Aedes Aegypti*

Test Statistics^a

Heksana Daun Tua + Temephos Sebelum
Perlakuan - Heksana Daun Tua + Temephos
Sesudah Perlakuan

Z	-4.811 ^b
Asymp. Sig. (2-tailed)	.000

- a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.



LAMPIRAN TOPIK PENELITIAN I
Efektivitas Ekstrak Daun Jarak Kepyar terhadap *Aedes sp.*

Tabel 12
 Penelitian terdahulu tentang Ekstrak Daun Jarak Kepyar terhadap
 Larva Nyamuk pada Uji Laboratorium

No	Pengarang (Tahun)	Jenis Pelarut / Jenis Larva	Temuan
1	Muhammad Waris et al., 2010 ³⁴	Aseton (<i>Ae. Aegypti</i>)	LC ₅₀ = 410,824ppm LC ₉₀ = 734,236ppm
2	Asaad G.M. Basheer, 2014 ⁹	- Etil asetat; - Heksana; - Etanol. (<i>An. Arabiensis</i>)	LC ₅₀ = 439ppm (etil asetat) 24jam LC ₅₀ = 760ppm (hexana) 24jam LC ₅₀ = 1108 mg/L (etanol) 24jam
3	Abdalla M. elimam et al., 2009 ³⁵	Aquades (<i>An. Arabiensis</i> & <i>Cx. Quinquefasciatus</i>)	LC ₅₀ (ppm) = 445,66 (<i>An. Arabiensis</i>) dan 1364,58 (<i>Cx. Quinquefasciatus</i>). LC ₉₀ (ppm) = 1114,29 (<i>An. Arabiensis</i>) dan 2046,44 (<i>Cx. Quinquefasciatus</i>).
4	Wahyu Wira Utami et al., 2016 ¹³	Etanol (<i>Ae. aegypti</i>)	Nilai LC ₅₀ = 138,995 ± 1,5 µg /mL = 138,995ppm.
5	Sabina Wangui Wachira et al., 2014 ¹⁶	Methanol (<i>An. Gambiae</i>)	LC ₅₀ = 0,40 mg/mL = 400ppm LC ₉₀ = 1,13 mg/mL = 1.130ppm
6	Brahim Aouny et al., 2018 ²²	Aquades (<i>Culex pipiens</i>)	LC ₅₀ = 195 mg/L = 195ppm LC ₉₀ = 398 mg/L = 398ppm Daun muda
7	Zineb Dachar et al., 2016 ¹⁷	Aquades (<i>Culex pipiens</i> & <i>Cs. longiareolata</i>)	LC ₅₀ = 0,06g/L = 60.07ppm (<i>Cx. Pipiens</i>) LC ₅₀ = 0,08 g/L = 80,1ppm (<i>Cs. Longiareolata</i>)
8	Sarita Kumar et al., 2012 ¹⁹	Heksana (<i>Ae. Aegypti</i>)	LC ₅₀ = 64,26ppm LC ₉₀ adalah 140,14ppm



Lampiran 13

No	Pengarang (Tahun)	Jenis Pelarut / Jenis Larva	Temuan
9	L. Leeja, 2020 ¹⁰	- Aquades; - Methanol (<i>Cx. Quinquefasciatus</i>)	LC ₅₀ = 116,63ppm LC ₉₀ = 233,89ppm
10	Awad Khalafalla Taha et al., 2022 ³⁶	Etanol (<i>An. Arabiens</i>)	LC ₅₀ = 282,7060ppm LC ₉₀ = 501,2372ppm.
11	S.H. Martinez- Thomas et al., 2009 ³⁷	- Heksana ; - Etil asetat ; - Methanol (<i>Cx. Quinquefasciatus</i>)	LC ₅₀ = 416 ppm (heksana) LC ₅₀ = 417 ppm (etil asetat) LC ₅₀ = 761 ppm (methanol)
12	Rathy M.C. et al., 2015 ²¹	Aquades (<i>Cx. sitiens</i>)	20 mg/mL = 20.000ppm, selama 24 jam (mortalitas 100%).
13	Ogonna C. Ani et al., 2022 ³⁸	Etanol (<i>Anopheles sp.</i>)	LC ₅₀ = 141,25 mg/l = 141,25ppm



BAB IV TOPIK PENELITIAN III
Aktivitas Larvasida Daun Jarak Kepyar pada uji Lapangan Skala Kecil

Tabel 20. Penelitian tentang Larvasida pada Uji Lapangan

No	Pengarang (Tahun)	Jenis larvasida / Jenis Larva	Temuan
1	Romi R. et al. (1993) ²⁵	<ul style="list-style-type: none"> - <i>Bacillus thuringiensis</i> - <i>Bacillus sphaericus</i> (<i>An. arabiensis</i>)	<ul style="list-style-type: none"> - <i>B. thuringiensis</i> (<i>Vectobac GR</i>) memberikan pengendalian yang sangat baik pada kolam kecil dan saluran air hujan. - <i>B. sphaericus</i> kurang efektif pada saluran air hujan tetapi efektif pada kolam kecil.
2	Sébastien Marcombe et al. (2011) ²⁶	<ul style="list-style-type: none"> - <i>Pyriproxyfen</i> - <i>Bti</i> - <i>diflubenzuron</i> dan - <i>Spinosad</i> (<i>Ae. aegypti</i>)	<ul style="list-style-type: none"> - <i>Pyriproxyfen</i> dan <i>Bti</i> tidak efektif dalam mengurangi populasi <i>Ae. aegypti</i> di lapangan. - <i>diflubenzuron</i> dan <i>Spinosad</i> tidak efektif dalam mengurangi populasi <i>Ae. aegypti</i> di lapangan
3	Armel Djenontin et al., (2014) ²⁷	<i>Vectobac GR</i> (<i>An. Gambiae</i> dan <i>Cx. quinquefasciatus</i>)	<ul style="list-style-type: none"> - 1,2 g/m² menyebabkan penghambatan ≥80% (<i>An. Gambiae</i>) 21 hari - 2 g/m² menyebabkan penghambatan ≥80% (<i>Cx. quinquefasciatus</i>) 28 hari
4	Carlos F. Marina et al. (2018) ²⁸	<ul style="list-style-type: none"> - <i>Pyriproxyfen</i> - <i>λ-cyhalothrin</i> - <i>Spinetoram</i> - <i>Imidacloprid</i> - <i>Thiamethoxam</i> - <i>Acetamiprid</i> - <i>Chlorantraniliprole</i> - <i>Spiromesifen</i> - <i>Spinosad</i> (<i>Ae. aegypti</i> dan <i>ae. albopictus</i>)	<ul style="list-style-type: none"> - <i>Spinosad</i> dan <i>λ-cyhalothrin</i> efektif terhadap keberadaan <i>Aedes sp.</i>



Lampiran 14

No	Pengarang (Tahun)	Jenis larvasida / - Jenis Larva	- Temuan
6	Rodjay R. & Zuharah W. F. (2021) ²⁹	- daun Ipomoea <i>Cairica</i> <i>asetoni</i> (<i>Ae. aegypti</i> dan <i>ae. albopictus</i>)	- Ekstrak daun Ipomoea <i>Carica</i> <i>asetoni</i> lebih efektif pada <i>Ae. albopictus</i> dibandingkan <i>Ae. aegypti</i> pada uji lapangan.



Optimization Software:
www.balesio.com