

DAFTAR PUSTAKA

- Aeny, T. N., Prasetyo, J., Suharjo, R., Dirmawati, S. R., Efri, dan Niswati, A. 2018. Short Communication: Isolation and Identification of Actinomycetes Potential as the Antagonist of *Dickeya zea* Pineapple Soft Rot in Lampung, Indonesia. *Biodiversitas*. 19(6): 2052–2058. <https://doi.org/10.13057/biodiv/d190610>.
- Ahmad, A. dan Hamzah, S. 2016. *Database Karst Sulawesi Selatan*. Makassar: Badan Lingkungan Hidup Daerah.
- Ali, A. 2009. Skrining dan Karakterisasi Parsial Senyawa Antijamur dari Actinomycetes Asal Limbah Padat Sagu Terdekomposisi. *Berkala Penelitian Hayati*. 14: 219–225. <https://doi.org/10.23869/bphjbr.14.2.200915>.
- Aminnullah, R., Bahar, M., Muktamiroh, H., dan Sandra, O. 2020. Efektivitas Isolat Actinomycetes dari Tanah Kebun Raya Bogor sebagai Antijamur terhadap Pertumbuhan *Candida albicans* secara In Vitro. *Bioeduscience*. 04(01): 90–96. <https://doi.org/10.29405/j.bes/4190-964362>.
- Armaida, E., dan Siti Khotimah, B., 2016. Karakterisasi Actinomycetes yang Berasosiasi dengan Porifera (*Axinella* spp.) dari Perairan Pulau Lemukutan Kalimantan Barat. *Protobiont*. 5(1): 68-73.
- Balouiri, M., Sadiki, M., dan Ibnsouda, S.K. 2016. Methods for In Vitro Evaluating Antimicrobial Activity: A Review. *Journal of Pharmaceutical Analysis*. 6. (2): 71-79.
- Burhamzah, R., dan Rante, H. 2020. Isolasi dan Skrining Aktinomisetes Laut Penghasil Senyawa Antibakteri-Multi Drug Resistance Dari Sedimen Laut Pantai Galesong. *Majalah Farmasi Dan Farmakologi*. 23(3): 79–81. <https://doi.org/10.20956/mff.v23i3.9397>.
- CABI. 2022. *Aspergillus niger (Black Mould of Onion)*. Invasive Species Compendium. Tersedia pada: <https://www.cabi.org/isc/datasheet/7444> [Diakses Juli 2022].
- CDC. 2019. Antibiotic Resistance Threats in the United States 2019. In *CDC*. 10(1). <https://doi.org/10.1186/s13756-020-00872-w>. Hal 42.
- CDC dan Kaplan. 1967. *Public Health Image Library (PHIL)*. CDC Organization. Tersedia pada: <https://phil.cdc.gov/Details.aspx?pid=21742> [Diakses Juli 2022].

- Daryanto, A., dan Oktariadi, O. 2009. Klasifikasi Kawasan Kars Maros, Sulawesi Selatan Untuk Menentukan Kawasan Lindung Dan Budidaya. *Buletin Geologi Tata Lingkungan*. 19(2): 67- 81.
- Dewi, I. S., Saptawati, T., dan Rachma, F. A. 2021. Skrining Fitokimia Ekstrak Etanol Kulit dan Biji Terong Belanda (*Solanum betaceum Cav.*). *Prosiding Seminar Nasional UNIMUS*. 4: 1210–1218.
- Dhanasekaran, D. dan Jiang, Y. (Editor). 2016. *Actinobacteria - Basics and Biotechnological Applications, Actinobacteria - Basics and Biotechnological Applications*. ExLi4EvA. doi: 10.5772/60457. Hal 9, 70.
- Difco Laboratories. 1998. *Difco Manual of Microbiological Culture Media*. Edisi 11. USA: Division of Becton Dickinson and Company.
- Djide M.N., dan Sartini. 2016. *Dasar-Dasar Mikrobiologi Farmasi*. Makassar: Lembaga Penerbitan Universtas Hasanuddin.
- Fardiyanti, R., Kasrina, dan Bustaman, H. 2021. Ragam Jenis *Streptomyces Sp* pada Rizosfer Tanaman Suku Liliacea di Kawasan Desa Sumber Bening, Rejang Lebong Bengkulu. *Konservasi Hayati*. 17(1): 29–34. <https://doi.org/10.33369/hayati.v17i1.14731>.
- Ghanem, N. B., Sabry, S. A., El-Sherif, Z. M., dan Abu El-Ela, G. A. 2000. Isolation and Enumeration of Marine Actinomycetes from Seawater and Sediments in Alexandria. *Journal of General and Applied Microbiology*. 46(3): 105–111. <https://doi.org/10.2323/jgam.46.105>.
- Harvey, R. A., Clark, M. A., Finkel, R., Rey, J. A., dan Karen, W. (Editor). 2012. *Lippincott's Illustrated Reviews: Pharmacology*. Edisi 5. Lippincott Williams and Wilkins.
- ITIS. 2020. Taxonomic: *Candida albicans*. Integrated Taxonomic Information System-Report. Tersedia pada: https://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=194598#null [Diakses 5 Juli 2022].
- Jaiinphon, J., Cheeptham, N., Sonthichai, W., dan Lumyong, S. 2003. Isolation and Screening of Actinomycetes from Cave Soils in Mae Hongson Province , Thailand for their Antifungal Activities . *Thai J. of Biotech*. 4(1): 16–23.
- Jakubiec-Krzesniak, K., Rajnisz-Mateusiak, A., Guspiel, A., Ziemska, J., dan Solecka, J. 2018. Secondary Metabolites of Actinomycetes and their Antibacterial , Antifungal and Antiviral Properties. *Polish Journal of Microbiology*. 67(3): 259–272. <https://doi.org/10.21307/pjm-2018-048>.

- Komala, O., Yulianita, dan Siwi, F. R. 2020. Aktivitas Antijamur Ekstrak Etanol 50% Dan Etanol 96% Daun Pacar Kuku *Lawsonia Inermis* L Terhadap *Trichophyton Mentagrophytes*. *Ekologia*. 19(1): 12–19. <https://doi.org/10.33751/ekol.v19i1.1657>.
- Kumalasari, A.M., Faturraahman R., N., dan Nur R., M. 2012. Potensi Actinomycetes Sebagai Sumber Senyawa Bioaktif Antibiotik dari Kawasan Karst Bantimurung, Sulawesi Selatan. *PELITA-Jurnal Penelitian Mahasiswa UNY*. 7(1): 59–72.
- Kumar, V., Bharti, A., Gusain, O., dan Bisht, G. S. 2011. Scanning Electron Microscopy Of *Streptomyces* Without Use Of Any Chemical Fixatives. *Scanning*. 33(6): 446–449. <https://doi.org/10.1002/sca.20261>.
- Marimuthu, S., Karthic, C., Mostafa, A. A., Al-enazi, N. M., Abdel-raouf, N., dan Nageh, E. 2020. Antifungal Activity of *Streptomyces* sp. SLR03 Against Tea Fungal Plant Pathogen *Pestalotiopsis Theae*. *Journal of King Saud University – Science*. 32(8): 3258–3264. <https://doi.org/10.1016/j.jksus.2020.08.027>.
- Markham, K.R. 1988. *Cara Mengidentifikasi Flavonoid*. diterjemahkan oleh Kosasih Padmawinata. Bandung: Penerbit ITB.
- Marquez, L., dan Quave, C. L. 2020. Prevalence and Therapeutic Challenges of Fungal Drug Resistance: Role for Plants in Drug Discovery. *Antibiotics*. 9(4): 150. <https://doi.org/10.3390/antibioticcs9040150>.
- Mubarak, F., Rante, H., dan Djide, N. 2017. Isolasi dan Aktivitas Antimikroba Aktinomycetes dari Tanah Karst Taman Wisata Bantimurung Asal Maros Sulawesi Selatan. *As-Syifaa Jurnal Farmasi*. 09(01): 1–10. <https://doi.org/10.33096/jjfa.v9i1.226>.
- Ngintang, A. R. D., dan Akbar, M. 2016. Kesiapan Promosi Kawasan Karst Bantimurung-Bulusaraung Sebagai Destinasi Andalan Wisata Alam Kabupaten Maros. *Jurnal Komunikasi KAREBA*. 5(2): 319–330.
- Nuhung, S. 2016. Karst Maros Pangkep Menuju Geopark Dunia (Tinjauan Dari Aspek Geologi Lingkungan). *Jurnal Plano Madani*. 5(1): 1–7.
- Nurkanto, A. 2007. Identifikasi Aktinomisetes Tanah Hutan Pasca Kebakaran Bukit Bangkirai Kalimantan Timur dan Potensinya Sebagai Pendegradasi Selulosa dan Pelarut Fosfat. *Biodiversitas Journal of Biological Diversity*. 8(4): 314–319. <https://doi.org/10.13057/biodiv/d080414>.
- Nurkhoiron, M. 2016. *Ringkasan Eksekutif Pelestarian Ekosistem Karst Dan Perlindungan Hak Asasi Manusia*. KOMNAS HAM. Jakarta. Hal 1-23.

- Pepper, I. L., Gerba, C. P., dan Gentry, T. J. 2015. *Environmental Microbiology*. Edisi Ketiga. Elsevier.
- Pimentel-Elardo, S. M., Tiro, L. P., Grozdanov, L., dan Hentschel, U. 2008. *Saccharopolyspora cebuensis* sp. nov., a novel actinomycete isolated from a Philippine sponge (Porifera). *International Journal of Systematic and Evolutionary Microbiology*. 58(3): 628–632. <https://doi.org/10.1099/ijs.0.64971-0>.
- Praja, R. N., dan Yudhana, A. 2017. Isolasi dan Identifikasi *Aspergillus* Spp Pada Paru-paru Ayam Kampung Yang Dijual Di Pasar Banyuwangi. *Jurnal Medik Veteriner*. 1(1): 6–11.
- Prakarsa, T. B. P., Sudarsono, dan Suhandoyo. 2021. Diversitas Kelelawar Penghuni Gua di Kawasan Karst Pulau Nusa Kambangan: Studi Gua Kali Bener dan Lempong Pucung. *Bioma: Jurnal Biologi Makassar*. 6(1): 48–56. <http://journal.unhas.ac.id/index.php/bioma>.
- Priyono, K. D. 2021. *Kajian Tanah dalam Perspektif Geografi*. Edisi Pertama. Insania.
- Pujiati, P. 2014. Isolasi Actinomycetes dari Tanah Kebun Sebagai Bahan Petunjuk Praktikum Mikrobiologi. *Jurnal Florea*. 1(2): 42–46. <https://doi.org/10.25273/florea.v1i2.390>.
- Purnaweni, H. 2014. Kebijakan Pengelolaan Lingkungan di Kawasan Kendeng Utara Provinsi Jawa Tengah. *Jurnal Ilmu Lingkungan*. 12(1): 53–65.
- Purwanto, S. 2015. Uji Aktivitas Antibakteri Fraksi Aktif Ekstrak Daun Senggani (*Melastoma malabathricum* L) Terhadap *Escherichia coli*. *Jurnal Keperawatan Sriwijaya*. 2(2): 84–92.
- Putra, G. W., Ramona, Y., dan Proborini, M. W. 2020. Eksplorasi Dan Identifikasi Mikroba Yang Diisolasi dari Rhizosfer Tanaman Stroberi (*Fragaria x ananassa* Dutch.) Di Kawasan Pancasari Bedugul. *Metamorfosa: Journal of Biological Sciences*. 7(2): 205–213. <https://doi.org/10.24843/metamorfosa.2020.v07.i02.p09>.
- Rahma, H., Arneti., dan Nofrianti, S. 2018. Seleksi Rizobakteri Dalam Menekan Pertumbuhan Cendawan *Diplodia Maydis* Penyebab Penyakit Busuk Tongkol Pada Jagung Secara In Vitro. *Pros Sem Nas Masy Biodiv Indon*. 4(2): 225–230. <https://doi.org/10.13057/psnmbi/m040222>.
- Raihan, M., Naufal, T., A. Rifka, H., Subehan, L., Ismail., dan Muh. N. A. 2020. Skrining Fitokimia Ekstrak Kulit Buah Nangka (*Artocarpus heterophyllus*) dan Aktivitas Antioksidannya terhadap [2,2'-azinobis-

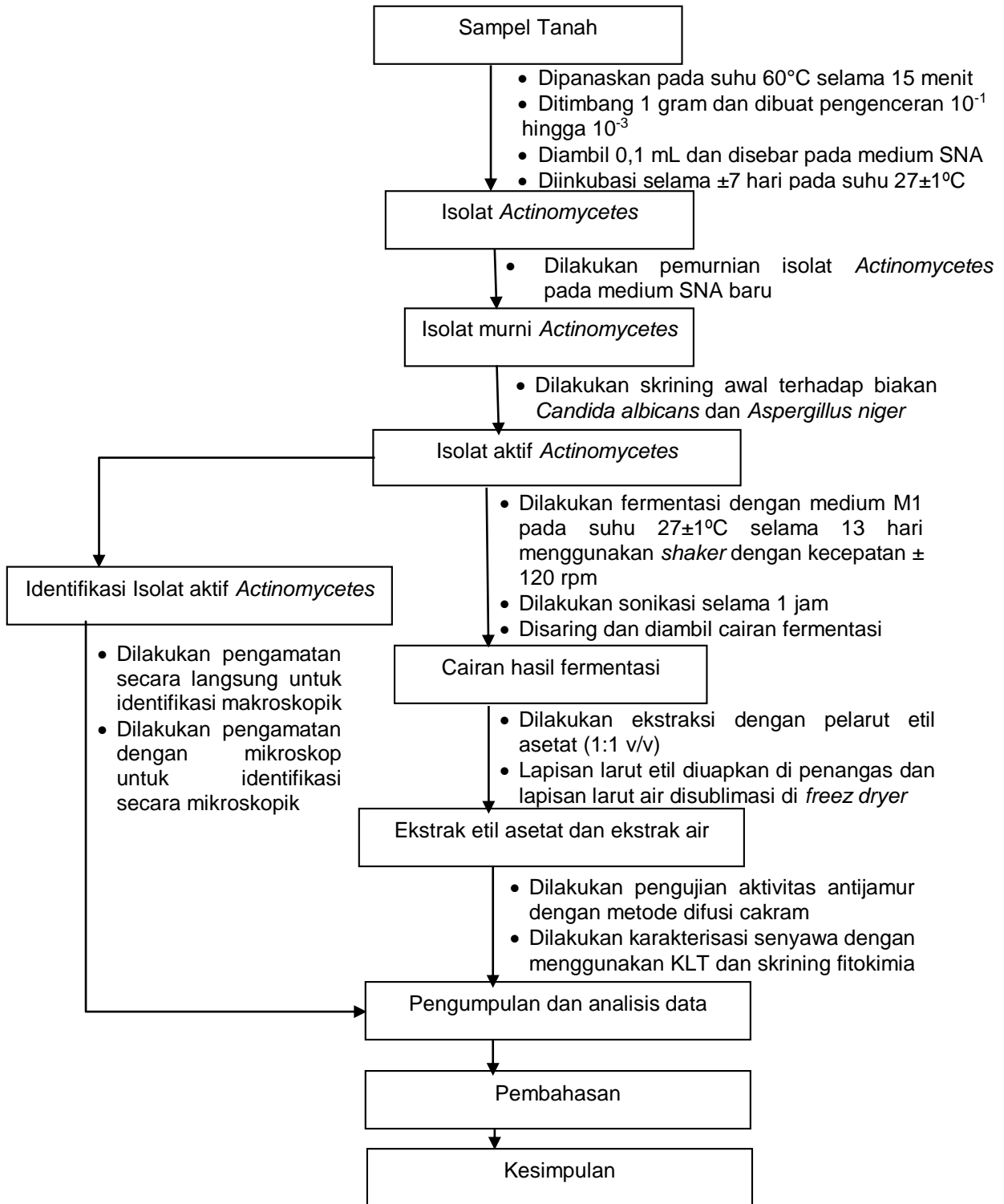
- (3-ethylbenzothiazoline-6-sulfonate)] (ABTS). *Majalah Farmasi dan Farmakologi*. 23(3): 101-106. <https://doi.org/10.20956/mff.v23i3.9400>.
- Rante, H., Wahyono, Murti, Y. B., dan Alam, G. 2010. Purifikasi dan karakterisasi senyawa anti- bakteri dari actinomycetes asosiasi spons terhadap bakteri patogen resisten. *Majalah Farmasi Indonesia*. 21(3): 158–165.
- Rattanakavil, T., Kumlung, T., dan Klanbut, K. 2020. Isolation and Molecular Characterization of Antifungal Production from Rice Fields Rhizosphere Soil, Thailand. *International Journal of Sciences and Innovative Technology*. 3(1): 41–52.
- Ritna, A., Anam, S., dan Khumaidi, A. 2016. Identifikasi Senyawa Flavonoid pada Fraksi Etil Asetat Benalu Batu (*Begonia Sp.*) Asal Kabupaten Morowali Utara. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy)*. 2(2): 83–89. <https://doi.org/10.22487/j24428744.2016.v2.i2.5957>.
- Sari, Z. A. A., dan Febriawan, R. 2021. Perbedaan Hasil Uji Aktivitas Antibakteri Metode Well Diffusion dan Kirby bauer Terhadap Pertumbuhan Bakteri. *Jurnal Medika Utama*. 2(04): 1156–1162.
- Sarika, K., Sampath, G., Kaveriyappan, R., Ameen, F., Alwakeel, S., Al, H. I., Raja, T., dan Ravi, G. 2021. Antimicrobial and Antifungal Activity of Soil Actinomycetes Isolated from Coal Mine Sites. *Saudi Journal of Biological Sciences*. XXXX: 1–6. <https://doi.org/10.1016/j.sjbs.2021.03.029>.
- Seniati, Marbiah, dan Irham, A. 2019. Pengukuran Kepadatan Bakteri *Vibrio Harveyi* Secara Cepat Dengan Menggunakan Spektrofotometer. *Agrokompleks*. 19(2): 12–19.
- Setiawan, T., Brahmantyo, B., dan Irawan, D. E. 2008. Analisis Kelurusan Morfologi Untuk Interpretasi Sistem Hidrogeologi Kars Cijulang, Kabupaten Ciamis, Provinsi Jawa Barat. *Pertemuan Ilmiah Tahunan IAGI Ke-37*. Bandung. 537–551.
- Siregar, R. S. 2004. *Penyakit Jamur Kulit*. Edisi 2. Jakarta: EGC.
- Song, Q., Huang, Y., dan Yang, H., 2012. Optimization of Fermentation Conditions for Antibiotic Production by Actinomycetes YJ1 Strain against *Sclerotinia sclerotiorum*. *J. Agric Sci*. 4: 95-102.
- Sting, R., Schwalm, A. K., Contzen, M., Roller, M., dan Rau, J. 2020. Actinomycetes Associated with Abscess Formation in a Goat, a llama and Two Alpacas. *Berliner Und Munchener Tierarztliche Wochenschrift*. 1–6. <https://doi.org/10.2376/1439-0299-2020-6>.

- Sukamto, R., dan Supriatna, S. 1982. *Geologi Lembar Ujung Pandang, Benteng dan Sinjai*. Bandung: Pusat Penelitian dan Pengembangan Geologi.
- Sulastoro. 2013. Karakteristik Sumberdaya Air di Daerah Karst (Studi Kasus Daerah Pracimantoro). *Journal of Rural and Development*. IV(1): 61–67.
- Sulistiyani, N., dan Akbar, A.N. 2014. Aktivitas Isolat Actinomycetes dari Rumput Laut (*Eucheuma cottonii*) sebagai Penghasil Antibiotik terhadap *Staphylococcus aureus* dan *Escherichia coli*. *Jurnal Ilmu Kefarmasian Indonesia*. 12 (1): 4–12.
- Suryaminarsih, P., Harijani, W. S., Muljani, I. R., Mindari, W., dan Rahmadhini, N. 2020. Screening and Identification of Actinomycetes Produced Chitinolytic from Suppression Soil as Biological Agents of Fruit Flies (*Bactrocera* sp.). *EurAsian Journal of BioSciences*. 14: 977–982.
- Tokarzewski, S., Ziółkowska, G., dan Nowakiewicz, A. 2012. Susceptibility Testing of *Aspergillus niger* Strains Isolated From Poultry to Antifungal Drugs - A Comparative Study of The Disk Diffusion, Broth Microdilution (M 38-A) and Etest® Methods. *Polish Journal of Veterinary Sciences*. 15(1): 125–133. <https://doi.org/10.2478/v10181-011-0123-7>.
- Susanto, Sudrajat, Ruga. 2012. Studi Kandungan Bahan Aktif tumbuhan Meranti Merah (*Shorea leprosula* Miq.) Sebagai Sumber Senyawa Antibakteri. *Jurnal Kesehatan*. 11(2): 1-15.
- Usman, dan Adi, V. Z. P. 2017. Potensi Antijamur Ekstrak Metanol Daun Mangrove *Rhizophora mucronata* Terhadap Jamur *Candida Albicans* dan *Aspergillus Niger*. *Jurnal Kimia Mulawarman*. 15(1): 29–34.
- Waluyo, L. 2018. *Bioremediasi Limbah*. Edisi Pertama. Universitas Muhammadiyah Malang. https://www.google.co.id/books/edition/BIOREMEDIASI_LIMBAH/mgZ-DwAAQBAJ?hl=id&gbpv=0.
- Whalen, K. 2019. *Lippincott Illustrated Reviews: Pharmacology South Asian Edition*. Diterjemahkan oleh S. Sangeeta dan T. Velpandia. India: Wolters Kluwer Health.
- Yanti, M. 2017. *Prevalensi Multipledrug Resistance Organism (MDRO) pada Pasien Pasca Operasi di ICU RSUP Dr. Wahidin Sudirohusodo Pada Bulan Januari-September 2017*. Makassar. Fakultas Kedokteran Universitas Hasanuddin.

Yuda,P.E., Erna, C., Ni, L.P. Y. W. 2017. Skrining Fitokimia Dan Analisis Kromatografi Lapis Tipis Ekstrak Tanaman Patikan Kebo (*Euphorbia Hirta* L.). *Jurnal Ilmiah Medicamento*. 3(2): 2356-4814.

LAMPIRAN

Lampiran 1. Skema Kerja Penelitian



Lampiran 2. Komposisi Medium

Tabel 5. Komposisi medium

| No. | Medium | Komposisi | |
|-----|-----------------------------------|--------------------------------------|--------------------|
| 1. | <i>Starch Nitrate Agar (SNA)</i> | Pati | 20 gram |
| | | Agar | 20 gram |
| | | KNO ₃ | 1 gram |
| | | K ₂ HPO ₄ | 0,5 gram |
| | | MgSO ₄ .7H ₂ O | 0,5 gram |
| | | NaCl | 0,5 gram |
| | | FeSO ₄ | 0,01 gram |
| | | Air Suling | ad 1 liter |
| | | | pH akhir 7,0 ± 0,2 |
| 2. | <i>Potato Dextrose Agar (PDA)</i> | Pepton | 10 gram |
| | | Glukosa | 40 gram |
| | | Agar | 15 gram |
| | | Air Suling | ad 1 liter |
| | | | pH akhir 5,6 ± 0,2 |

Lampiran 3. Tabel Uji Aktivitas Antijamur

Tabel 6. Hasil data tiga replikasi uji aktivitas terhadap *Candida albicans* isolat B11 dan B17

| Kadar ekstrak dalam paper disk | Jenis ekstrak | B11 | | B17 | |
|--------------------------------|---------------|---------------------------|----------------|---------------------------|----------------|
| | | Diameter Zona Hambat (mm) | Rata-Rata (mm) | Diameter Zona Hambat (mm) | Rata-Rata (mm) |
| 10% | Etil Asetat | 10,95 | 9,75±1,08 | 8,55 | 12,66±3,83 |
| | | 9,47 | | 16,11 | |
| | | 8,85 | | 13,31 | |
| | Air | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | 6,00 | |
| | | 6,00 | | 6,00 | |
| 5% | Etil Asetat | 10,35 | 9,34±0,88 | 9,04 | 9,78±0,98 |
| | | 8,80 | | 9,42 | |
| | | 8,86 | | 10,89 | |
| | Air | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | 6,00 | |
| | | 6,00 | | 6,00 | |
| 2,5% | Etil Asetat | 8,64 | 9,08±0,88 | 8,46 | 9,29±2,05 |
| | | 10,10 | | 7,79 | |
| | | 8,52 | | 11,62 | |
| | Air | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | 6,00 | |
| | | 6,00 | | 6,00 | |
| Kontrol positif (Nistatin) | - | 23,93 | 24,82±1,70 | 22,21 | 24,19±2,46 |
| | | 26,78 | | 26,94 | |
| | | 23,76 | | 23,41 | |
| Kontrol negatif (Etil Asetat) | - | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | 6,00 | |
| | | 6,00 | | 6,00 | |

Tabel 7. Hasil data tiga replikasi uji aktivitas terhadap *Aspergillus niger* isolat B11 dan B17

| Kadar ekstrak dalam <i>paper disk</i> | Jenis ekstrak | B11 | | B17 | |
|---------------------------------------|---------------|---------------------------|----------------|---------------------------|----------------|
| | | Diameter Zona Hambat (mm) | Rata-Rata (mm) | Diameter Zona Hambat (mm) | Rata-Rata (mm) |
| 10% | Etil Asetat | 12,67 | 12,66±3,83 | 6,00 | 6,00±0,00 |
| | | 9,94 | | | |
| | | 10,04 | | | |
| | Air | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | | |
| | | 6,00 | | | |
| 5% | Etil Asetat | 11,04 | 9,78±0,98 | 6,00 | 6,00±0,00 |
| | | 9,43 | | | |
| | | 9,42 | | | |
| | Air | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | | |
| | | 6,00 | | | |
| 2,5% | Etil Asetat | 9,23 | 9,29±2,05 | 6,00 | 6,00±0,00 |
| | | 8,54 | | | |
| | | 8,71 | | | |
| | Air | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | | 6,00 | | | |
| | | 6,00 | | | |
| Kontrol positif (Nistatin) | - | 26,64 | 24,19±2,46 | 26,10 | 25,02±0,99 |
| | 20,58 | | | | |
| | 25,84 | | | | |
| Kontrol negatif (Etil Asetat) | - | 6,00 | 6,00±0,00 | 6,00 | 6,00±0,00 |
| | 6,00 | | | | |
| | 6,00 | | | | |

Lampiran 4. Analisis Data

Tabel 8. Hasil analisis data uji normalitas B11 terhadap *C. albicans*

| | | Tests of Normality ^{b,c,d,e} | | | | | |
|---|-----------------------------|---------------------------------------|----|------|--------------|----|------|
| Ekstrak Uji | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Zona Hambat Terhadap <i>C.albicans</i> | Kontrol Positif | ,367 | 3 | . | ,792 | 3 | ,096 |
| | Ekstrak Etil Asetat 10% | ,271 | 3 | . | ,947 | 3 | ,557 |
| | Ekstrak Etil Asetat 5% | ,373 | 3 | . | ,779 | 3 | ,065 |
| | Ekstrak Etil Asetat 2,5% | ,361 | 3 | . | ,807 | 3 | ,130 |

Tabel 9. Hasil analisis data uji homogenitas B11 terhadap *C. albicans*

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 8,412 | 7 | 16 | ,000 |

Tabel 10. Hasil analisis data uji *one way* ANOVA B11 terhadap *C. albicans*

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|-------------------|----|-------------|---------|------|
| Between Groups | 851,826 | 7 | 121,689 | 174,230 | ,000 |
| Within Groups | 11,175 | 16 | ,698 | | |
| Total | 863,001 | 23 | | | |

Tabel 11. Hasil analisis data uji *post hoc (games howell)* B11 terhadap *C. albicans*

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I- J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------|-----------------------------|------------------------------|---------------|------|----------------------------|----------------|
| | | | | | Lower Bound | Lower Bound |
| Kontrol Positif | Kontrol Negatif | 18,82333 [*] | ,97956 | ,012 | 9,7999 [*] | 27,8468 |
| | Ekstrak Etil Asetat 10% | 15,06667 [*] | 1,16086 | ,004 | 8,4016 [*] | 21,7317 |
| | Ekstrak Etil Asetat 5% | 15,48667 [*] | 1,10298 | ,005 | 8,5818 [*] | 22,3915 |
| | Ekstrak Etil Asetat 2,5% | 15,73667 [*] | 1,10338 | ,005 | 8,8345 [*] | 22,6388 |
| | Ekstrak Air 10% | 18,82333 [*] | ,97956 | ,012 | 9,7999 [*] | 27,8468 |
| | Ekstrak Air 5% | 18,82333 [*] | ,97956 | ,012 | 9,7999 [*] | 27,8468 |
| | Ekstrak Air 2,5% | 18,82333 [*] | ,97956 | ,012 | 9,7999 [*] | 27,8468 |
| Kontrol Negatif | Kontrol Positif | -18,82333 [*] | ,97956 | ,012 | -27,8468 [*] | -9,7999 |
| | Ekstrak Etil Asetat 10% | -3,75667 | ,62293 | ,112 | -9,4949 | 1,9816 |
| | Ekstrak Etil Asetat 5% | -3,33667 | ,50696 | ,095 | -8,0066 | 1,3333 |

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------------|--------------------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| | Ekstrak Etil Asetat 2,5% | -3,08667 | ,50785 | ,110 | -7,7648 | 1,5915 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Etil Asetat 10% | Kontrol Positif | -15,06667* | 1,16086 | ,004 | -21,7317* | -8,4016 |
| | Kontrol Negatif | 3,75667 | ,62293 | ,112 | -1,9816 | 9,4949 |
| | Ekstrak Etil Asetat 5% | ,42000 | ,80315 | ,998 | -3,8486 | 4,6886 |
| | Ekstrak Etil Asetat 2,5% | ,67000 | ,80371 | ,979 | -3,6000 | 4,9400 |
| | Ekstrak Air 10% | 3,75667 | ,62293 | ,112 | -1,9816 | 9,4949 |
| | Ekstrak Air 5% | 3,75667 | ,62293 | ,112 | -1,9816 | 9,4949 |
| | Ekstrak Air 2,5% | 3,75667 | ,62293 | ,112 | -1,9816 | 9,4949 |
| Ekstrak Etil Asetat 5% | Kontrol Positif | -15,48667* | 1,10298 | ,005 | -22,3915* | -8,5818 |
| | Kontrol Negatif | 3,33667 | ,50696 | ,095 | -1,3333 | 8,0066 |
| | Ekstrak Etil Asetat 10% | -,42000 | ,80315 | ,998 | -4,6886 | 3,8486 |
| | Ekstrak Etil Asetat 2,5% | ,25000 | ,71758 | 1,000 | -3,4777 | 3,9777 |
| | Ekstrak Air 10% | 3,33667 | ,50696 | ,095 | -1,3333 | 8,0066 |
| | Ekstrak Air 5% | 3,33667 | ,50696 | ,095 | -1,3333 | 8,0066 |
| | Ekstrak Air 2,5% | 3,33667 | ,50696 | ,095 | -1,3333 | 8,0066 |
| Ekstrak Etil Asetat 2,5% | Kontrol Positif | -15,73667* | 1,10338 | ,005 | -22,6388* | -8,8345 |
| | Kontrol Negatif | 3,08667 | ,50785 | ,110 | -1,5915 | 7,7648 |
| | Ekstrak Etil Asetat 10% | -,67000 | ,80371 | ,979 | -4,9400 | 3,6000 |
| | Ekstrak Etil Asetat 5% | -,25000 | ,71758 | 1,000 | -3,9777 | 3,4777 |
| | Ekstrak Air 10% | 3,08667 | ,50785 | ,110 | -1,5915 | 7,7648 |
| | Ekstrak Air 5% | 3,08667* | ,50785 | ,110 | -1,5915* | 7,7648 |
| | Ekstrak Air 2,5% | 3,08667* | ,50785 | ,110 | -1,5915* | 7,7648 |
| Ekstrak Air 10% | Kontrol Positif | -18,82333* | ,97956 | ,012 | -27,8468* | -9,7999 |
| | Kontrol Negatif | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Etil Asetat 10% | -3,75667* | ,62293 | ,112 | -9,4949* | 1,9816 |
| | Ekstrak Etil Asetat 5% | -3,33667* | ,50696 | ,095 | -8,0066* | 1,3333 |
| | Ekstrak Etil Asetat 2,5% | -3,08667* | ,50785 | ,110 | -7,7648* | 1,5915 |
| | Ekstrak Air 5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -18,82333 | ,97956 | ,012 | -27,8468 | -9,7999 |

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Ekstrak Air 5% | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | -3,75667 | ,62293 | ,112 | -9,4949 | 1,9816 |
| | Ekstrak Etil Asetat 5% | -3,33667 | ,50696 | ,095 | -8,0066 | 1,3333 |
| | Ekstrak Etil Asetat 2,5% | -3,08667 | ,50785 | ,110 | -7,7648 | 1,5915 |
| | Ekstrak Air 10% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -18,82333 | ,97956 | ,012 | -27,8468 | -9,7999 |
| Ekstrak Air 2,5% | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | -3,75667 | ,62293 | ,112 | -9,4949 | 1,9816 |
| | Ekstrak Etil Asetat 5% | -3,33667 | ,50696 | ,095 | -8,0066 | 1,3333 |
| | Ekstrak Etil Asetat 2,5% | -3,08667 | ,50785 | ,110 | -7,7648 | 1,5915 |
| | Ekstrak Air 10% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |

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

Tabel 12. Hasil analisis data uji normalitas B11 terhadap *A. niger*

| Tests of Normality ^{b,c,d,e} | | | | | | | |
|---------------------------------------|--------------------------|---------------------------------|----|------|--------------|----|------|
| | Ekstrak Uji | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Zona Hambat Terhadap <i>A.niger</i> | Kontrol Positif | ,341 | 3 | . | ,847 | 3 | ,233 |
| | Ekstrak Etil Asetat 10% | ,374 | 3 | . | ,777 | 3 | ,062 |
| | Ekstrak Etil Asetat 5% | ,383 | 3 | . | ,755 | 3 | ,010 |
| | Ekstrak Etil Asetat 2,5% | ,294 | 3 | . | ,921 | 3 | ,456 |

Tabel 13. Hasil analisis data uji homogenitas B11 terhadap *A. niger*

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 11,045 | 7 | 16 | ,000 |

Tabel 14. Hasil analisis data uji *one way* ANOVA B11 terhadap *A. niger*

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 815,069 | 7 | 116,438 | 65,443 | ,000 |
| Within Groups | 28,468 | 16 | 1,779 | | |
| Total | 843,537 | 23 | | | |

Tabel 15. Hasil analisis data uji *post hoc* (games howell) B11 terhadap *A. niger*

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Kontrol Positif | Kontrol Negatif | 18,35333* | 1,90075 | ,046 | ,8443* | 35,8624 |
| | Ekstrak Etil Asetat 10% | 13,47000 | 2,10041 | ,052 | -,2380 | 27,1780 |
| | Ekstrak Etil Asetat 5% | 14,39000 | 1,97551 | ,059 | -1,0938 | 29,8738 |
| | Ekstrak Etil Asetat 2,5% | 15,52667 | 1,91205 | ,061 | -1,6076 | 32,6610 |
| | Ekstrak Air 10% | 18,35333* | 1,90075 | ,046 | ,8443* | 35,8624 |
| | Ekstrak Air 5% | 18,35333* | 1,90075 | ,046 | ,8443* | 35,8624 |
| | Ekstrak Air 2,5% | 18,35333* | 1,90075 | ,046 | ,8443* | 35,8624 |
| Kontrol Negatif | Kontrol Positif | -18,35333* | 1,90075 | ,046 | -35,8624* | -,8443 |
| | Ekstrak Etil Asetat 10% | -4,88333 | ,89380 | ,134 | -13,1167 | 3,3501 |
| | Ekstrak Etil Asetat 5% | -3,96333 | ,53834 | ,077 | -8,9224 | ,9957 |
| | Ekstrak Etil Asetat 2,5% | -2,82667* | ,20755 | ,023 | -4,7386* | -,9148 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Etil Asetat 10% | Kontrol Positif | -13,47000 | 2,10041 | ,052 | -27,1780 | ,2380 |
| | Kontrol Negatif | 4,88333 | ,89380 | ,134 | -3,3501 | 13,1167 |
| | Ekstrak Etil Asetat 5% | ,92000 | 1,04340 | ,970 | -5,2024 | 7,0424 |
| | Ekstrak Etil Asetat 2,5% | 2,05667 | ,91758 | ,526 | -5,4824 | 9,5957 |
| | Ekstrak Air 10% | 4,88333 | ,89380 | ,134 | -3,3501 | 13,1167 |
| | Ekstrak Air 5% | 4,88333 | ,89380 | ,134 | -3,3501 | 13,1167 |
| | Ekstrak Air 2,5% | 4,88333 | ,89380 | ,134 | -3,3501 | 13,1167 |
| Ekstrak Etil Asetat 5% | Kontrol Positif | -14,39000 | 1,97551 | ,059 | -29,8738 | 1,0938 |
| | Kontrol Negatif | 3,96333 | ,53834 | ,077 | -,9957 | 8,9224 |
| | Ekstrak Etil Asetat 10% | -,92000 | 1,04340 | ,970 | -7,0424 | 5,2024 |
| | Ekstrak Etil Asetat 2,5% | 1,13667 | ,57697 | ,602 | -2,9486 | 5,2220 |
| | Ekstrak Air 10% | 3,96333 | ,53834 | ,077 | -,9957 | 8,9224 |
| | Ekstrak Air 5% | 3,96333 | ,53834 | ,077 | -,9957 | 8,9224 |
| | Ekstrak Air 2,5% | 3,96333 | ,53834 | ,077 | -,9957 | 8,9224 |
| Ekstrak Etil Asetat 2,5% | Kontrol Positif | -15,52667 | 1,91205 | ,061 | -32,6610 | 1,6076 |
| | Kontrol Negatif | 2,82667* | ,20755 | ,023 | ,9148* | 4,7386 |
| | Ekstrak Etil Asetat 10% | -2,05667 | ,91758 | ,526 | -9,5957 | 5,4824 |

| | | | | | | |
|------------------|--------------------------|-----------|---------|------|-----------|--------|
| | Ekstrak Etil Asetat 5% | -1,13667 | ,57697 | ,602 | -5,2220 | 2,9486 |
| | Ekstrak Air 10% | 2,82667* | ,20755 | ,023 | ,9148* | 4,7386 |
| | Ekstrak Air 5% | 2,82667* | ,20755 | ,023 | ,9148* | 4,7386 |
| | Ekstrak Air 2,5% | 2,82667 | ,20755 | ,023 | ,9148 | 4,7386 |
| | Kontrol Positif | -18,35333 | 1,90075 | ,046 | -35,8624 | -,8443 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | -4,88333* | ,89380 | ,134 | -13,1167* | 3,3501 |
| Ekstrak Air 10% | Ekstrak Etil Asetat 5% | -3,96333* | ,53834 | ,077 | -8,9224* | ,9957 |
| | Ekstrak Etil Asetat 2,5% | -2,82667* | ,20755 | ,023 | -4,7386* | -,9148 |
| | Ekstrak Air 5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -18,35333 | 1,90075 | ,046 | -35,8624 | -,8443 |
| | Kontrol Negatif | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Etil Asetat 10% | -4,88333 | ,89380 | ,134 | -13,1167 | 3,3501 |
| Ekstrak Air 5% | Ekstrak Etil Asetat 5% | -3,96333 | ,53834 | ,077 | -8,9224 | ,9957 |
| | Ekstrak Etil Asetat 2,5% | -2,82667 | ,20755 | ,023 | -4,7386 | -,9148 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -18,35333 | 1,90075 | ,046 | -35,8624 | -,8443 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | -4,88333 | ,89380 | ,134 | -13,1167 | 3,3501 |
| Ekstrak Air 2,5% | Ekstrak Etil Asetat 5% | -3,96333 | ,53834 | ,077 | -8,9224 | ,9957 |
| | Ekstrak Etil Asetat 2,5% | -2,82667 | ,20755 | ,023 | -4,7386 | -,9148 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |

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

Tabel 16. Hasil analisis data uji normalitas B17 terhadap *C. albicans*

| Ekstrak Uji | | Tests of Normality ^{b,c,d,e} | | | | | |
|--|-------------------------|---------------------------------------|----|------|--------------|----|------|
| | | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Zona Hambat Terhadap <i>C.albicans</i> | Kontrol Positif | ,291 | 3 | . | ,925 | 3 | ,471 |
| | Ekstrak Etil Asetat 10% | ,235 | 3 | . | ,978 | 3 | ,716 |
| | Ekstrak Etil Asetat 5% | ,312 | 3 | . | ,896 | 3 | ,374 |

| | | | | | | |
|-----------------------------|------|---|---|------|---|------|
| Ekstrak Etil Asetat 2,5% | ,324 | 3 | . | ,877 | 3 | ,314 |
|-----------------------------|------|---|---|------|---|------|

Tabel 17. Hasil analisis data uji homogenitas B17 terhadap *C. albicans*

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 5,375 | 7 | 16 | ,003 |

Tabel 18. Hasil analisis data uji one way ANOVA B17 terhadap *C. albicans*

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|--------|------|
| Between Groups | 818,609 | 7 | 116,944 | 36,272 | ,000 |
| Within Groups | 51,585 | 16 | 3,224 | | |
| Total | 870,194 | 23 | | | |

Tabel 19. Hasil analisis data uji post hoc (games howell) B17 terhadap *C. albicans*

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|-------------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| Kontrol Positif | Kontrol Negatif | 18,18667* | 1,41958 | ,026 | 5,1099* | 31,2634 |
| | Ekstrak Etil Asetat 10% | 11,53000 | 2,62388 | ,107 | -3,4679 | 26,5279 |
| | Ekstrak Etil Asetat 5% | 14,40333* | 1,52755 | ,024 | 3,7136* | 25,0930 |
| | Ekstrak Etil Asetat 2,5% | 14,89667* | 1,84658 | ,012 | 5,1266* | 24,6667 |
| | Ekstrak Air 10% | 18,18667* | 1,41958 | ,026 | 5,1099* | 31,2634 |
| | Ekstrak Air 5% | 18,18667* | 1,41958 | ,026 | 5,1099* | 31,2634 |
| | Ekstrak Air 2,5% | 18,18667* | 1,41958 | ,026 | 5,1099* | 31,2634 |
| Kontrol Negatif | Kontrol Positif | -18,18667* | 1,41958 | ,026 | -31,2634* | -5,1099 |
| | Ekstrak Etil Asetat 10% | -6,65667 | 2,20670 | ,361 | -26,9840 | 13,6707 |
| | Ekstrak Etil Asetat 5% | -3,78333 | ,56410 | ,092 | -8,9797 | 1,4130 |
| | Ekstrak Etil Asetat 2,5% | -3,29000 | 1,18095 | ,405 | -14,1685 | 7,5885 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Etil Asetat 10% | Kontrol Positif | -11,53000 | 2,62388 | ,107 | -26,5279 | 3,4679 |
| | Kontrol Negatif | 6,65667 | 2,20670 | ,361 | -13,6707 | 26,9840 |
| | Ekstrak Etil Asetat 5% | 2,87333 | 2,27766 | ,865 | -15,4496 | 21,1962 |
| | Ekstrak Etil Asetat 2,5% | 3,36667 | 2,50283 | ,841 | -12,0749 | 18,8082 |
| | Ekstrak Air 10% | 6,65667 | 2,20670 | ,361 | -13,6707 | 26,9840 |
| | Ekstrak Air 5% | 6,65667 | 2,20670 | ,361 | -13,6707 | 26,9840 |
| | Ekstrak Air 2,5% | 6,65667 | 2,20670 | ,361 | -13,6707 | 26,9840 |

| | | | | | | |
|------------------------------|--------------------------------|-----------------|------------|---------|-----------|-----------|
| Ekstrak Etil Asetat 5% | Kontrol Positif | -14,40333* | 1,52755 | ,024 | -25,0930* | -3,7136 |
| | Kontrol Negatif | 3,78333 | ,56410 | ,092 | -1,4130 | 8,9797 |
| | Ekstrak Etil Asetat 10% | -2,87333 | 2,27766 | ,865 | -21,1962 | 15,4496 |
| | Ekstrak Etil Asetat 2,5% | ,49333 | 1,30876 | 1,000 | -7,9904 | 8,9771 |
| | Ekstrak Air 10% | 3,78333 | ,56410 | ,092 | -1,4130 | 8,9797 |
| | Ekstrak Air 5% | 3,78333 | ,56410 | ,092 | -1,4130 | 8,9797 |
| | Ekstrak Air 2,5% | 3,78333 | ,56410 | ,092 | -1,4130 | 8,9797 |
| | Ekstrak Etil Asetat 2,5% | Kontrol Positif | -14,89667* | 1,84658 | ,012 | -24,6667* |
| Kontrol Negatif | | 3,29000 | 1,18095 | ,405 | -7,5885 | 14,1685 |
| Ekstrak Etil Asetat 10% | | -3,36667 | 2,50283 | ,841 | -18,8082 | 12,0749 |
| Ekstrak Etil Asetat 5% | | -,49333 | 1,30876 | 1,000 | -8,9771 | 7,9904 |
| Ekstrak Air 10% | | 3,29000 | 1,18095 | ,405 | -7,5885 | 14,1685 |
| Ekstrak Air 5% | | 3,29000* | 1,18095 | ,405 | -7,5885* | 14,1685 |
| Ekstrak Air 2,5% | | 3,29000 | 1,18095 | ,405 | -7,5885 | 14,1685 |
| Ekstrak Air 10% | Kontrol Positif | -18,18667* | 1,41958 | ,026 | -31,2634* | -5,1099 |
| | Kontrol Negatif | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Etil Asetat 10% | -6,65667* | 2,20670 | ,361 | -26,9840* | 13,6707 |
| | Ekstrak Etil Asetat 5% | -3,78333* | ,56410 | ,092 | -8,9797* | 1,4130 |
| | Ekstrak Etil Asetat 2,5% | -3,29000* | 1,18095 | ,405 | -14,1685* | 7,5885 |
| | Ekstrak Air 5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Air 5% | Kontrol Positif | -18,18667 | 1,41958 | ,026 | -31,2634 | -5,1099 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | -6,65667 | 2,20670 | ,361 | -26,9840 | 13,6707 |
| | Ekstrak Etil Asetat 5% | -3,78333 | ,56410 | ,092 | -8,9797 | 1,4130 |
| | Ekstrak Etil Asetat 2,5% | -3,29000 | 1,18095 | ,405 | -14,1685 | 7,5885 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Air 2,5% | Kontrol Positif | -18,18667 | 1,41958 | ,026 | -31,2634 | -5,1099 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | -6,65667 | 2,20670 | ,361 | -26,9840 | 13,6707 |
| | Ekstrak Etil Asetat 5% | -3,78333 | ,56410 | ,092 | -8,9797 | 1,4130 |
| | Ekstrak Etil Asetat 2,5% | -3,29000 | 1,18095 | ,405 | -14,1685 | 7,5885 |
| Ekstrak Air 10% | ,00000* | ,00000 | . | ,0000* | ,0000 | |

| | | | | | |
|----------------|--------|--------|---|-------|-------|
| Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
|----------------|--------|--------|---|-------|-------|

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

Tabel 20. Hasil analisis data uji normalitas B17 terhadap *A. niger*

| | | Tests of Normality ^{b,c,d,e} | | | | | |
|-----------------------------------|-----------------|---------------------------------------|----|------|--------------|----|------|
| Zona | Ekstrak Uji | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| Hambat Terhadap <i>C.albicans</i> | Kontrol Positif | ,255 | 3 | . | ,963 | 3 | ,630 |

Tabel 21. Hasil analisis data uji homogenitas B17 terhadap *A. niger*

| Levene Statistic | df1 | df2 | Sig. |
|------------------|-----|-----|------|
| 7,792 | 7 | 16 | ,000 |

Tabel 22. Hasil analisis data uji one way ANOVA B17 terhadap *A. niger*

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|----|-------------|----------|------|
| Between Groups | 949,621 | 7 | 135,660 | 1110,603 | ,000 |
| Within Groups | 1,954 | 16 | ,122 | | |
| Total | 951,575 | 23 | | | |

Tabel 23. Hasil analisis data uji post hoc (games howell) B17 terhadap *A. niger*

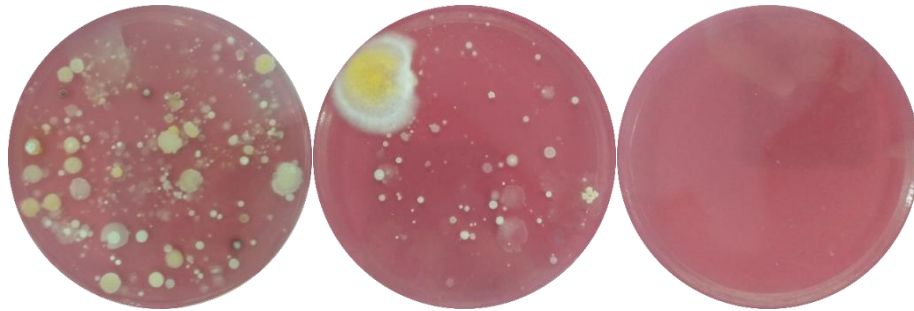
| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|-----------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Lower Bound |
| Kontrol Positif | Kontrol Negatif | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| | Ekstrak Etil Asetat 10% | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| | Ekstrak Etil Asetat 5% | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| | Ekstrak Etil Asetat 2,5% | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| | Ekstrak Air 10% | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| | Ekstrak Air 5% | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| | Ekstrak Air 2,5% | 19,02000* | ,57073 | ,004 | 13,7626* | 24,2774 |
| Kontrol Negatif | Kontrol Positif | -19,02000* | ,57073 | ,004 | -24,2774* | -13,7626 |
| | Ekstrak Etil Asetat 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|--------------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Lower Bound |
| Ekstrak Etil Asetat 10% | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -19,02000* | ,57073 | ,004 | -24,2774* | -13,7626 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -19,02000* | ,57073 | ,004 | -24,2774* | -13,7626 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Etil Asetat 5% | Ekstrak Etil Asetat 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -19,02000* | ,57073 | ,004 | -24,2774* | -13,7626 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Etil Asetat 2,5% | Ekstrak Etil Asetat 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Kontrol Positif | -19,02000* | ,57073 | ,004 | -24,2774* | -13,7626 |
| | Kontrol Negatif | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Etil Asetat 10% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Etil Asetat 5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| Ekstrak Air 10% | Ekstrak Etil Asetat 2,5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 5% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -19,02000 | ,57073 | ,004 | -24,2774 | -13,7626 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |

| (I) Ekstrak Uji | (J) Ekstrak Uji | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|------------------|--------------------------|-----------------------|------------|------|-------------------------|-------------|
| | | | | | Lower Bound | Lower Bound |
| | Ekstrak Etil Asetat 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 10% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Kontrol Positif | -19,02000 | ,57073 | ,004 | -24,2774 | -13,7626 |
| | Kontrol Negatif | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 10% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| Ekstrak Air 2,5% | Ekstrak Etil Asetat 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Etil Asetat 2,5% | ,00000 | ,00000 | . | ,0000 | ,0000 |
| | Ekstrak Air 10% | ,00000* | ,00000 | . | ,0000* | ,0000 |
| | Ekstrak Air 5% | ,00000 | ,00000 | . | ,0000 | ,0000 |

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

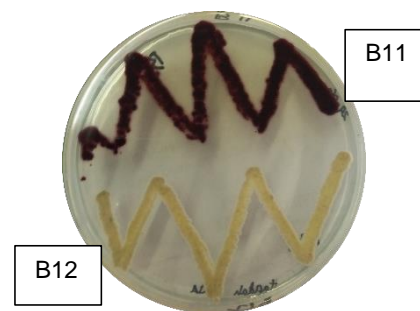
Lampiran 5. Dokumentasi Penelitian



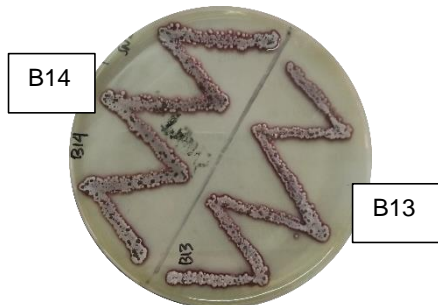
Gambar 8. Pengenceran 10^{-1} , 10^{-2} , dan 10^{-3} dari sampel tanah Karst Bantimurung



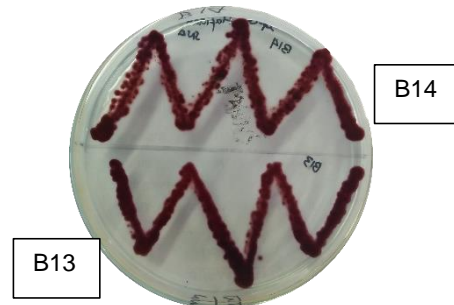
Gambar 9. Miselium aerial isolat *Actinomycetes* B11 dan B12



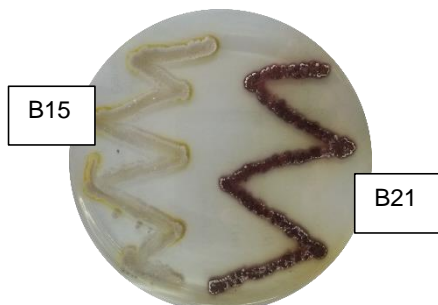
Gambar 10. Miselium substrat isolat *Actinomycetes* B11 dan B12



Gambar 11. Miselium aerial isolat *Actinomycetes* B13 dan B14



Gambar 12. Miselium substrat isolat *Actinomycetes* B13 dan B14



Gambar 13. Miselium aerial isolat *Actinomycetes* B15 dan B21



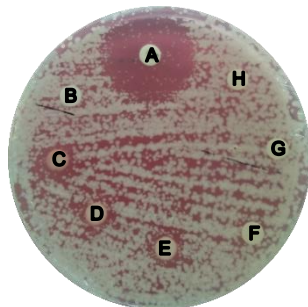
Gambar 14. Miselium substrat isolat *Actinomycetes* B15 dan B21



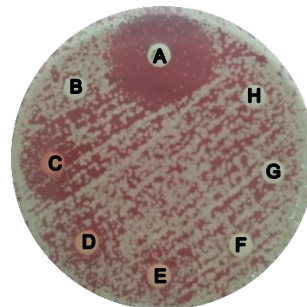
Gambar 15. Miselium aerial isolat *Actinomyces* B16 dan B17



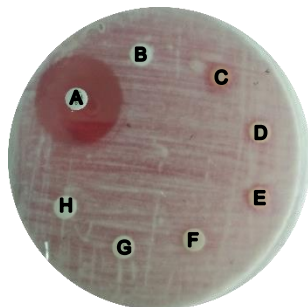
Gambar 16. Miselium substrat isolat *Actinomyces* B16 dan B17



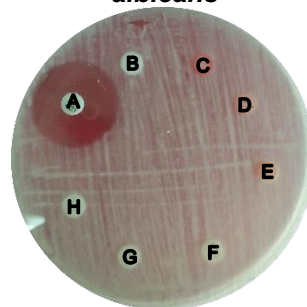
Gambar 17. Hasil uji aktivitas ekstrak air dan etil asetat B11 terhadap *C. albicans*



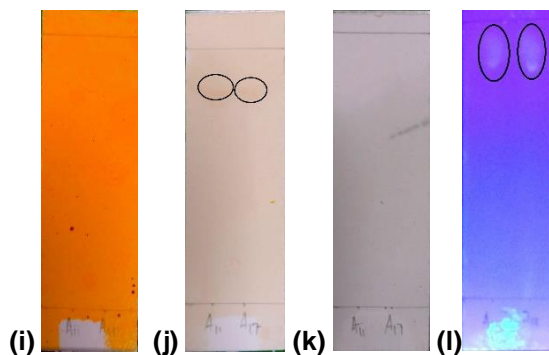
Gambar 18. Hasil uji aktivitas ekstrak air dan etil asetat B17 terhadap *C. albicans*



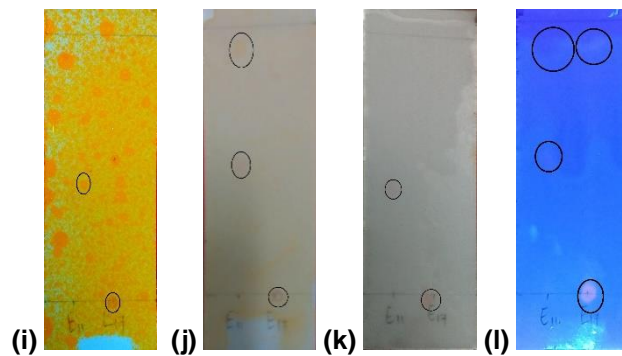
Gambar 19. Hasil uji aktivitas ekstrak air dan etil asetat B11 terhadap *A. niger*



Gambar 20. Hasil uji aktivitas ekstrak air dan etil asetat B17 terhadap *A. niger*



Gambar 21. Hasil KLT ekstrak air B11 dan B17 terhadap semua reagen



Gambar 22. Hasil KLT ekstrak etil asetat B11 dan B17 terhadap semua reagen

Keterangan:

- a) Kontrol positif (Nistatin)
- b) Kontrol negatif (etil asetat)
- c) Ekstrak etil asetat konsentrasi 10%
- d) Ekstrak etil asetat konsentrasi 5%
- e) Ekstrak etil asetat konsentrasi 2,5%
- f) Ekstrak air konsentrasi 10%
- g) Ekstrak air konsentrasi 5%
- h) Ekstrak air konsentrasi 2,5%
- i) Alkaloid
- j) Tanin
- k) Terpenoid
- l) Flavonoid