

LAMPIRAN

Lampiran 1 Determinasi Tanaman

HERBARIUM JATINANGOR
LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA UNPAD
Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor
Telp. 089689992695, email: phanerogamae@yahoo.com

LEMBAR IDENTIFIKASI TUMBUHAN
No.85/HB/02/2025.

Herbarium Jatinangor, Laboratorium Taksonomi Tumbuhan, Jurusan Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : Ira Dwi Fatma
NIM/NIDN : 231FF04013
Instansi : Universitas Bhakti Kencana.
Lokasi : Bandung.

Telah melakukan identifikasi tumbuhan, dengan No. Koleksi :
Tanggal Koleksi : 15 Februari 2025

Hasil Identifikasi

Nama Ilmiah : *Swietenia mahagoni* [L.] Jacq.
Sinonim : *Swietenia mahagoni* var. *Praecociflora* Hemsl.
Nama Lokal : Biji Mahoni
Suku/Famili : Meliaceae

Klasifikasi (Hirarki Taksonomi)

Kingdom	Plantae
Divisi	Tracheophyta
Class	Magnoliopsida
Ordo	Sapindales
Famili	Maliaceae
Genus	<i>Swietenia</i>
Species	<i>Swietenia mahagoni</i> [L.] Jacq.

Referensi:

Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants*.
Columbia University Press. New York

The Plant List. *Website Dunia Tumbuhan*. <http://www.theplantlist.org/tpl1.1/record/kew-158489>.

Backer, C. A. and Bakhuizen v/d Brink R. C Jr. 1963. *Flora of Java*. Wolter-Noordhoff NV. Groningen.

Jatinangor, 17 Februari 2025.

Identifikator,

LABORATORIUM TAKSONOMI TUMBUHAN
JURUSAN BIOLOGI FMIPA-UNPAD

Drs. Joko Kusmoro, M.P.
NIP. 19600801 199101 1 001

Lampiran 2 Surat Keterangan Mikroba Uji

1. *Pseudomonas aeruginosa*



Thermo Fisher Scientific
Microbiology
12076 Santa Fe Trail Drive
12230 Santa Fe Trail Drive
Lenexa, KS 66215
800.255.6730
800.447.5761 fax
www.thermofisher.com

Certificate of Analysis

Product Name: *P. aeruginosa* ATCC 35032 PK/5
Lot Number: 570***

Product Number: R4607062
Expiration Date: 2025-04-16
(YYYY-MM-DD)

This product has been manufactured, processed and packaged in accordance with Quality Systems Regulation, 21 CFR Part 820. Representative samples were tested per Remel Inc., a part of Thermo Fisher Scientific Quality Control specifications and were found to meet performance criteria for this product.

Purity:

Standardized aliquots of the rehydrated product are inoculated onto nonselective media and examined for pure growth following the appropriate incubation. Selective and Differential media are also tested where applicable.

Viability And Quantification:

Each organism is recovered from the preserved state within the required time frame and at an acceptable level. Passage number is stated as the current preserved state.

Macroscopic And Microscopic Morphology:

Colony morphology is consistent with documented referenced description.
Traditional staining is performed.

Characterization:

Organism exhibits characteristic biochemical, enzymatic, genotypical and/or biochemical reactions. Automated and/or conventional testing was performed and results were within established limits. Antimicrobial testing performed where applicable. Results within expected ranges.

CFU/loop: >10(4)

Passage: 3

Gram Reaction: Gram Negative Rod

Identification Profile: MicroSEQ® or Vitek® 2

Appearance: Preserved Gel Matrix suspended in inoculating loop

pH: N/A

Signed

Quality Assurance Manager

The identity, purity, and authenticity of the Licensed Products are exclusively the responsibility of Remel Inc. and not ATCC. The ATCC Licensed Derivative Emblem, the ATCC Licensed Derivative Word mark, and the ATCC Catalog Marks are trademarks of ATCC.
Remel Inc. is licensed to use these trademarks and to sell products derived from ATCC® culture.



Lampiran 2 (lanjutan)

2. *Staphylococcus aureus*



LABORATORIUM MIKROBIOLOGI-BIOTEKNOLOGI FARMASI
FAKULTAS FARMASI
UNIVERSITAS PADJADJARAN
 Gedung Laboratorium 2, Lantai 2 Fakultas Farmasi UNPAD
 Jl. Raya Bandung - Sumedang KM 21, Jatinangor-Sumedang 45363



SERTIFIKAT UJI BAKTERI *STAPHYLOCOCCUS AUREUS* Atcc.29213



REFERENCE	DATE
	3/24/22
COMMENT	

GOOD IDENTIFICATION	
Strip	API STAPH V5.0
Profile	6 7 3 ****
Note	

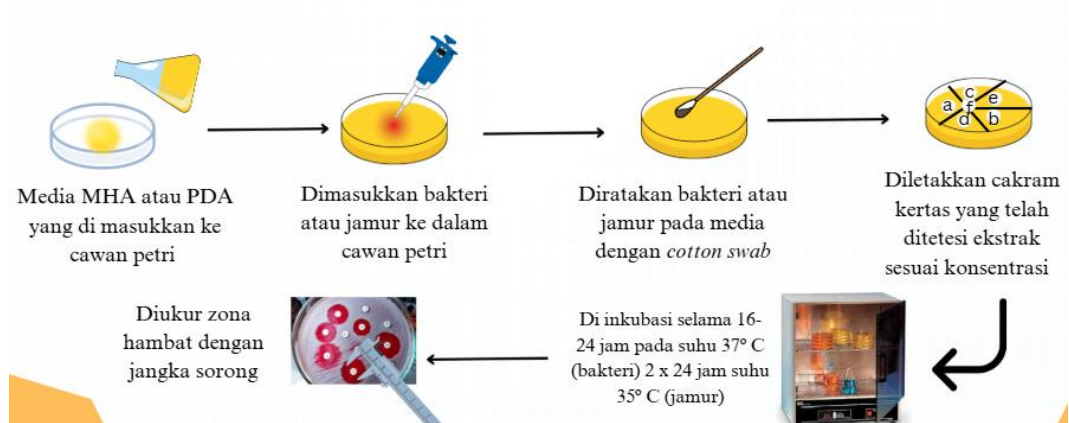
Significant taxa	% ID	T	Tests against
Staphylococcus aureus	97.7	1.0	

Mengetahui,
 Kepala Laboratorium Mikrobiologi-
 Bioteknologi Farmasi,

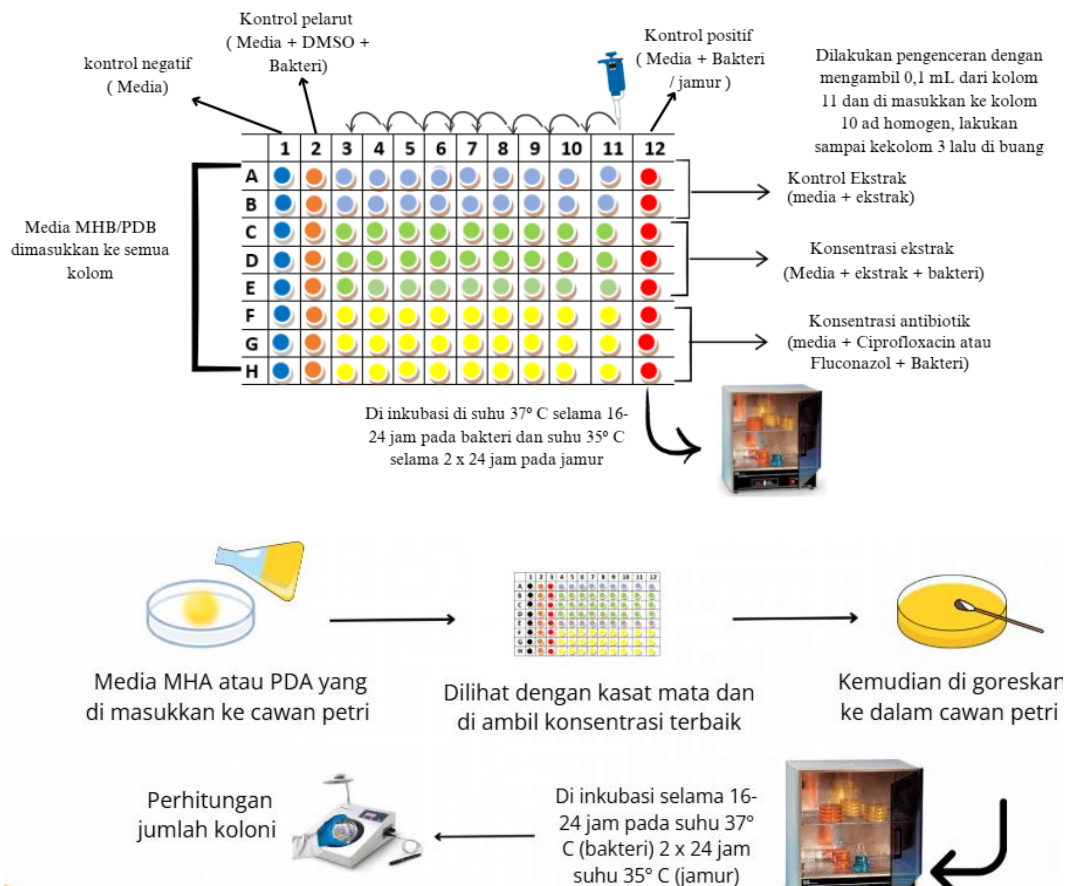
 Dr. Teta Rostinawati, M.Si., Apt.
 NIP. 197301032006042001

Lampiran 3 Prosedur Penelitian

a. Alur prosedur cakram kertas

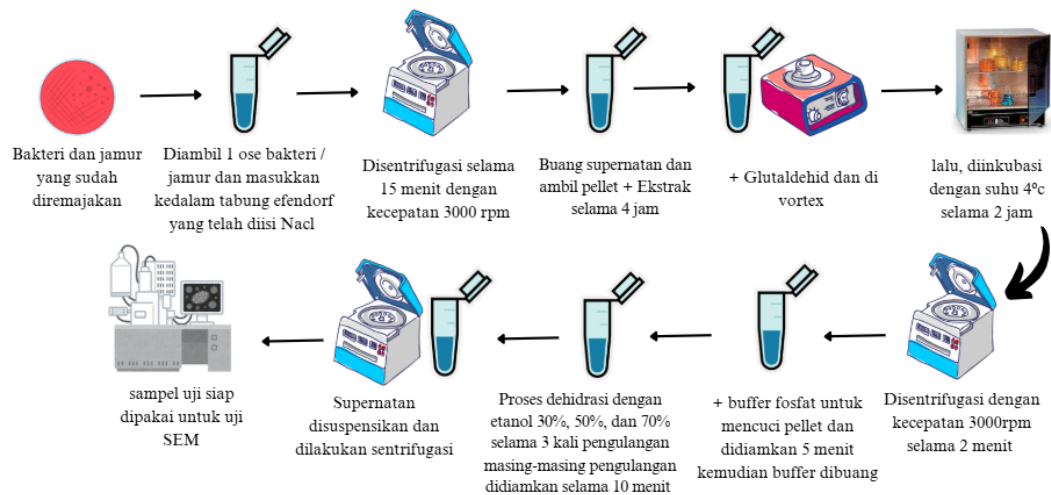


b. Alur prosedue metode mikrodilusi



Lampiran 3 (lanjutan)

c. Alur prosedur *Scanning electron microscopy* (SEM)



Lampiran 4 Perhitungan Rendemen Ekstrak

$$\text{Rendemen ekstrak} = \frac{\text{bobot ekstrak}}{\text{bobot simplisia}} \times 100\%$$

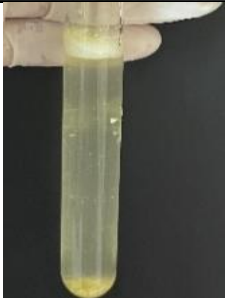
$$\text{Rendemen ekstrak} = \frac{122,5\text{gram}}{1000\text{ gram}} \times 100\%$$

$$\text{Rendemen ekstrak} = 12,25\%$$

Lampiran 5 Karakteristik Simplisia

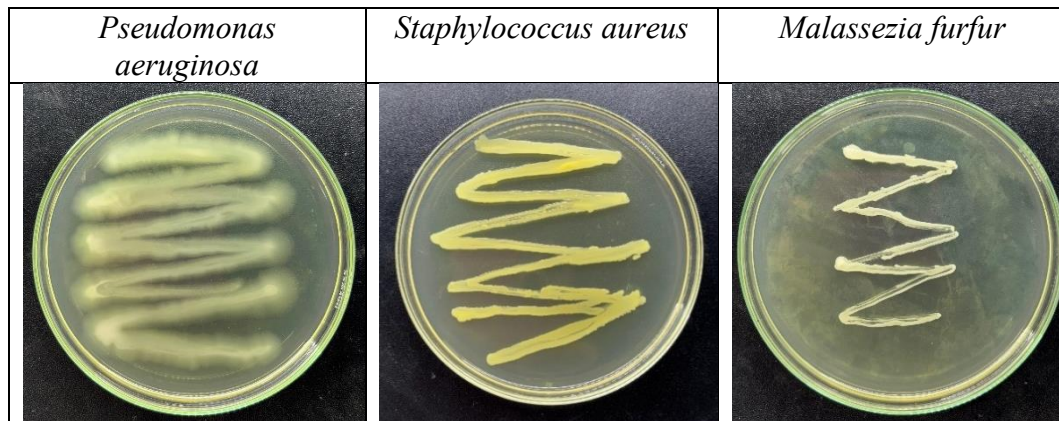
No	Karakterisasi	Hasil	Dokumentasi
1.	Susut Pengerinan	3,698 %	
2.	Kadar Abu	$W = 73,962 \text{ gram}$ $W1 = 68,965 \text{ gram}$ $W2 = 69,113 \text{ gram}$ $\text{Kadar abu} = \frac{w2-w1}{w-w1} \times 100 \%$ $= \frac{69,113 \text{ gram} - 68,965 \text{ gram}}{73,962 \text{ gram} - 68,965 \text{ gram}} \times 100\%$ $= 2,96 \%$	
3.	Kadar Sari Larut Air	Cawan kosong : 38,7710 gram Cawan isi : 38,8509 gram Bobot simplisia : 5 gram Kadar sari larut air $= \frac{\text{cawan isi} - \text{cawan kosong}}{\text{bobot simplisia}} \times \frac{\text{vol.pelarut}}{\text{vol.filtrat}} \times 100\%$ $= \frac{38,8509 \text{ gram} - 38,7710 \text{ gram}}{5 \text{ gram}} \times \frac{100 \text{ ml}}{20 \text{ ml}} \times 100\%$ $= 7,99 \%$	
4.	Kadar Sari Larut Etanol	Cawan kosong : 36,5294 gram Cawan isi : 36,8158 gram Bobot simplisia : 5 gram Kadar sari larut etanol $= \frac{\text{cawan isi} - \text{cawan kosong}}{\text{bobot simplisia}} \times \frac{\text{vol.pelarut}}{\text{vol.filtrat}} \times 100\%$ $= \frac{36,8158 \text{ gram} - 36,5294 \text{ gram}}{5 \text{ gram}} \times \frac{100 \text{ ml}}{20 \text{ ml}} \times 100\%$ $= 28,64 \%$	

Lampiran 6 Hasil Skrining Fitokimia

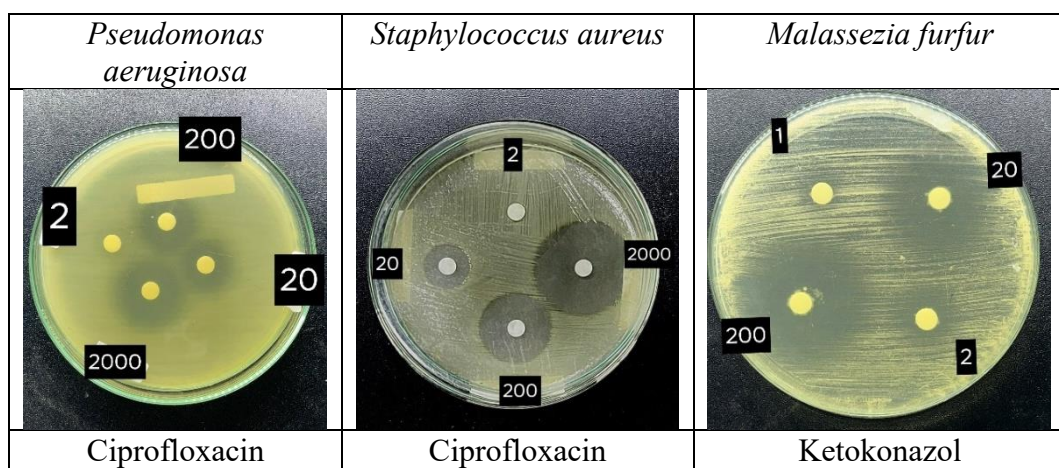
No	Skrining	Hasil	Dokumentasi
1.	Alkaloid	+ Dragendroff Terbentuknya perubahan/endapan merah bata/coklat kemerahan Mayer Terjadinya perubahan warna putih	
2.	Flavonoid	+ Terbentuk perubahan warna orange kemerahan	
3.	Saponin	+ Buih tetap stabil atau tidak hilang	
4.	Triterpenoid	+ Terdapat perubahan warna orange atau kemerahan	
5.	Tanin	+ Terdapat perubahan warna hitam kehijauan	

Lampiran 7 Hasil Penelitian

1. Peremajaan mikroba uji

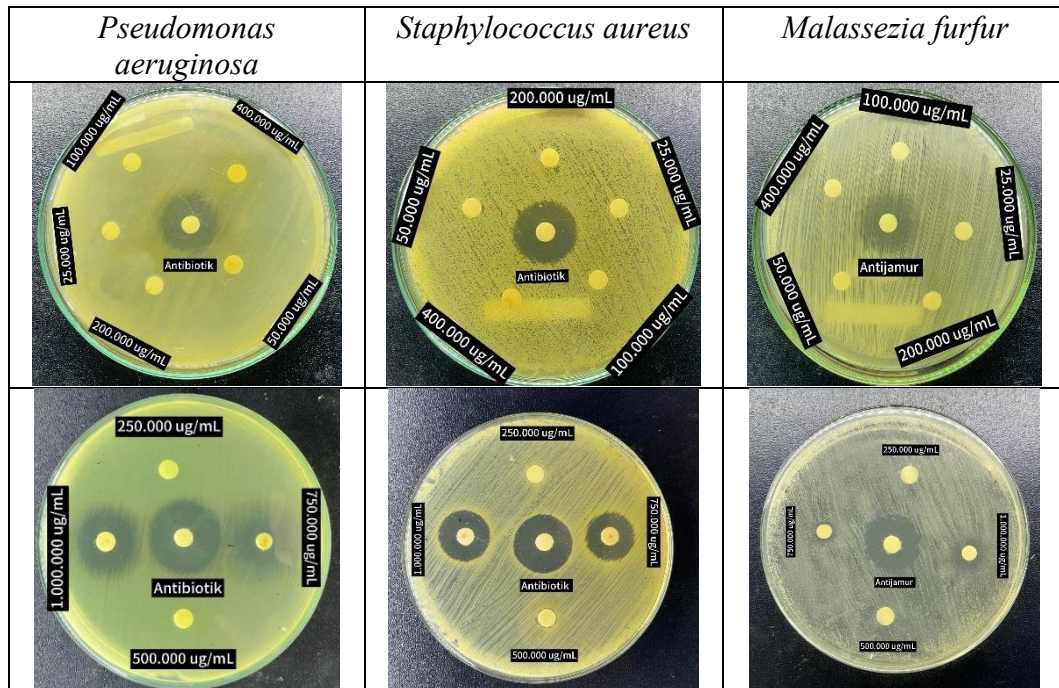


2. Optimasi antimikroba



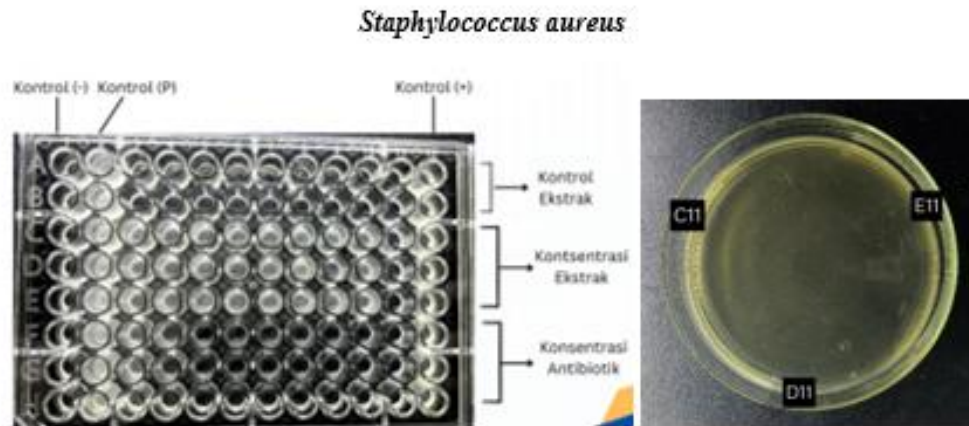
Lampiran 7 (Lanjutan)

3. Cakram kertas



Lampiran 7 (Lanjutan)

4. Mikrodilusi



$$\% \text{ Inhibisi} = \frac{\text{jumlah koloni bakteri awal} - \text{jumlah koloni bakteri akhir}}{\text{jumlah koloni bakteri awal}} \times 100 \%$$

$$\% \text{ Inhibisi} = \frac{50.000 - 0}{50.000} \times 100 \% = 100 \%$$

	1	2	3	4	5	6	7	8	9	10	11	12
A	+	+	+	+	+	+	+	+	+	+	+	+
B	+	+	+	+	+	+	+	+	+	+	+	+
C	+	+	+	+	+	+	+	+	+	+	+	+
D	+	+	+	+	+	+	+	+	+	+	+	+
E	+	+	+	+	+	+	+	+	+	+	+	+
F	+	+	+	+	+	+	+	+	+	+	+	+
G	+	+	+	+	+	+	+	+	+	+	+	+
H	+	+	+	+	+	+	+	+	+	+	+	+

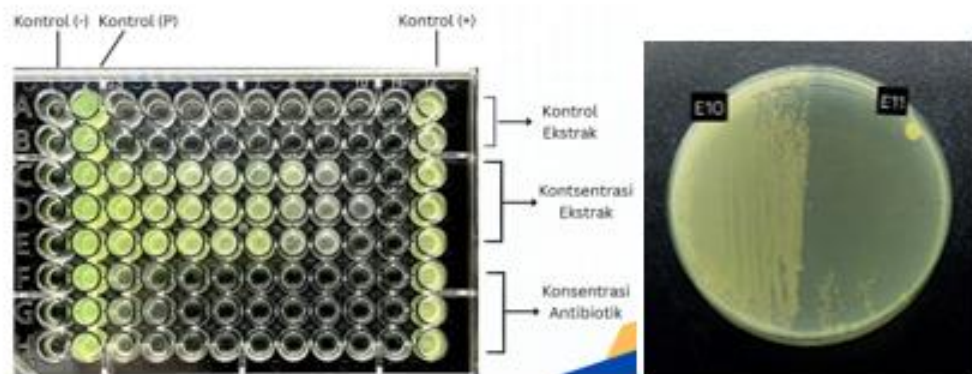
Keterangan :

(-) = Bening

(+) = keruh + endapan

Lampiran 7 (Lanjutan)

Pseudomonas aeruginosa



$$\% \text{ Inhibisi} = \frac{50.000 - 258}{50.000} \times 100 \% = 99,488 \%$$

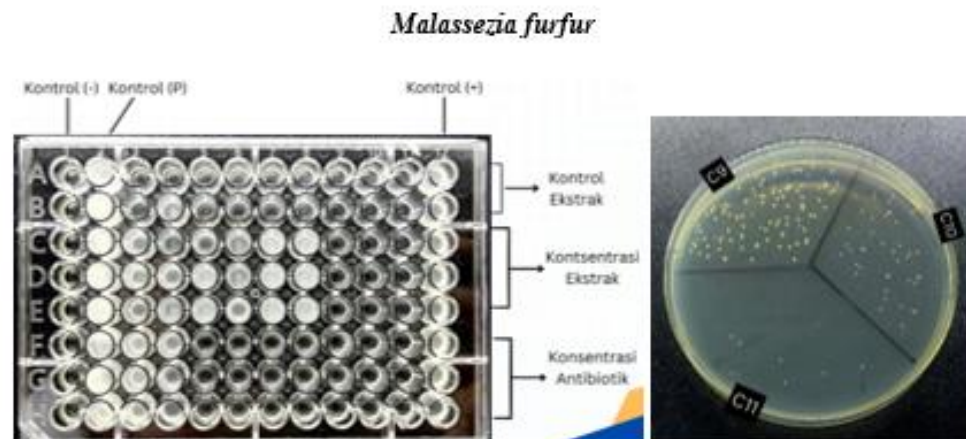
	1	2	3	4	5	6	7	8	9	10	11	12
A	●	+	●	●	●	●	●	●	●	●	●	●
B	●	+	●	+	●	●	●	●	●	●	●	●
C	●	+	+	+	+	+	+	+	+	+	+	●
D	●	+	+	+	+	+	+	+	+	+	+	●
E	●	+	+	+	+	+	+	+	+	+	+	●
F	●	+	+	+	+	+	+	+	+	+	+	●
G	●	+	+	+	+	+	+	+	+	+	+	●
H	●	+	+	+	+	+	+	+	+	+	+	●

Keterangan :

(-) = Bening

(+) = keruh + endapan

Lampiran 7 (Lanjutan)



$$\% \text{ Inhibisi} = \frac{50.000 - 6}{50.000} \times 100 \% = 99,988 \%$$

	1	2	3	4	5	6	7	8	9	10	11	12
A	●	●	●	●	●	●	●	●	●	●	●	●
B	●	●	●	●	●	●	●	●	●	●	●	●
C	●	●	●	●	●	●	●	●	●	●	●	●
D	●	●	●	●	●	●	●	●	●	●	●	●
E	●	●	●	●	●	●	●	●	●	●	●	●
F	●	●	●	●	●	●	●	●	●	●	●	●
G	●	●	●	●	●	●	●	●	●	●	●	●
H	●	●	●	●	●	●	●	●	●	●	●	●

Keterangan :

(-) = Bening

(+) = keruh + endapan

Keterangan :

●	Kontrol negatif (Media)
●	Kontrol pelarut (Media + DMSO + Bakteri)
●	Kontrol ekstrak (Media + ekstrak)
●	Media + Ekstrak + Bakteri atau Jamur uji)
●	Media + Antibiotik + Bakteri atau Jamur uji)
●	Kontrol positif (Media + Bakteri atau Jamur uji)

Lampiran 8 Hasil Turnitin

ORIGINALITY REPORT			
7 %	9 %	6 %	6 %
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS
PRIMARY SOURCES			
1	repository.ukwms.ac.id Internet Source	1 %	
2	jurnal.yamasi.ac.id Internet Source	1 %	
3	pt.scribd.com Internet Source	1 %	
4	jpmi.journals.id Internet Source	1 %	
5	repository.setiabudi.ac.id Internet Source	1 %	
6	repository.unair.ac.id Internet Source	1 %	
7	jurnal.unprimdn.ac.id Internet Source	1 %	
8	repo.unbrah.ac.id Internet Source	1 %	
9	biowallacea.uho.ac.id Internet Source	1 %	

Lampiran 9 Kartu Bimbingan

NIM	231FF04013	Nama Mahasiswa	IRA DWI FATMA
Program Studi	Farmasi	Jenis TA	Skripsi
Periode Mulai	2024 Genap	SKS Lulus	144 SKS
Tgl. Mulai	4 Maret 2025	Judul Tugas Akhir	Aktivitas Antimikroba Ekstrak Etanol Biji Mahoni (<i>Swietenia mahagoni</i> [L] Jacq.) Terhadap Bakteri <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i> dan jamur <i>Malassezia furfur</i>
Tahap	Seminar Kolokium/ Hasil Penelitian (Ujian)	Status	Aktif

No	Tanggal	Dosen Pembimbing	Topik	Disetujui	Aksi
1	5 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Laporan hasil penelitian	✓	 
1	7 Februari 2025	IKA KURNIA SUKMAWATI	Diskusi metode penelitian	✓	 
2	5 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Persetujuan kemajuan 1	✓	 
2	14 Februari 2025	IKA KURNIA SUKMAWATI	Membahas prosedur kerja peneletian	✓	 
3	14 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Mengirimkan Hasil dan Pembahasan Penelitian	✓	 
3	19 Februari 2025	IKA KURNIA SUKMAWATI	Mengkonfirmasi hasil uji	✓	 
4	15 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Meminta Persetujuan	✓	 
4	6 Maret 2025	IKA KURNIA SUKMAWATI	Mengkonfirmasi hasil uji	✓	 
5	2 Mei 2025	IKA KURNIA SUKMAWATI	Kemajuan 1 dan Laporan hasil penelitian	✓	 
5	16 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Hasil Dan Pembahasan	✓	 
6	5 Mei 2025	IKA KURNIA SUKMAWATI	Bimbingan Uji SEM	✓	 
6	22 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Persetujuan Dosbing Untuk Mahasiswa Yang Akan Moju GI	✓	 
7	22 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Hasil dan Pembahasan	✓	 
7	15 Mei 2025	IKA KURNIA SUKMAWATI	Meminta Persetujuan	✓	 
8	21 Mei 2025	IKA KURNIA SUKMAWATI	Bimbingan Hasil & Pembahasan Penelitian	✓	 
9	25 Mei 2025	Dr. apt. Agus Sulaeman, MSI	Revisi Hasil & Pembahasan	✓	 
9	29 Mei 2025	IKA KURNIA SUKMAWATI	Meminta TTD	✓	 

Lampiran 10 Riwayat Hidup

BIODATA



Nama Lengkap	: Ira Dwi Fatma
Nama Panggilan	: Ira
Tempat/Tanggal Lahir	: Surya Mataram, 21 April 2001
Jenis Kelamin	: Perempuan
Agama	: Islam
Status Perkawinan	: Belum Kawin
Alamat	: Surya Mataram RT 024/RW 005 Kec. Marga Tiga Kab. Lampung Timur Lampung
Email	: iradwifatma11@gmail.com
No. Telp	: +62 823-7560-9328
Anak ke	: 2 dari 3 bersaudara