

## LAMPIRAN

### Lampiran 1. Hasil Turnitin

|                                                                                                                                                  |                                             |              |                |
|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------|----------------|
| Halimatu Sa'diah_201FF03126_bebasplagiarism                                                                                                      |                                             |              |                |
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## Lampiran 2. Lembar Bimbingan



Dok. No. 02.64.00.FRM-03/AKD-SPMI

Jl. Sekeloa Utara No. 754 Bandung  
Telp. 022-2540760 Fax 022-2540768  
Email: info@bhaktikencana.ac.id

## KARTU BIMBINGAN TUGAS AKHIR 2

|                  |                                    |
|------------------|------------------------------------|
| Pembimbing Utama | : Dr. apt. Patonah, M.Si           |
| Nama Mahasiswa   | : Halimatu Sa'diah                 |
| NPM              | : 201FF03126                       |
| Bidang Ilmu      | : Farmakologi Farmasi Klinis (FFK) |

| No  | Hari/Tanggal           | Waktu             | Tempat             | Materi                                                                                | Paraf Dosen |
|-----|------------------------|-------------------|--------------------|---------------------------------------------------------------------------------------|-------------|
| 1.  | Rabu / 14 - Feb - 24   | 16.00             | Rudoman Bu Patonah | Latihan EKG                                                                           | ✓           |
| 2.  | Selasa / 20 - Feb - 24 | 11.00             | Ruang Diklat       | - Menyampaikan project<br>- diskusi terkait prosedur in vitro<br>- identifikasi reman | ✓           |
| 3.  | Selasa / 27 - Feb - 24 | 17.00 s/d selesai | Online             | diskusi terkait perhitungan entalpi                                                   | ✓           |
| 4.  | Selasa / 5 - Mar - 24  | 11.30 s/d selesai | Via zoom           | - Susunan yang digunakan<br>- Proses penelitian                                       | ✓           |
| 5.  | Jum'at / 22 - Mar - 24 | 10.00 s/d selesai | Ruang Diklat       | - histologi jaringan dan NO<br>- Proses penelitian                                    | ✓           |
| 6.  | Senin / 22 - Apr - 24  | 13.00 s/d selesai | Via zoom           | - Proses penelitian                                                                   | ✓           |
| 7.  | Senin / 29 - Apr - 24  | 13.00 s/d selesai | Via Email          | - Presentasi Laporan Kemajuan 1                                                       | ✓           |
| 8.  | Selasa / 30 - Apr - 24 | 09.00 s/d selesai | Ruang Diklat FF    | Tanda tangan laporan kemajuan 1 dan diikuti pemeriksaan NO dan praktikum              | ✓           |
| 9.  | Rabu / 01 - Mei - 24   | 16.00 s/d selesai | Ruang Bu Patonah   | Ditaksi cara perhitungan p <sub>H</sub> dan hasil EKG                                 | ✓           |
| 10. | Rabu / 22 Mei 24       | 14.00 s/d selesai | Ruang diklat FF    | Seminar kelompok keilmuan                                                             | ✓           |
| 11. | Kamis / 30 Mei 24      | 14.00 s/d selesai | Ruang diklat FF    | Tanda tangan laporan kemajuan 2 dan fixasi prosedur NO                                | ✓           |
| 12. | Jum'at / 14 Juni 24    | 10.00 s/d selesai | Ruang Pak UBR      | Konfirmasi penerimaan radar Flavonoid total & hasil histologi jaringan                | ✓           |
| 13. | Senin / 8 Juli 24      | 09.00 s/d selesai | zoom meeting       | Diskusikan hasil keseluruhan penelitian dan pembahasannya                             | ✓           |
| 14. | Jum'at / 19 Juli 24    | 18.00 s/d selesai | G-DRIVE            | Memasukkan file hasil penelitian Spss, Draft skripsi                                  | ✓           |
| 15. | Selasa / 9 Juli 24     | 14.00 s/d selesai | RE 104             | Diskusi dan Revisi Draft Skripsi                                                      | ✓           |
| 16. | Rabu / 10 Juli 24      | 11.00 s/d selesai | Ruang Pak UBR      | Tanda tangan halaman persetujuan                                                      | ✓           |

Catatan : Kartu ini harus dibawa setiap kali melakukan bimbingan dan harus diisi oleh dosen pembimbing.

**KARTU BIMBINGAN TUGAS AKHIR 2**

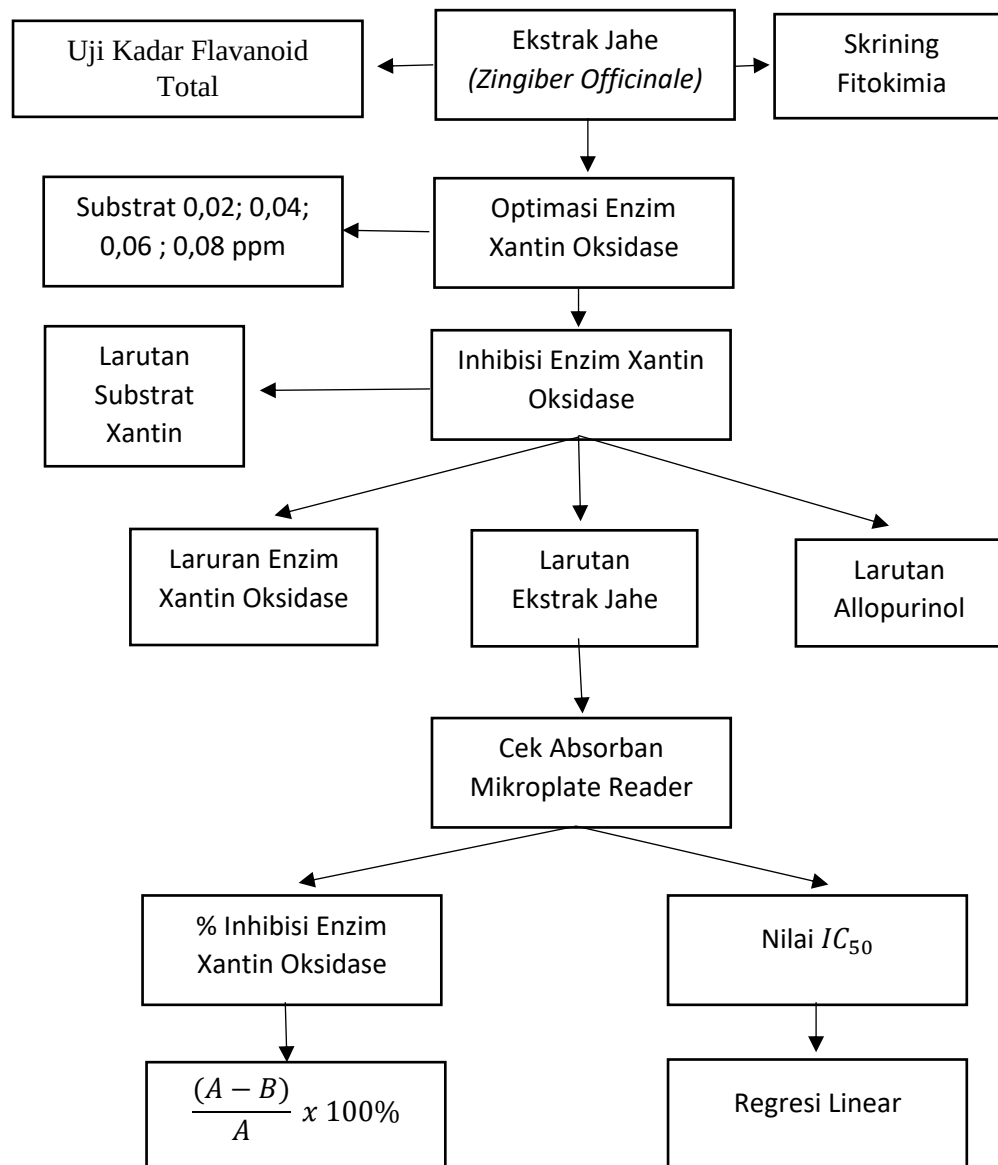
|                |        |                                    |
|----------------|--------|------------------------------------|
| Pembimbing     | Seri A | : Soni Muhsinin, M.Si              |
| Nama Mahasiswa |        | : Halimatu Sa'diah                 |
| NPM            |        | : 201FF03126                       |
| Bidang Ilmu    |        | : Farmakologi Farmasi Klinis (FFK) |

| No  | Hari/Tanggal          | Waktu            | Tempat       | Materi                                                        | Paraf Dosen |
|-----|-----------------------|------------------|--------------|---------------------------------------------------------------|-------------|
| 1.  | Senin / 27 - Feb - 24 | 16.00 sd selesai | online       | - Diskusi terkait beli entim                                  | SA          |
| 2.  | Jumat / 15 Mar - 24   | 10.30 sd selesai | LPPM         | - Membahas prosedur in vitro<br>- progress penelitian         | SA          |
| 3.  | Senin 12 - Apr - 24   | 14.00 sd selesai | L3 dekat lab | - Konfirmasi terkait progress penelitian dan memulai in vitro | SA          |
| 4.  | Senin / 29 - Apr - 24 | 14.00 sd selesai | LPPM         | - Presentasi kemajuan 1                                       | SA          |
| 5.  | Kamis / 20 - Mei - 24 | 11.00 sd selesai | LPPM         | - Presentasi laporan kemajuan 2                               | SA          |
| 6.  | Kedu / 10 Juni 24     | 13.00 sd selesai | P3K          | Konfirmasi terkait kemajuan penelitian                        | SA          |
| 7.  | Kamis / 13 Juni 24    | 13.00 sd selesai | P3K          | Membahas SPSS, cara pembacaan SPSS                            | SA          |
| 8.  | Kamis / 27 Juni 24    | 13.00 sd selesai | P3K          | Membahas terkait data in vitro, NO, dan MDA                   | SA          |
| 9.  | Jumat / 5 Juni 24     | 14.00 sd selesai | P3K          | Revisi draft skripsi dan Revisi SPSS                          | SA          |
| 10. | Sabtu / 6 Juni 24     | 18.00 sd selesai | E- Olive     | Pengumpulan draft skripsi, SPSS, Excel, data.                 | SA          |
| 11. | Senin / 10 Juni 24    | 11.00 sd selesai | Ruang P3K    | diskusi dan tanda tangan halaman persetujuan                  | SA          |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |
|     |                       |                  |              |                                                               |             |

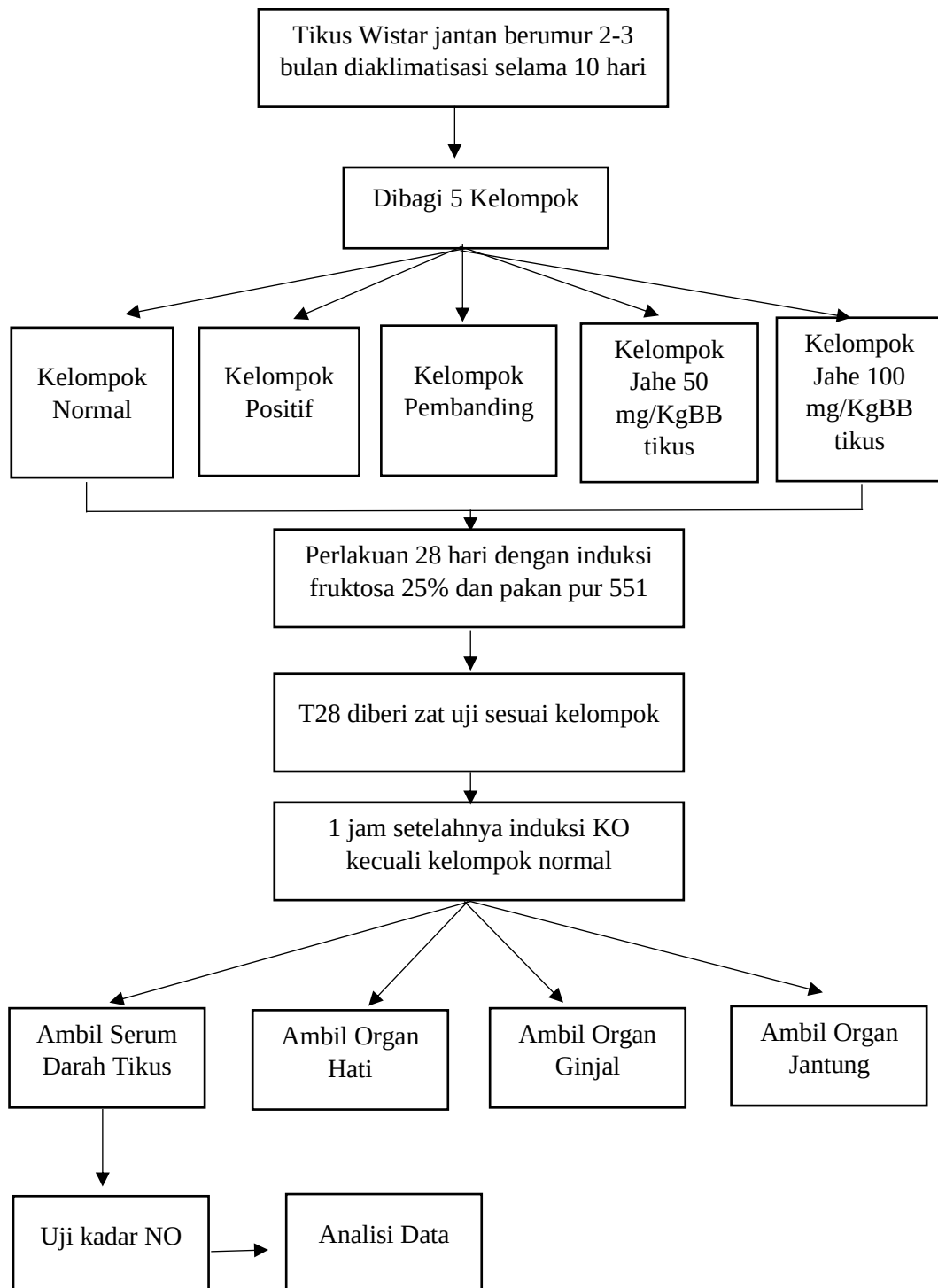
Catatan : Kartu ini harus dibawa setiap kali melakukan bimbingan dan harus diisi oleh dosen pembimbing.

### Lampiran 3. Bagan Kerja

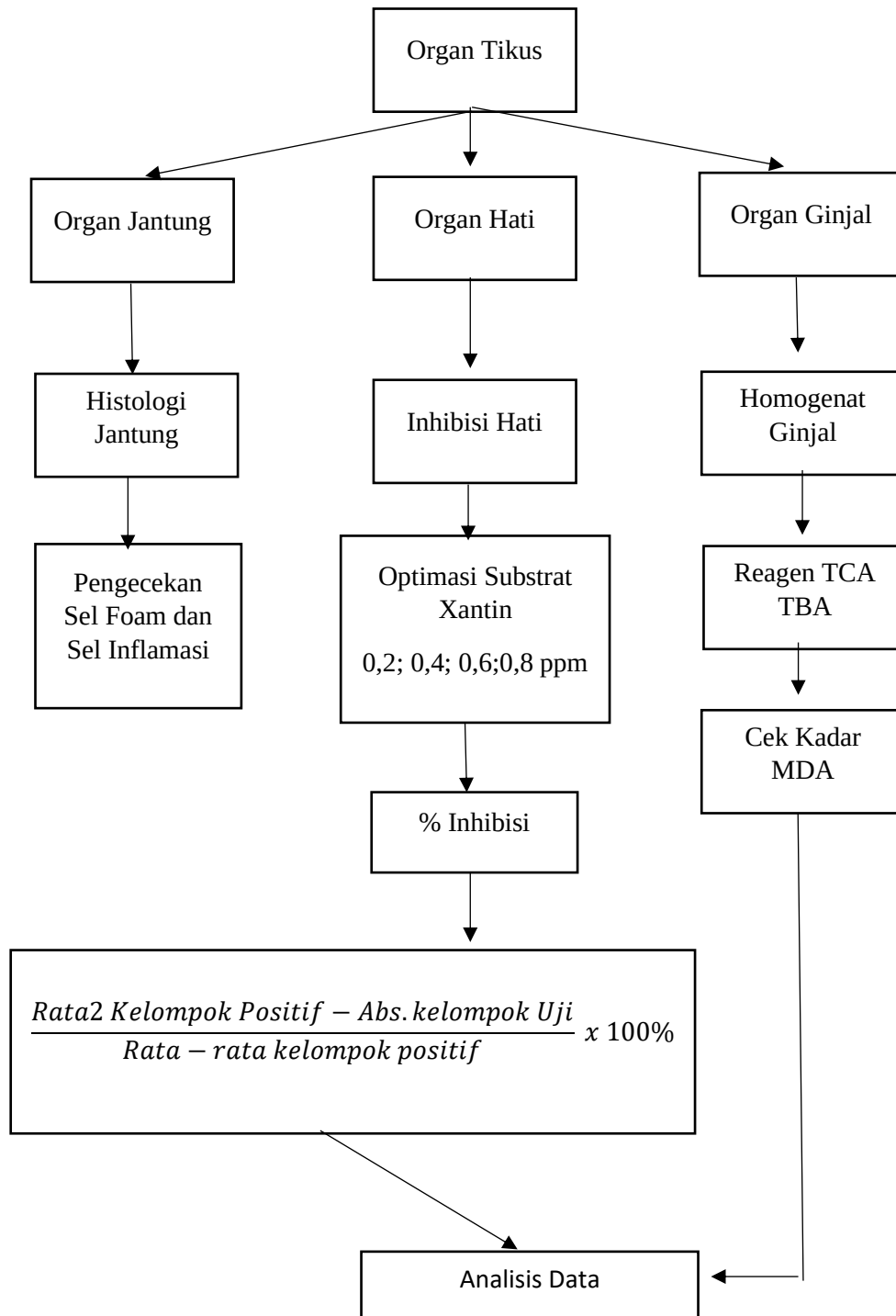
#### 1. In Vitro



## 2. In Vivo



## 3. Ex Vivo



## Lampiran 4. Surat Persetujuan Etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,  
RISET DAN TEKNOLOGI  
UNIVERSITAS PADJADJARAN  
**KOMITE ETIK PENELITIAN**  
**RESEARCH ETHICS COMMITTEE**

Jl. Prof. Eyckman No. 38 Bandung 40161  
Telp. & Fax. 022-2038697 email: [kep@unpad.ac.id](mailto:kep@unpad.ac.id), website: [kep.unpad.ac.id](http://kep.unpad.ac.id)

No. Reg.: 2401020011

**Persetujuan Etik**  
**ETHICAL APPROVAL**

Nomor: 115/UN6.KEP/EC/2024

Komite Etik Penelitian Universitas Padjadjaran Bandung, telah mengkaji dengan teliti proposal penelitian yang menggunakan subjek Hewan Coba dalam penelitian yang berjudul:

*The Research Ethics Committee Universitas Padjadjaran Bandung, has been thoroughly reviewed proposal for research with animal subjects in research entitled:*

"UJI IN VIVO DAN IN VITRO AKTIVITAS ANTIHIPERURISEMIA EKSTRAK TUNGGAL DAN KOMBINASI RIMPANG JAHE (ZINGIBER OFFICINALE) DAN RIMPANG KENCUR (KAEMPFERIA GALANGA) TERHADAP INHIBISI XANTINE OXIDASE PADA MODEL HEWAN SINDROM METABOLIK"

|                                                                |   |                                                                                                 |
|----------------------------------------------------------------|---|-------------------------------------------------------------------------------------------------|
| Nama Peneliti Utama<br><i>Principal Researcher</i>             | : | Yoga Adi Restu Muzaki                                                                           |
| Pembimbing/Peneliti Lain<br><i>Supervisor/Other Researcher</i> | : | Dr. apt. Patonah, M.Si<br>apt. Ika Kurnia Sukmawati, M.Si                                       |
| Nama Institusi<br><i>Institution</i>                           | : | Program Sarjana<br>Program Studi Farmasi<br>Fakultas Farmasi Universitas Bhakti Kencana Bandung |

proposal tersebut dapat disetujui pelaksanaannya.  
*hereby declare that the proposal is approved.*

Ditetapkan di : Bandung  
*Issued in*  
Tanggal : 02-02-2024  
*Date*



Ketua,  
*Chairman,*

Prof. Nur Atik, dr. M.Kes., MOHRE., PhD  
NIP. 19811010 200801 1 019

**Keterangan/notes:**

Persetujuan etik ini berlaku selama satu tahun sejak tanggal ditetapkan.  
*This ethical clearance is effective for one year from the due date.*

Pada akhir penelitian, laporan pelaksanaan penelitian harus diserahkan ke Komite Etik Penelitian.

*In the end of the research, progress and final summary report should be submitted to the Research Ethics Committee.*

Jika ada perubahan atau penyimpangan protokol dan/atau perpanjangan penelitian, harus mengajukan kembali permohonan kajian etik penelitian.

*If there be any protocol modification or deviation and/or extension of the study, the Principal investigator is required to resubmit the protocol for approval.*

Jika ada kejadian serius yang tidak diinginkan (KTD) harus segera dilaporkan ke Komite Etik Penelitian.

*If there are Serious Adverse Events (SAE) should be immediately reported to the Research Ethics Committee*

## Lampiran 5. Determinasi Tanaman



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,  
RISET DAN TEKNOLOGI  
UNIVERSITAS PADJADJARAN  
**KOMITE ETIK PENELITIAN**  
**RESEARCH ETHICS COMMITTEE**

Jl. Prof. Eyckman No. 38 Bandung 40161  
Telp. & Fax. 022-2038697 email: [kep@unpad.ac.id](mailto:kep@unpad.ac.id), website: [kep.unpad.ac.id](http://kep.unpad.ac.id)

No. Reg.: 2401020011

**PERSETUJUAN ETIK**  
**ETHICAL APPROVAL**

Nomor: 115/UN6.KEP/EC/2024

Komite Etik Penelitian Universitas Padjadjaran Bandung, telah mengkaji dengan teliti proposal penelitian yang menggunakan subjek Hewan Coba dalam penelitian yang berjudul:

*The Research Ethics Committee Universitas Padjadjaran Bandung, has been thoroughly reviewed proposal for research with animal subjects in research entitled:*

"UJI IN VIVO DAN IN VITRO AKTIVITAS ANTIHIPERURISEMIA EKSTRAK TUNGGAL DAN KOMBINASI RIMPANG JAHE (ZINGIBER OFFICINALE) DAN RIMPANG KENCUR (KAEMPFERIA GALANGA) TERHADAP INHIBISI XANTINE OXIDASE PADA MODEL HEWAN SINDROM METABOLIK"

Nama Peneliti Utama : Yoga Adi Restu Muzaki  
*Principal Researcher*

Pembimbing/Peneliti Lain : Dr. apt. Patonah, M.Si  
*Supervisor/Other Researcher* apt. Ika Kurnia Sukmawati, M.Si

Nama Institusi : Program Sarjana  
*Institution* Program Studi Farmasi  
Fakultas Farmasi Universitas Bhakti Kencana Bandung

proposal tersebut dapat disetujui pelaksanaannya.  
*hereby declare that the proposal is approved.*

Ditetapkan di : Bandung  
*Issued in*  
Tanggal : 02-02-2024  
*Date*



Ketua,  
*Chairman,*

Prof. Nur Atik, dr. M.Kes., MOHRE., PhD  
NIP. 19811010 200801 1 019

**Keterangan/notes:**

Persetujuan etik ini berlaku selama satu tahun sejak tanggal ditetapkan.  
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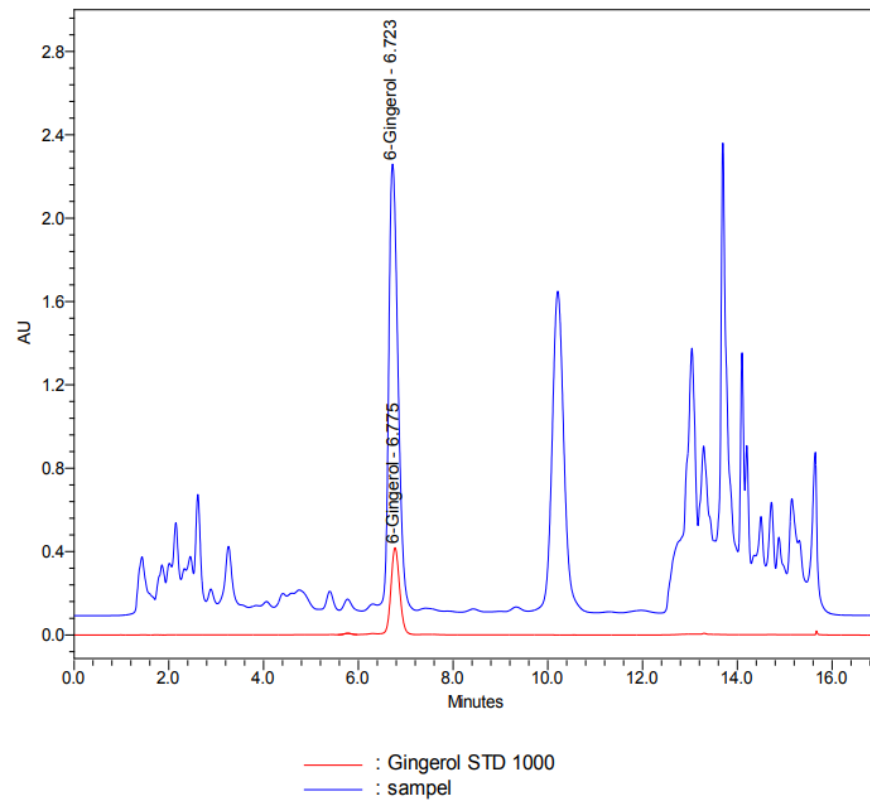
*If there be any protocol modification or deviation and/or extension of the study, the Principal investigator is required to resubmit the protocol for approval.*

Jika ada kejadian serius yang tidak diinginkan (KTD) harus segera dilaporkan ke Komite Etik Penelitian.

*If there are Serious Adverse Events (SAE) should be immediately reported to the Research Ethics Committee*



## Lampiran 6. Identifikasi Kualitatif Senyawa 6-Gingerol

**Gambar 3.** Kromatogram Overlap Sampel Ekstrak Jahe (atas) dan *Standard* 6-gingerol (bawah)


**PT. EBM SAINTIFIK DAN TEKNOLOGI**

Jl. Bukit Raya No. 582, Clumbuleuit, Bandung 40142, Jawa Barat, Indonesia

www.markherb.com

info@markherb.com

+62 877 3544 7441

**RESULT OF ANALYSIS**

**Laporan Hasil Analisis: 24-05/MH/Rep/LHA/004**

**I. Number / Nomor**

1.1 Quotation No. / No. Penawaran : 24-03/Q-MH/11

**II. Customer / Pelanggan**

2.1 Name / Nama : Nadhira Aulia Zahra  
 2.2 Address / Alamat : Universitas Bhakti Kencana  
 Jl. Soekarno Hatta No. 754, Cipadung Kidul,  
 Kec. Panyileukan,  
 Kota Bandung, Jawa Barat 40614  
 2.3 Phone / Telepon : +62 851 7689 8656  
 2.4 Contact Person / Personil : Nadhira Aulia Zahra  
 Penghubung

**III. Sample / Sampel Analisis**

3.1 Sample Code / Kode Sampel : Ekstrak Jahe  
 3.2 Batch Number / No Batch : -  
 3.3 Lot Number / No Lot : -  
 3.4 Packaging / Kemasan : 5 gr  
 3.5 Production Date / Tanggal Produksi : -  
 3.6 Expiry Date / Tanggal Kadaluarsa : -  
 3.7 Factory Name / Nama Pabrik : -  
 3.8 Factory Address / Alamat Pabrik : -  
 3.9 Trade Mark / Nama Dagang : -  
 3.10 Sample Name / Nama Sample : Jahe  
 3.11 Other Information / Keterangan lain : -  
 No Notifikasi : -  
 No Pengajuan : -  
 No Registrasi : -  
 No Principal Code : -  
 3.12 Date of Received / Diterima : 28 Maret 2024  
 3.13 Date of Analysis / Tanggal Analisis : 10 Mei 2024  
 3.14 Type of Analysis/ Jenis Analisis : Analisis Kualitatif 6-gingerol dari Ekstrak Jahe

**IV. Result / Hasil Uji**

Next page/ Halaman selanjutnya

## Lampiran 7. Surat Keterangan Tikus Putih Jantan Galur Wistar

**SURAT KETERANGAN**

Saya yang bertanda tangan di bawah ini :

Nama : **Dewi Wulandari**  
Alamat : Jl. Ps. Baros, Baros Pasar Kavling No.28 I Rt.02 Rw.1  
Cimahi Selatan 40532  
No. Hp : 081578008919

menerangkan / menyatakan bahwa tikus putih yang kami kembangbiakan di peternakan AnakMami Tikus Putih adalah jenis Wistar. Tikus itu adalah normal yang digunakan sebagai hewan percobaan di Laboratorium

Demikian surat keterangan ini dibuat, semoga dapat digunakan sebagaimana mestinya. Atas kerjasamanya kami ucapkan terima kasih.

Cimahi, 27 Feb 2024



Dewi Wulandari

---

AnakMami Tikus Putih  
Jl. Ps. Baros, Baros Pasar Kavling I No.28 Rt.02 Rw.01 Cimahi Selatan 40532  
081578008919 - 081328000919

## Lampiran 8. COA Fruktosa

NO : 3 / F55-LKL / V / 2023 /  
 DATE : 27/10/2023

## CERTIFICATE OF ANALYSIS

1. Name Of Product : High Fructose Corn Syrup 55
2. Customer : PT. Hade Sejati Pratama
3. Production Date : 20 Oktober 2023
4. Expired Date : 20 Oktober 2025
5. Lot No. : 02201023
6. Total Weight : 20010 Kg
7. Pembuat : Rego
8. Result Of Analysis :

| NO | PARAMETER                | SPECIFICATION              | RESULT    | METHODE           |
|----|--------------------------|----------------------------|-----------|-------------------|
| 1  | Appearance               | Colorless Liquid           | Colorless | Visual            |
| 2  | pH (100%)                | 3.3 - 4.5                  | 4.2       | Potenciometry     |
| 3  | pH (10 %)                | 4.5 - 6.5                  | 5.3       | Potenciometry     |
| 4  | Brix (20°C)              | Min. 75.0 %                | 75.6      | Refractometry     |
| 5  | Color(30 Bx ; 420 nm)    | Max. 0.007 abs             | 0.005     | Spectrophotometry |
| 6  | Turbidity (30Bx; 720 nm) | Max. 0.002 abs             | 0.000     | Spectrophotometry |
| 7  | Fructose                 | Min. 55.0 %                | 55.2      | HPLC              |
| 8  | Fructose + Glucose       | Min. 94.0 %                | 96.4      | HPLC              |
| 9  | Oligo                    | Max. 6.0 %                 | 3.6       | HPLC              |
| 10 | Arsenic (As)*            | Max. 1.0 mg/kg             | < 0.001   | SNI 01-4866-1998  |
| 11 | Lead (Pb)*               | Max. 0.5 mg/kg             | < 0.1     | SNI 01-2896-1998  |
| 12 | Copper (Cu)*             | Max. 2.0 mg/kg             | 0.1       | SNI 01-2896-1998  |
| 13 | Total Plate Count        | Max. 5.0 x 10 <sup>2</sup> | < 10      | SNI 01-2897-1992  |
| 14 | E. coli                  | < 3 MPN/g                  | < 3       | SNI 01-2897-1992  |
| 15 | Coliform                 | Max. 20 MPN/g              | < 3       | SNI 01-2897-1992  |
| 16 | Molds                    | Max. 50 cfu/g              | < 10      | SNI 01-2897-1992  |
| 17 | Yeast                    | Max. 50 cfu/g              | < 10      | SNI 01-2897-1992  |

\* External Laboratory every 6 month

PT. Daesang Ingredients Indonesia, 27 Oktober 2023



DAESANG  
Ingredients Indonesia

Ahmad Rizal Mawardi  
 QA Staff

## PT. Daesang Ingredients Indonesia

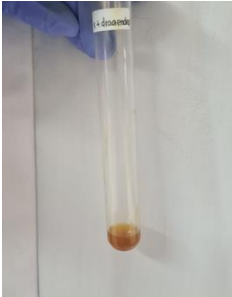
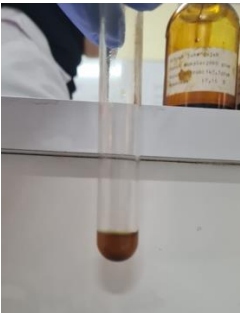
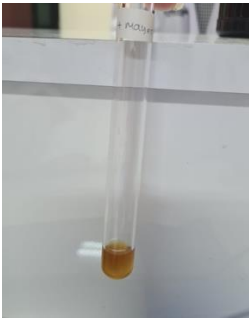
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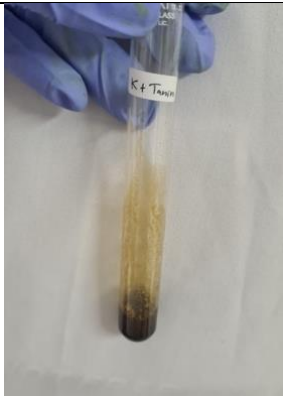
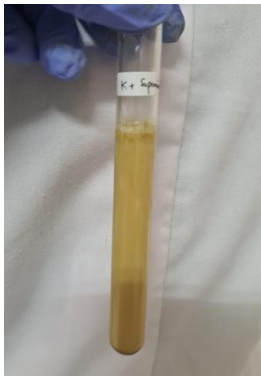
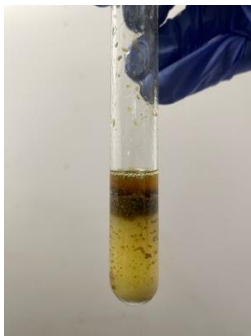
Jl. PerintisKemerdekaan No. 1-3, PuloGadung, Jakarta 13260 – Indonesia  
 Tel. (62-21) 4786-3124 Fax. (62-21) 4786-3146

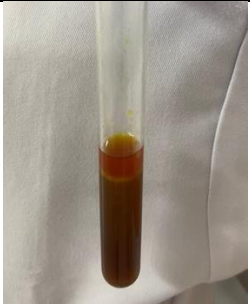
## FACTORY :

Kec. Driyorejo, Kab. Gresik 61177, JawaTimur - Indonesia  
 Tel.(62-31) 750-7888, 759-0040 Fax.(62-31) 750 7595, 7590039

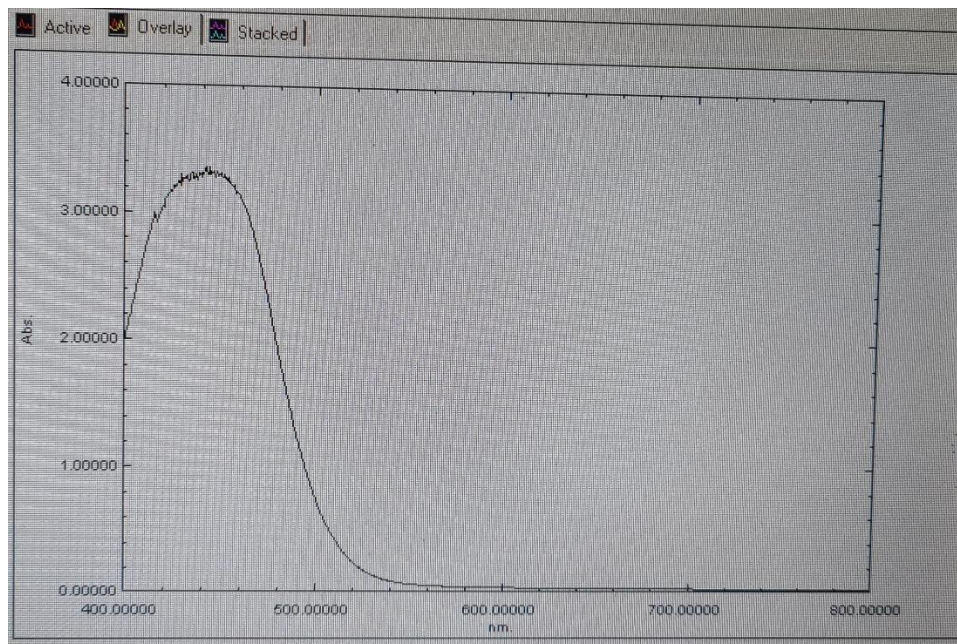
## Lampiran 9. Skrining Fitokimia

| No | Pereaksi |            | Hasil | Keterangan                                                         | Dokumentasi                                                                           |
|----|----------|------------|-------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. | Alkaloid | Dragendorf | +     | Endapan jingga                                                     |    |
|    |          | Wagner     | +     | Endapan coklat                                                     |   |
|    |          | Mayer      | -     | Negatif palsu<br>(tidak ada endapan putih tapi ada bayangan putih) |  |

|    |              |   |                    |                                                                                       |
|----|--------------|---|--------------------|---------------------------------------------------------------------------------------|
| 2. | Tanin        | + | Hitam kehijauan    |    |
| 3. | Saponin      | - | Tinggi busa < 1 cm |   |
| 4. | Flavonoid    | + | Cincin merah       |  |
| 5. | Triterpenoid | + | Kecoklatan         |                                                                                       |

|  |  |  |  |                                                                                     |
|--|--|--|--|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
|--|--|--|--|-------------------------------------------------------------------------------------|

## Lampiran 10. Panjang Gelombang Maksimum Kuersetin





### Lampiran 11. Rumus Kadar NO

( $\mu\text{M}$ ) = Konsentrasi NO

$$C \text{ (M)} = \frac{A}{\epsilon \times l} \text{ hasilnya dikali } 10^6 \text{ (mikromolar)}$$

A = Absorban

$\epsilon$  = nilai ekstinsi molar (20.000)

l = Panjang serapan spektro pada kuvet (1 cm)

C = konsentrasi

### Konversi (Berat Molekul NO)

BM = 30,01 g/mol

Volume sampel = 3 mL dalam kuvet (0,003 L)

Massa NO = Konsentrasi NO x Volume Sampel x BM x  $10^6$  ( $\mu\text{g/mL}$ )

Massa NO ke Mol

Massa molar NO = 30 g/mol

Massa NO dari  $\mu\text{g}$  ke gram

$$n = \frac{m}{M}$$

$$n \text{ (mol)} = \frac{\text{Massa NO (gram)} \times 10^{-5}}{\text{Berat molar}}$$

### Konsentrasi Dalam Larutan

$$C \text{ (M)} = \frac{n}{V}$$

Molar ke  $\mu\text{M}$  = hasil C(M) x  $10^6$   $\mu\text{M/M}$

## Lampiran 12. Hasil Uji Statistik One Way - Anova

## 1. Bobot Badan Tikus

|         |                | ANOVA          |    |             |        |       |
|---------|----------------|----------------|----|-------------|--------|-------|
|         |                | Sum of Squares | df | Mean Square | F      | Sig.  |
| Hari_0  | Between Groups | 52,560         | 4  | 13,140      | 0,301  | 0,874 |
|         | Within Groups  | 872,400        | 20 | 43,620      |        |       |
|         | Total          | 924,960        | 24 |             |        |       |
| Hari_7  | Between Groups | 1542,800       | 4  | 385,700     | 5,545  | 0,004 |
|         | Within Groups  | 1391,200       | 20 | 69,560      |        |       |
|         | Total          | 2934,000       | 24 |             |        |       |
| Hari_14 | Between Groups | 3678,960       | 4  | 919,740     | 9,557  | 0,000 |
|         | Within Groups  | 1924,800       | 20 | 96,240      |        |       |
|         | Total          | 5603,760       | 24 |             |        |       |
| Hari_21 | Between Groups | 7730,240       | 4  | 1932,560    | 24,581 | 0,000 |
|         | Within Groups  | 1572,400       | 20 | 78,620      |        |       |
|         | Total          | 9302,640       | 24 |             |        |       |
| Hari_28 | Between Groups | 9816,240       | 4  | 2454,060    | 36,508 | 0,000 |
|         | Within Groups  | 1344,400       | 20 | 67,220      |        |       |
|         | Total          | 11160,640      | 24 |             |        |       |

2. Kadar NO (*Nitric Oxide*)

## Descriptives

Kadar\_Nitric\_Oxide

|             | N  | Mean     | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|-------------|----|----------|----------------|------------|----------------------------------|-------------|---------|---------|
|             |    |          |                |            | Lower Bound                      | Upper Bound |         |         |
| Normal      | 5  | 19,02600 | ,678786        | ,303562    | 18,18318                         | 19,86882    | 18,106  | 19,706  |
| Positif     | 5  | 2,24000  | ,279285        | ,124900    | 1,89322                          | 2,58678     | 1,950   | 2,700   |
| Pembanding  | 5  | 17,84540 | 1,171638       | ,523972    | 16,39062                         | 19,30018    | 16,055  | 19,206  |
| Jahe 50 mg  | 5  | 7,04200  | 1,012052       | ,452604    | 5,78537                          | 8,29863     | 6,002   | 8,402   |
| Jahe 100 mg | 5  | 12,33400 | ,413310        | ,184838    | 11,82081                         | 12,84719    | 11,953  | 12,854  |
| Total       | 25 | 11,69748 | 6,543316       | 1,308663   | 8,99653                          | 14,39843    | 1,950   | 19,706  |

### Tests of Normality

|                    | Kelompok    | Kolmogorov-Smirnov <sup>a</sup> |    |                   | Shapiro-Wilk |    |      |
|--------------------|-------------|---------------------------------|----|-------------------|--------------|----|------|
|                    |             | Statistic                       | df | Sig.              | Statistic    | df | Sig. |
| Kadar_Nitric_Oxide | Normal      | ,205                            | 5  | ,200 <sup>*</sup> | ,924         | 5  | ,554 |
|                    | Positif     | ,286                            | 5  | ,200 <sup>*</sup> | ,875         | 5  | ,289 |
|                    | Pembanding  | ,219                            | 5  | ,200 <sup>*</sup> | ,963         | 5  | ,830 |
|                    | Jahe 50 mg  | ,286                            | 5  | ,200 <sup>*</sup> | ,901         | 5  | ,414 |
|                    | Jahe 100 mg | ,310                            | 5  | ,130              | ,836         | 5  | ,154 |

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### Tests of Homogeneity of Variances

|                    |                                      | Levene Statistic | df1 | df2    | Sig. |
|--------------------|--------------------------------------|------------------|-----|--------|------|
| Kadar_Nitric_Oxide | Based on Mean                        | 2,569            | 4   | 20     | ,070 |
|                    | Based on Median                      | 1,216            | 4   | 20     | ,335 |
|                    | Based on Median and with adjusted df | 1,216            | 4   | 12,288 | ,353 |
|                    | Based on trimmed mean                | 2,472            | 4   | 20     | ,078 |

### ANOVA

Kadar\_Nitric\_Oxide

|                | Sum of Squares | df | Mean Square | F       | Sig.  |
|----------------|----------------|----|-------------|---------|-------|
| Between Groups | 1015,134       | 4  | 253,783     | 408,464 | <,001 |
| Within Groups  | 12,426         | 20 | ,621        |         |       |
| Total          | 1027,560       | 24 |             |         |       |

**Kadar\_Nitric\_Oxide**

|                        |             |   | Subset for alpha = 0.05 |         |          |          |          |
|------------------------|-------------|---|-------------------------|---------|----------|----------|----------|
|                        | Kelompok    | N | 1                       | 2       | 3        | 4        | 5        |
| Tukey HSD <sup>a</sup> | Positif     | 5 | 2,24000                 |         |          |          |          |
|                        | Jahe 50 mg  | 5 |                         | 7,04200 |          |          |          |
|                        | Jahe 100 mg | 5 |                         |         | 12,33400 |          |          |
|                        | Pembanding  | 5 |                         |         |          | 17,84540 |          |
|                        | Normal      | 5 |                         |         |          | 19,02600 |          |
|                        | Sig.        |   | 1,000                   | 1,000   | 1,000    | ,165     |          |
| Duncan <sup>a</sup>    | Positif     | 5 | 2,24000                 |         |          |          |          |
|                        | Jahe 50 mg  | 5 |                         | 7,04200 |          |          |          |
|                        | Jahe 100 mg | 5 |                         |         | 12,33400 |          |          |
|                        | Pembanding  | 5 |                         |         |          | 17,84540 |          |
|                        | Normal      | 5 |                         |         |          |          | 19,02600 |
|                        | Sig.        |   | 1,000                   | 1,000   | 1,000    | 1,000    | 1,000    |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5,000.

### 3. Kadar MDA (*Malondialdehid*)

**Descriptives**

Kadar\_MDA

|            | N  | Mean    | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |             | Minimum | Maximum |
|------------|----|---------|----------------|------------|----------------------------------|-------------|---------|---------|
|            |    |         |                |            | Lower Bound                      | Upper Bound |         |         |
| Normal     | 5  | 1,52179 | ,204104        | ,091278    | 1,26837                          | 1,77522     | 1,346   | 1,859   |
| Positif    | 5  | 4,64359 | ,381359        | ,170549    | 4,17007                          | 5,11711     | 4,167   | 5,109   |
| Pembanding | 5  | 2,37692 | ,244994        | ,109565    | 2,07272                          | 2,68112     | 2,000   | 2,654   |
| Jahe 50mg  | 5  | 3,36923 | ,053363        | ,023865    | 3,30297                          | 3,43549     | 3,288   | 3,423   |
| Jahe 100mg | 5  | 2,65769 | ,289939        | ,129665    | 2,29769                          | 3,01770     | 2,442   | 3,128   |
| Total      | 25 | 2,91385 | 1,095285       | ,219057    | 2,46173                          | 3,36596     | 1,346   | 5,109   |

**Tests of Normality**

|           |            | Kolmogorov-Smirnov <sup>a</sup> |    |                   | Shapiro-Wilk |    |      |
|-----------|------------|---------------------------------|----|-------------------|--------------|----|------|
|           | Kelompok   | Statistic                       | df | Sig.              | Statistic    | df | Sig. |
| Kadar_MDA | Normal     | ,267                            | 5  | ,200 <sup>*</sup> | ,864         | 5  | ,244 |
|           | Positif    | ,172                            | 5  | ,200 <sup>*</sup> | ,967         | 5  | ,856 |
|           | Pembanding | ,225                            | 5  | ,200 <sup>*</sup> | ,945         | 5  | ,702 |
|           | Jahe 50mg  | ,213                            | 5  | ,200 <sup>*</sup> | ,939         | 5  | ,656 |
|           | Jahe 100mg | ,276                            | 5  | ,200 <sup>*</sup> | ,826         | 5  | ,130 |

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### Tests of Homogeneity of Variances

|           |                                         | Levene<br>Statistic | df1 | df2    | Sig. |
|-----------|-----------------------------------------|---------------------|-----|--------|------|
| Kadar_MDA | Based on Mean                           | 2,698               | 4   | 20     | ,060 |
|           | Based on Median                         | 1,333               | 4   | 20     | ,292 |
|           | Based on Median and with<br>adjusted df | 1,333               | 4   | 14,468 | ,305 |
|           | Based on trimmed mean                   | 2,598               | 4   | 20     | ,067 |

### ANOVA

Kadar\_MDA

|                | Sum of<br>Squares | df | Mean Square | F       | Sig.  |
|----------------|-------------------|----|-------------|---------|-------|
| Between Groups | 27,455            | 4  | 6,864       | 102,744 | <,001 |
| Within Groups  | 1,336             | 20 | ,067        |         |       |
| Total          | 28,792            | 24 |             |         |       |

### Kadar\_MDA

|                        |            |   | Subset for alpha = 0.05 |         |         |         |
|------------------------|------------|---|-------------------------|---------|---------|---------|
|                        | Kelompok   | N | 1                       | 2       | 3       | 4       |
| Tukey HSD <sup>a</sup> | Normal     | 5 | 1,52179                 |         |         |         |
|                        | Pembanding | 5 |                         | 2,37692 |         |         |
|                        | Jahe 100mg | 5 |                         | 2,65769 |         |         |
|                        | Jahe 50mg  | 5 |                         |         | 3,36923 |         |
|                        | Positif    | 5 |                         |         |         | 4,64359 |
|                        | Sig.       |   | 1,000                   | ,446    | 1,000   | 1,000   |
| Duncan <sup>a</sup>    | Normal     | 5 | 1,52179                 |         |         |         |
|                        | Pembanding | 5 |                         | 2,37692 |         |         |
|                        | Jahe 100mg | 5 |                         | 2,65769 |         |         |
|                        | Jahe 50mg  | 5 |                         |         | 3,36923 |         |
|                        | Positif    | 5 |                         |         |         | 4,64359 |
|                        | Sig.       |   | 1,000                   | ,101    | 1,000   | 1,000   |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5,000.

#### 4. Inhibisi XO pada organ Hati

### Descriptives

Inhibisi\_XOI\_Hati

|             | N  | Mean     | Std. Deviation | Std. Error | 95% Confidence Interval for Mean |          | Minimum | Maximum |
|-------------|----|----------|----------------|------------|----------------------------------|----------|---------|---------|
| Normal      | 5  | 39,28898 | 1,412849       | ,631845    | 37,53469                         | 41,04326 | 37,476  | 41,165  |
| Pembanding  | 5  | 82,76601 | 2,196200       | ,982170    | 80,03907                         | 85,49296 | 79,960  | 85,976  |
| Jahe 50 mg  | 5  | 67,06389 | ,315416        | ,141058    | 66,67225                         | 67,45553 | 66,630  | 67,435  |
| Kahe 100 mg | 5  | 71,65628 | ,389126        | ,174023    | 71,17311                         | 72,13944 | 71,156  | 72,137  |
| Total       | 20 | 65,19379 | 16,469746      | 3,682747   | 57,48571                         | 72,90187 | 37,476  | 85,976  |

### Tests of Normality

|                   | Kelompok    | Kolmogorov-Smirnov <sup>a</sup> |    |                   | Shapiro-Wilk |    |      |
|-------------------|-------------|---------------------------------|----|-------------------|--------------|----|------|
|                   |             | Statistic                       | df | Sig.              | Statistic    | df | Sig. |
| Inhibisi_XOI_Hati | Normal      | ,115                            | 5  | ,200 <sup>*</sup> | ,997         | 5  | ,998 |
|                   | Pembanding  | ,190                            | 5  | ,200 <sup>*</sup> | ,981         | 5  | ,939 |
|                   | Jahe 50 mg  | ,158                            | 5  | ,200 <sup>*</sup> | ,982         | 5  | ,943 |
|                   | Kahe 100 mg | ,310                            | 5  | ,131              | ,872         | 5  | ,273 |

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

### Tests of Homogeneity of Variances

|                   |                                      | Levene Statistic | df1 | df2   | Sig. |
|-------------------|--------------------------------------|------------------|-----|-------|------|
| Inhibisi_XOI_Hati | Based on Mean                        | 2,957            | 3   | 16    | ,064 |
|                   | Based on Median                      | 2,669            | 3   | 16    | ,083 |
|                   | Based on Median and with adjusted df | 2,669            | 3   | 6,598 | ,133 |
|                   | Based on trimmed mean                | 2,922            | 3   | 16    | ,066 |

### ANOVA

Inhibisi\_XOI\_Hati

|                | Sum of Squares | df | Mean Square | F       | Sig.  |
|----------------|----------------|----|-------------|---------|-------|
| Between Groups | 5125,517       | 3  | 1708,506    | 966,576 | <,001 |
| Within Groups  | 28,281         | 16 | 1,768       |         |       |
| Total          | 5153,798       | 19 |             |         |       |

**Inhibisi\_XOI\_Hati**

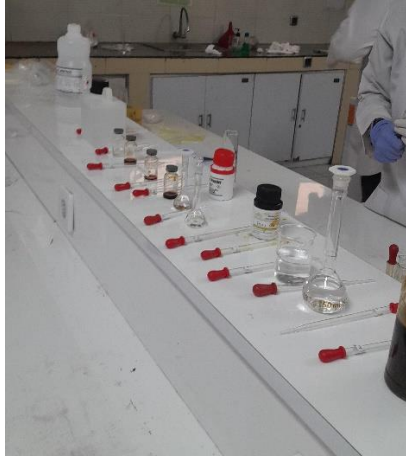
|                        |             |   | Subset for alpha = 0.05 |          |          |          |
|------------------------|-------------|---|-------------------------|----------|----------|----------|
|                        | Kelompok    | N | 1                       | 2        | 3        | 4        |
| Tukey HSD <sup>a</sup> | Normal      | 5 | 39,28898                |          |          |          |
|                        | Jahe 50 mg  | 5 |                         | 67,06389 |          |          |
|                        | Kahe 100 mg | 5 |                         |          | 71,65628 |          |
|                        | Pembanding  | 5 |                         |          |          | 82,76601 |
|                        | Sig.        |   | 1,000                   | 1,000    | 1,000    | 1,000    |
| Duncan <sup>a</sup>    | Normal      | 5 | 39,28898                |          |          |          |
|                        | Jahe 50 mg  | 5 |                         | 67,06389 |          |          |
|                        | Kahe 100 mg | 5 |                         |          | 71,65628 |          |
|                        | Pembanding  | 5 |                         |          |          | 82,76601 |
|                        | Sig.        |   | 1,000                   | 1,000    | 1,000    | 1,000    |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 5,000.

### Lampiran 13. Dokumentasi Penelitian

#### 1. Skrining Fitokimia



**Persiapan Skrining Fitokimia**

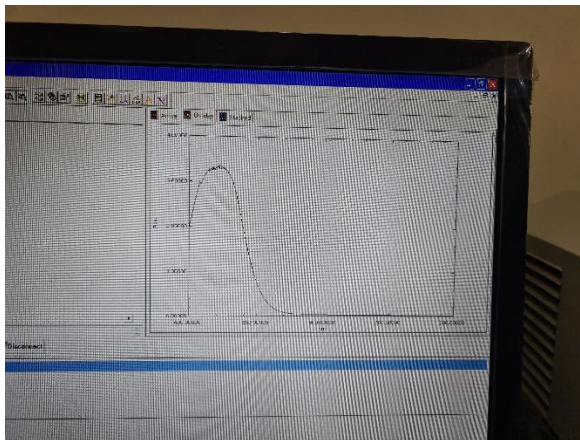
#### 2. Kadar flavanoid total



**Baku Kuersetin**



**Larutan Ekstrak Jahe**



**Pengukuran panjang gelombang maksimum baku kuersetin**



### 3. Pemberian Induksi 28 Hari *In Vivo* dan Pembedahan



**Pemberian Induksi dan Ekstrak secara oral**



**Pemberian Kalium Oksonat T28**



**Pemngambilan plasma darah T0&T28**



**Pengambilam organ hati, ginjal, dan Jantung**

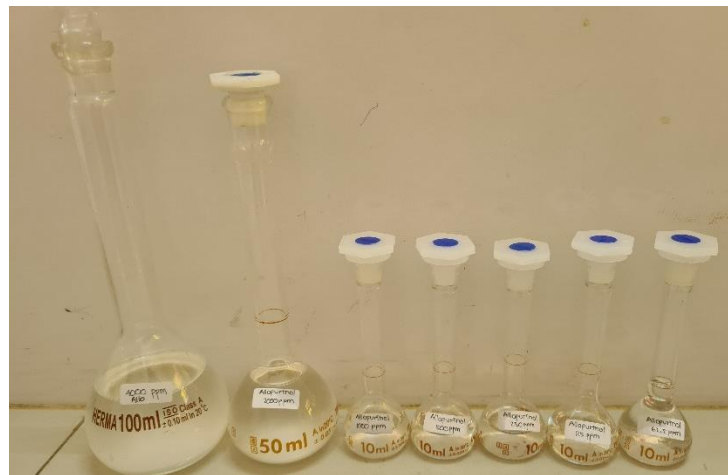
4. Pengecekan Inhibisi Enzim Xantin Oksidase secara *In Vitro*



**Konsentrasi Substrat Xantin**



**Pengenceran Ekstrak Jahe**



**Pengenceran Allopurinol**



**Preparasi alat dan bahan XOI ekstrak Jahe**

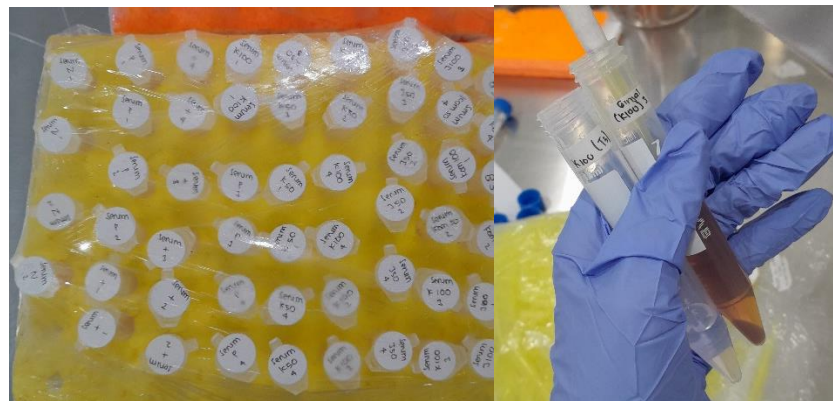


**Pengecekan Absorban menggunakan mikroplate Reader**

5. Pengecekan Kadar NO (*Nitric Oxide*)



**Preaksi Griess**



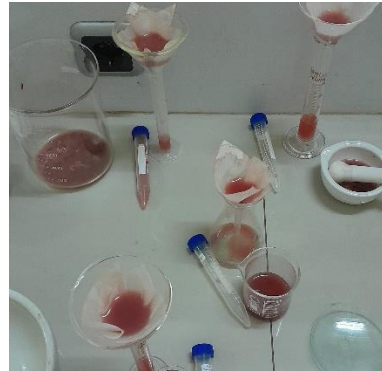
**Pengambilan Serum Darah Tikus**

**Supernatant di reaksi dengan kadmium**

6. Pengecekan Inhibisi enzim xantin oksidase pada organ hati



**Pembuatan Homogenat Hati**



**Penyaringan Homogenat  
Hati+Dapar tris**

7. Pengecekan kadar MDA (*Malondialdehid*)



**Pembuatan Homogenat Ginjal**



**Pengecekan Kadar MDA  
menggunakan Spektrofotometri**



**Pemberian Kloroform**



## Lampiran 14. Curriculum Vitae

**HALIMATU SA'DIAH**

Tangerang, Banten | +6287883844712 | halimatusadiah2210@gmail.com

**PROFIL PERSONAL**

Saya adalah lulusan S1 Farmasi yang memiliki pengalaman magang dalam instansi farmasi. Dengan latar belakang pendidikan dan pengalaman saya, saya memiliki pemahaman mendalam tentang standar pelayanan kefarmasian di rumah sakit dan peraturan yang terkait. Saya memahami pentingnya kualitas dan keamanan dalam pelayanan kesehatan, serta memiliki komitmen yang kuat untuk memberikan kontribusi pada pengembangan solusi farmasi yang inovatif guna meningkatkan kualitas hidup masyarakat.

**RIWAYAT PENDIDIKAN****UNIVERSITAS BHAKTI KENCANA BANDUNG****2020 - 2024**

S1 Farmasi - IPK 3,75

Judul skripsi = AKTIVITAS EKSTRAK JAHE ( ZINGIBER OFFICINALE ) SEBAGAI ANTIINFLAMASI MELALUI INHIBISI ENZIM XANTIN OKSIDASE

**PENGALAMAN****MAHASISWI MBKM RSUD BANDUNG KIWARI****1 April - 1 Juli 2023**

Merdeka Belajar Kampus Merdeka

- Menyiapkan amprahan berupa obat dan BHP sesuai dengan faktur
- Membantu pengecekan Stock Opname dalam pemantauan persediaan obat di Rumah Sakit, termasuk pemantauan tanggal kadaluarsa
- Melakukan oembacaan resep dan peracikan obat puyer

**BRAND AMABASSADOR MAJU INDONESIA****2022**

- Termasuk 3.500 peserta terbaik dari 16.000 peserta
- Melakukan edukasi kesehatan melalui social media

**PRESTASI**

- Juara 2 Broadcasting Bahasa Inggris tingkat gali inovasi banten
- Peserta Story Telling Bahasa arab tingkat Provinsi Banten
- Peserta P2MW (Panduan Program Pembinaan Mahasiswa Wirausaha )2022
- Finalis PKM (Program Kreativitas Mahasiswa) 2022

**KEMAMPUAN TEKNIKAL**

- Dispensing Resep
- Meracik obat
- Pengembangan Obat

**KEMAMPUAN PERSONAL**

- Kemampuan Komunikasi
- Kemampuan Pemecahan masalah
- Kerja Tim
- Keterampilan Manajemen waktu