

## LAMPIRAN

### Lampiran 1. Hasil Determinasi Rimpang Kunyit

**HERBARIUM JATINANGORIENSE**  
**LABORATORIUM BIOSISTEMATIKA DAN MOLEKULER**  
**DEPARTEMEN BIOLOGI, FMIPA UNPAD**  
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor  
 Telp. 022-7796412

**LEMBAR IDENTIFIKASI TUMBUHAN**  
 No.549/LBM/IT/VI/2025

Herbarium Jatinangor, Laboratorium Biosistematika dan Molekuler, Departemen Biologi  
 FMIPA UNPAD, dengan ini menerangkan bahwa:

Nama : R. Herni Kusriani  
 NIDN : 0003017701  
 Instansi : Universitas Bhakti Kencana  
 Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: 677  
 Tanggal Koleksi : 16 Juni 2025  
 Lokasi : Manoko - Lembang, Jawa Barat

Hasil Identifikasi,

Nama Ilmiah : *Curcuma longa* L.  
 Sinonim : *Curcuma domestica* Valetton  
 Nama Lokal : Kunyit  
 Suku/Famili : *Zingiberaceae* Martinov

Referensi:

Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants*.  
 Columbia University Press. New York  
 World Flora Online: <https://powo.science.kew.org/>.

Jatinangor, 30 Juni 2025

Mengetahui,  
Kepala Laboratorium



Annisa, M.Si., Ph.D.  
NIP. 197802042006042001

Identifikator,



Drs. Joko Kusmoro, M.P.  
NIP. 196008011991011001

## Lampiran 2. Hasil Determinasi Herba Pegagan

**HERBARIUM JATINANGORIENSE**  
**LABORATORIUM BIOSISTEMATIKA DAN MOLEKULER**  
**DEPARTEMEN BIOLOGI, FMIPA UNPAD**  
 Gedung D2-212, Jl. Raya Bandung Sumedang Km 21 Jatinangor  
 Telp. 022-7796412

---

**LEMBAR IDENTIFIKASI TUMBUHAN**  
 No.550/LBM/IT/VI/2025

Herbarium Jatinangor, Laboratorium Biosistematika dan Molekuler, Departemen Biologi FMIPA UNPAD, dengan ini menerangkan bahwa:  
 Nama : R. Herni Kusriani  
 NIDN : 0003017701  
 Instansi : Universitas Bhakti Kencana  
 Telah melakukan identifikasi tumbuhan, dengan No. Koleksi: 678  
 Tanggal Koleksi : 16 Juni 2025  
 Lokasi : Manoko - Lembang, Jawa Barat

Hasil Identifikasi,

Nama Ilmiah : *Centella asiatica* (L.) Urb.  
 Sinonim : *Centella boninensis* Nakai ex Tuyama  
 Nama Lokal : Pegagan  
 Suku/Famili : *Apiacea* Lindl.

Referensi:

Cronquist, Arthur. 1981. *An Integrated System of Classification of Flowering Plants*.  
 Columbia University Press. New York  
 World Flora Online: <https://powo.science.kew.org/>.

Jatinangor, 30 Juni 2025

Mengetahui,  
Kepala Laboratorium



Annisa, M.Si., Ph.D.  
NIP. 197802042006042001

Identifikator,



Dr. Budi Irawan, M.Si  
NIP. 197312281999031003

### Lampiran 3. Perhitungan Penimbangan Bahan

Kombinasi ekstrak rimpang kunyit dan herba pegagan yang dibutuhkan:

$$F1 (6\%) = \frac{6}{100} \times 20g = 1,2 \text{ gram}$$

$$F2 (6\%) = \frac{6}{100} \times 20g = 1,2 \text{ gram}$$

$$F3 (6\%) = \frac{6}{100} \times 20g = 1,2 \text{ gram}$$

Formulasi *Sheet Mask* dalam formula (Suryani et al., 2024)

|                            |      |
|----------------------------|------|
| Glycerin                   | 5%   |
| Propylene glycol           | 5%   |
| PEG-40 Hydrogen Castor Oil | 0,5% |
| Xanthan gum                | 0,3% |
| Nipagin                    | 0,1% |
| Etanol 96%                 | 2%   |
| Parfum                     | qs   |
| Aquadest ad                | 100% |

Pada penelitian ini dilakukan 3 (tiga) perlakuan yaitu, F1 (glycerin 10% dan propylene glycol 0%), F2 (glycerin 0% dan propylene glycol 10%) dan F3 (glycerin 5% dan propylene glycol 5%)

1. F1 = Formula *sheet mask* dengan menggunakan kombinasi ekstrak ekstrak rimpang kunyit dan herba pegagan dengan glycerin 10% dan propylene glycol 0%

|                               |                                         |                    |
|-------------------------------|-----------------------------------------|--------------------|
| a. Glycerin                   | $= \frac{10}{100} \times 20 \text{ g}$  | $= 2 \text{ g}$    |
| b. Propylene glycol           | $= \frac{0}{100} \times 20 \text{ g}$   | $= 0 \text{ g}$    |
| c. PEG-40 Hydrogen Castor Oil | $= \frac{0,5}{100} \times 20 \text{ g}$ | $= 0,1 \text{ g}$  |
| d. Xanthan gum                | $= \frac{0,3}{100} \times 20 \text{ g}$ | $= 0,06 \text{ g}$ |
| e. Nipagin                    | $= \frac{0,1}{100} \times 20 \text{ g}$ | $= 0,02 \text{ g}$ |
| f. Etanol 96%                 | $= \frac{2}{100} \times 20 \text{ g}$   | $= 0,4 \text{ g}$  |

g. Aquadest = 16,22 ml

2. F1 = Formula *sheet mask* dengan menggunakan kombinasi ekstrak ekstrak rimpang kunyit dan herba pegagan dengan glycerin 0% dan propylene glycol 10%

|                               |                                         |          |
|-------------------------------|-----------------------------------------|----------|
| a. Glycerin                   | $= \frac{0}{100} \times 20 \text{ g}$   | = 0 g    |
| b. Propylene glycol           | $= \frac{10}{100} \times 20 \text{ g}$  | = 2 g    |
| c. PEG-40 Hydrogen Castor Oil | $= \frac{0,5}{100} \times 20 \text{ g}$ | = 0,1 g  |
| d. Xanthan gum                | $= \frac{0,3}{100} \times 20 \text{ g}$ | = 0,06 g |
| e. Nipagin                    | $= \frac{0,1}{100} \times 20 \text{ g}$ | = 0,02 g |
| f. Etanol 96%                 | $= \frac{2}{100} \times 20 \text{ g}$   | = 0,4 g  |
| g. Aquadest                   | = 16,22 ml                              |          |

3. F1 = Formula *sheet mask* dengan menggunakan kombinasi ekstrak ekstrak rimpang kunyit dan herba pegagan dengan glycerin 5% dan propylene glycol 5%

|                               |                                         |          |
|-------------------------------|-----------------------------------------|----------|
| a. Glycerin                   | $= \frac{5}{100} \times 20 \text{ g}$   | = 1 g    |
| b. Propylene glycol           | $= \frac{5}{100} \times 20 \text{ g}$   | = 1 g    |
| c. PEG-40 Hydrogen Castor Oil | $= \frac{0,5}{100} \times 20 \text{ g}$ | = 0,1 g  |
| d. Xanthan gum                | $= \frac{0,3}{100} \times 20 \text{ g}$ | = 0,06 g |
| e. Nipagin                    | $= \frac{0,1}{100} \times 20 \text{ g}$ | = 0,02 g |
| f. Etanol 96%                 | $= \frac{2}{100} \times 20 \text{ g}$   | = 0,4 g  |
| g. Aquadest                   | = 16,22 ml                              |          |

#### Lampiran 4. Perhitungan % rendemen

1. Ekstrak Rimpang Kunyit

|                 |              |
|-----------------|--------------|
| Bobot ekstrak   | 277,079 gram |
| Bobot simplisia | 1,5 kg       |

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

$$\% \text{ Rendemen} = \frac{277,079 \text{ gram}}{1500 \text{ gram}} \times 100\%$$

$$\% \text{ Rendemen} = 18,47 \%$$

2. Ekstrak jahe merah

|                 |              |
|-----------------|--------------|
| Bobot ekstrak   | 160,089 gram |
| Bobot simplisia | 1,5 kg       |

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

$$\% \text{ Rendemen} = \frac{160,089 \text{ gram}}{1500 \text{ gram}} \times 100\%$$

$$\% \text{ Rendemen} = 10,67 \%$$

#### Lampiran 5. Karakterisasi

- a. Kadar abu total

1. Kulit Rimpang kunyit

|                           |            |
|---------------------------|------------|
| Berat krus kosong         | 65,92 gram |
| Bobot krus + isi 1        | 66,24 gram |
| Bobot krus + isi 2        | 66,25 gram |
| Bobot krus + isi 3        | 66,27 gram |
| Isi 1 - Bobot krus kosong | 0,32 gram  |
| Isi 2 - Bobot krus kosong | 0,33 gram  |
| Isi 3 - Bobot krus kosong | 0,35 gram  |
| Bobot simplisia           | 5 gram     |

$$\text{Kadar abu total} = \frac{\text{berat abu sisa pijar}}{\text{bobot simplisia}} \times 100\%$$

$$\begin{aligned} \text{cawan 1} &= \frac{0,32 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 6,4 \% \end{aligned}$$

$$\begin{aligned} \text{cawan 2} &= \frac{0,33 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 6,6 \% \end{aligned}$$

$$\begin{aligned} \text{cawan 3} &= \frac{0,35 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 7 \% \end{aligned}$$

$$rata - rata = \frac{6,4 + 6,6 + 7}{3} = 6,67 \pm 0,30$$

## 2. Pegagan

|                           |            |
|---------------------------|------------|
| Berat krus kosong         | 68,22 gram |
| Bobot krus + isi 1        | 68,44 gram |
| Bobot krus + isi 2        | 68,43 gram |
| Bobot krus + isi 3        | 68,46 gram |
| Isi 1 - Bobot krus kosong | 0,22 gram  |
| Isi 2 - Bobot krus kosong | 0,21 gram  |
| Isi 3 - Bobot krus kosong | 0,24 gram  |
| Bobot simplisia           | 5 gram     |

$$Kadar\ abu\ total = \frac{berat\ abu\ sisa\ pijar}{bobot\ simplisia} \times 100\%$$

$$cawan\ 1 = \frac{0,22\ gram}{5\ gram} \times 100\% = 4,4\ \%$$

$$cawan\ 2 = \frac{0,21\ gram}{5\ gram} \times 100\% = 4,2\ \%$$

$$cawan\ 3 = \frac{0,24\ gram}{5\ gram} \times 100\% = 4,8\ \%$$

$$rata - rata = \frac{4,4 + 4,2 + 4,8}{3} = 4,46 \pm 0,30$$

## b. Kadar Abu tidak Larut Asam

### 1. Rimpang kunyit

|                           |            |
|---------------------------|------------|
| Berat krus kosong         | 65,92 gram |
| Bobot krus + isi 1        | 65,98 gram |
| Bobot krus + isi 2        | 65,95 gram |
| Bobot krus + isi 3        | 65,96 gram |
| Isi 1 - Bobot krus kosong | 0,06 gram  |
| Isi 2 - Bobot krus kosong | 0,03 gram  |
| Isi 3 - Bobot krus kosong | 0,04 gram  |
| Bobot simplisia           | 5 gram     |

$$Kadar\ abu\ total = \frac{berat\ abu\ sisa\ pijar}{bobot\ simplisia} \times 100\%$$

$$cawan\ 1 = \frac{0,06\ gram}{5\ gram} \times 100\% = 1,2\ \%$$

$$cawan\ 2 = \frac{0,03\ gram}{5\ gram} \times 100\% = 0,6\ \%$$

$$\begin{aligned} \text{cawan 3} &= \frac{0,04 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 0,8 \% \end{aligned}$$

$$\text{rata - rata} = \frac{1,2 + 0,6 + 0,8}{3} = 0,86 \pm 0,30$$

## 2. Pegagan

|                           |            |
|---------------------------|------------|
| Berat krus kosong         | 68,22 gram |
| Bobot krus + isi 1        | 68,31 gram |
| Bobot krus + isi 2        | 68,29 gram |
| Bobot krus + isi 3        | 68,35 gram |
| Isi 1 - Bobot krus kosong | 0,09 gram  |
| Isi 2 - Bobot krus kosong | 0,07 gram  |
| Isi 3 - Bobot krus kosong | 0,13 gram  |
| Bobot simplisia           | 5 gram     |

$$\text{Kadar abu total} = \frac{\text{berat abu sisa pijar}}{\text{bobot simplisia}} \times 100\%$$

$$\begin{aligned} \text{cawan 1} &= \frac{0,09 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 1,8 \% \end{aligned}$$

$$\begin{aligned} \text{cawan 2} &= \frac{0,07 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 1,4 \% \end{aligned}$$

$$\begin{aligned} \text{cawan 3} &= \frac{0,13 \text{ gram}}{5 \text{ gram}} \times 100\% \\ &= 2,6 \% \end{aligned}$$

$$\text{rata - rata} = \frac{1,8 + 1,4 + 2,6}{3} = 1,93 \pm 0,61$$

## c. Kadar sari larut etanol

### 1. Pegagan

|                            |            |
|----------------------------|------------|
| Berat cawan kosong         | 77,37 gram |
| cawan + ekstrak 1          | 77,64 gram |
| cawan + ekstrak 2          | 77,64 gram |
| cawan + ekstrak 3          | 77,65 gram |
| Isi 1 - Bobot cawan kosong | 0,27 gram  |
| Isi 2 - Bobot cawan kosong | 0,27 gram  |
| Isi 3 - Bobot cawan kosong | 0,28 gram  |
| Bobot simplisia            | 5 gram     |

$$\text{Kadar sari larut etanol} = \frac{\text{bobot ekstrak} \times 5}{\text{bobot simplisia}} \times 100\%$$

$$\begin{aligned} \text{cawan 1} &= \frac{0,27 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ &= 27 \% \end{aligned}$$

$$\text{cawan 2} = \frac{0,27 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 27 \%$$

$$\text{cawan 3} = \frac{0,28 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 28 \%$$

$$\text{rata - rata} = \frac{27 + 27 + 28}{3} = 27,33 \pm 0,57$$

## 2. Rimpang kunyit

|                            |            |
|----------------------------|------------|
| Berat cawan kosong         | 84,75 gram |
| cawan + ekstrak 1          | 85,02 gram |
| cawan + ekstrak 2          | 85,02 gram |
| cawan + ekstrak 3          | 85,04 gram |
| Isi 1 - Bobot cawan kosong | 0,27 gram  |
| Isi 2 - Bobot cawan kosong | 0,27 gram  |
| Isi 3 - Bobot cawan kosong | 0,29 gram  |
| Bobot simplisia            | 5 gram     |

$$\text{Kadar sari larut etanol} = \frac{\text{bobot ekstrak} \times 5}{\text{bobot simplisia}} \times 100\%$$

$$\text{cawan 1} = \frac{0,27 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 27 \%$$

$$\text{cawan 2} = \frac{0,27 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 27 \%$$

$$\text{cawan 3} = \frac{0,29 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 29 \%$$

$$\text{rata - rata} = \frac{27 + 27 + 29}{3} = 27,66 \pm 1,15$$

## d. Kadar Sari Larut Air

### 1. Pegagan

|                            |            |
|----------------------------|------------|
| Berat cawan kosong         | 81,18 gram |
| cawan + ekstrak 1          | 81,44 gram |
| cawan + ekstrak 2          | 81,45 gram |
| cawan + ekstrak 3          | 81,45 gram |
| Isi 1 - Bobot cawan kosong | 0,26 gram  |
| Isi 2 - Bobot cawan kosong | 0,27 gram  |
| Isi 3 - Bobot cawan kosong | 0,27 gram  |
| Bobot simplisia            | 5 gram     |

$$\text{Kadar sari larut air} = \frac{\text{bobot ekstrak} \times 5}{\text{bobot simplisia}} \times 100\%$$

$$\text{cawan 1} = \frac{0,26 \text{ gram} \times 5}{5 \text{ gram}} \times 100\%$$

$$= 26 \%$$

$$\text{cawan 2} = \frac{0,27 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 27 \%$$

$$\text{cawan 3} = \frac{0,27 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 27 \%$$

$$\text{rata - rata} = \frac{26 + 27 + 27}{3} = 26,67 \pm 0,57$$

## 2. Rimpang kunyit

|                            |            |
|----------------------------|------------|
| Berat cawan kosong         | 84,75 gram |
| cawan + ekstrak 1          | 84,93 gram |
| cawan + ekstrak 2          | 84,95 gram |
| cawan + ekstrak 3          | 84,93 gram |
| Isi 1 - Bobot cawan kosong | 0,18 gram  |
| Isi 2 - Bobot cawan kosong | 0,2 gram   |
| Isi 3 - Bobot cawan kosong | 0,18 gram  |
| Bobot simplisia            | 5 gram     |

$$\text{Kadar sari larut air} = \frac{\text{bobot ekstrak} \times 5}{\text{bobot simplisia}} \times 100\%$$

$$\text{cawan 1} = \frac{0,18 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 18 \%$$

$$\text{cawan 2} = \frac{0,2 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 20 \%$$

$$\text{cawan 3} = \frac{0,18 \text{ gram} \times 5}{5 \text{ gram}} \times 100\% \\ = 18 \%$$

$$\text{rata - rata} = \frac{18 + 20 + 18}{3} = 18,67 \pm 1$$

## Lampiran 6. Penetapan Kadar Flavonoid Total

| Konsentrasi Baku | Absorbansi Baku | Sampel                             | Pengulangan | Absorbansi Sampel | Kadar Flavonoid total total |
|------------------|-----------------|------------------------------------|-------------|-------------------|-----------------------------|
| 30               | 0,497           | Rimpang kunyit 10 $\mu\text{g/mL}$ | 1           | 0,427             | 229,1826 $\pm$ 0,723152     |
| 40               | 0,625           |                                    | 2           | 0,428             |                             |
| 50               | 0,765           |                                    | 3           | 0,429             |                             |
| 60               | 0,852           | Herba Pegagan 100 $\mu\text{g/mL}$ | 1           | 0,286             | 10,57101 $\pm$ 0,050204     |
| 70               | 0,988           |                                    | 2           | 0,287             |                             |
| 80               | 1,069           |                                    | 3           | 0,287             |                             |

## 1. Perhitungan Rimpang Kunyit

|                                                                                                                 |                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diketahui :<br><br>$y = 0,0115x + 0,1651$<br><br>$R^2 : 0,9942$<br>Faktor pengenceran : 40<br>Labu ukur : 25 mL |                                                                                                                                                                                                                 |
| Pengulangan 1<br>$y = bx + a$<br>$x = \frac{y - a}{b}$<br>$x = \frac{0,427 - 0,1651}{0,0115}$<br>$x = 22,8487$  | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$<br>$= \frac{22,8487 \times 40 \times 25}{10} \times 100\%$<br>$= 228,487$     |
| Pengulangan 2<br>$y = bx + a$<br>$x = \frac{y - a}{b}$<br>$x = \frac{0,428 - 0,1651}{0,0115}$<br>$x = 22,99304$ | % kadar :<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$<br>$= \frac{22,99304 \times 40 \times 25}{10} \times 100\%$<br>$= 229,1304$ |
| Pengulangan 3<br>$y = bx + a$<br>$x = \frac{y - a}{b}$<br>$x = \frac{0,429 - 0,1651}{0,0115}$<br>$x = 22,99304$ | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$<br>$= \frac{22,99304 \times 40 \times 25}{10} \times 100\%$<br>$= 229,9304$   |

## 2. Perhitungan Herba Pegagan

|                                                                                                                 |                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diketahui :<br><br>$y = 0,0115x + 0,1651$<br><br>$R^2 : 0,9942$<br>Faktor pengenceran : 4<br>Labu ukur : 25 mL  |                                                                                                                                                                                                              |
| Pengulangan 1<br>$y = bx + a$<br>$x = \frac{y - a}{b}$<br>$x = \frac{0,286 - 0,1651}{0,0115}$<br>$x = 10,51304$ | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$<br>$= \frac{10,51304 \times 4 \times 25}{10} \times 100\%$<br>$= 10,51304$ |

|                                                                                                        |                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pengulangan 2<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,287 - 0,1651}{0,0115}$ $x = 10,6$     | % kadar :<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{10,6 \times 4 \times 25}{10} \times 100\%$ $= 10,6$ |
| Pengulangan 3<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,429 - 0,1651}{0,0115}$ $x = 22,99304$ | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{10,6 \times 4 \times 25}{10} \times 100\%$ $= 10,6$   |

### Lampiran 7. Penetapan Kadar Fenolik Total

| Konsentrasi Baku | Absorbansi Baku | Sampel                  | Pengulangan | Absorbansi Sampel | Kadar Fenolik total |
|------------------|-----------------|-------------------------|-------------|-------------------|---------------------|
| 10               | 0,234           | Rimpang kunyit 10 µg/mL | 1           | 0,322             | 198,1492±1,459796   |
| 20               | 0,325           |                         | 2           | 0,325             |                     |
| 30               | 0,426           |                         | 3           | 0,323             |                     |
| 40               | 0,527           | Herba Pegagan 100 µg/mL | 1           | 0,711             | 57,06667±0,436436   |
| 50               | 0,617           |                         | 2           | 0,714             |                     |
| 60               | 0,775           |                         | 3           | 0,72              |                     |

#### 1. Perhitungan Rimpang Kunyit

|                                                                                                          |                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diketahui :<br>$y = 0,0105 + 0,1158x$ $R^2 : 0,9913$ Faktor pengenceran : 40<br>Labu ukur : 25 mL        |                                                                                                                                                                                                         |
| Pengulangan 1<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,32238 - 0,1158}{0,0105}$ $x = 19,67429$ | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{19,67429 \times 40 \times 25}{10} \times 100\%$ $= 196,7429$ |

|                                                                                                           |                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pengulangan 2<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,325444 - 0,1158}{0,0105}$ $x = 19,96571$ | % kadar :<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{19,96571 \times 40 \times 25}{10} \times 100\%$ $= 199,6571$ |
| Pengulangan 3<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,32375 - 0,1158}{0,0105}$ $x = 19,80476$  | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{19,80476 \times 40 \times 25}{10} \times 100\%$ $= 198,0476$   |

## 2. Perhitungan Herba Pegagan

|                                                                                                        |                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diketahui :<br>$y = 0,0105x + 0,1158$<br>$R^2 : 0,9913$<br>Faktor pengenceran : 4<br>Labu ukur : 25 mL |                                                                                                                                                                                                            |
| Pengulangan 1<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,711 - 0,1158}{0,0105}$ $x = 56,68571$ | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{56,68571 \times 4 \times 25}{10} \times 100\%$ $= 56,68571$     |
| Pengulangan 2<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,714 - 0,1158}{0,0105}$ $x = 56,97143$ | % kadar :<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{56,971443 \times 4 \times 25}{10} \times 100\%$ $= 56,971443$ |
| Pengulangan 3<br>$y = bx + a$ $x = \frac{y - a}{b}$ $x = \frac{0,72 - 0,1158}{0,0105}$ $x = 57,54286$  | % kadar<br>$= \frac{\text{konsentrasi} \times \text{faktor pengenceran} \times \text{labu ukur}}{\text{mg timbang}} \times 100\%$ $= \frac{57,54286 \times 4 \times 25}{10} \times 100\%$ $= 57,54286$     |

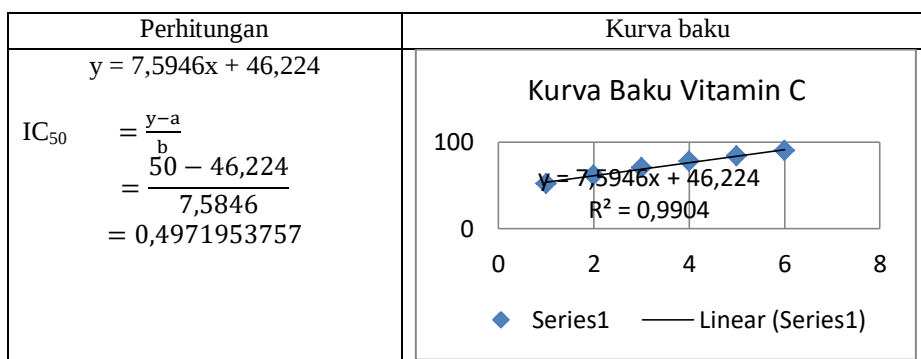
## Lampiran 8. Uji Aktivitas Antioksidan Metode DPPH

### 1. Vitamin C

| Absorbansi Kontrol                           | konsentrasi | Absorbansi (Pengulangan) |        |        | % Inhibisi             |          |          |
|----------------------------------------------|-------------|--------------------------|--------|--------|------------------------|----------|----------|
|                                              |             | I                        | II     | III    | I                      | II       | III      |
| 0,7453                                       | 1           | 0,3656                   | 0,357  | 0,3442 | 53,81725               | 54,56863 | 50,94593 |
|                                              | 2           | 0,2895                   | 0,2857 | 0,2665 | 64,24259               | 63,31679 | 61,15658 |
|                                              | 3           | 0,2154                   | 0,2187 | 0,2191 | 70,60244               | 71,44774 | 71,09889 |
|                                              | 4           | 0,1719                   | 0,1636 | 0,1509 | 79,75312               | 79,45794 | 76,93546 |
|                                              | 5           | 0,1251                   | 0,1197 | 0,1108 | 85,1335                | 84,67731 | 83,21481 |
|                                              | 6           | 0,08                     | 0,0714 | 0,0686 | 90,79565               | 89,34657 | 89,26607 |
| IC <sub>50</sub>                             |             |                          |        |        | 0,56533                | 0,497195 | 0,22005  |
| Rata-rata IC <sub>50</sub> & Standar Deviasi |             |                          |        |        | 0,427527102 ± 0,182882 |          |          |

Contoh perhitungan % inhibisi

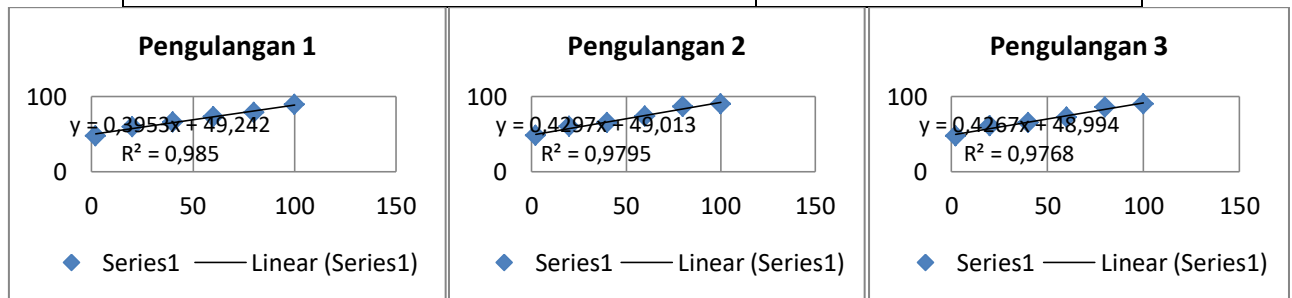
$$\begin{aligned}
 \% \text{ Inhibisi} &= \frac{\text{absorbansi kontrol} - \text{absorbansi sampel}}{\text{absorbansi kontrol}} \times 100\% \\
 &= \frac{0,7453 - 0,3656}{0,7453} \times 100\% \\
 &= 53,81725
 \end{aligned}$$



### 2. Rimpang Kunyit

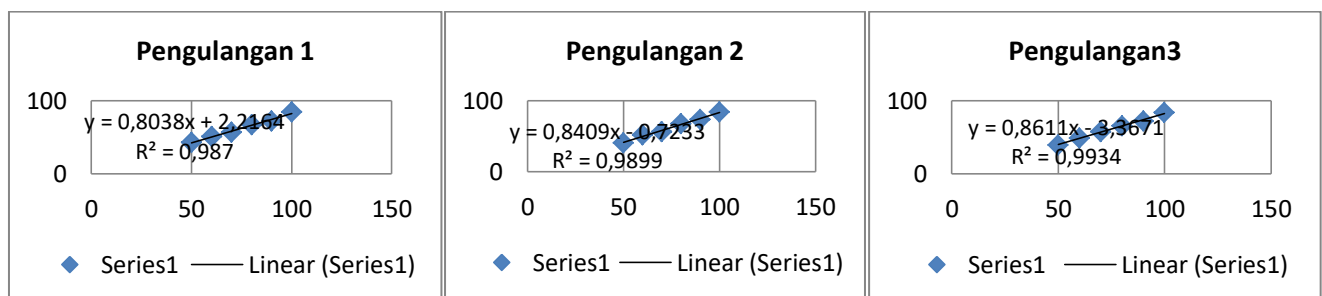
| Absorbansi Kontrol | konsentrasi | Absorbansi (Pengulangan) |       |       | % Inhibisi |        |        |
|--------------------|-------------|--------------------------|-------|-------|------------|--------|--------|
|                    |             | I                        | II    | III   | I          | II     | III    |
| 0,7453             | 2           | 0,389                    | 0,386 | 0,389 | 47,766     | 48,181 | 47,698 |
|                    | 20          | 0,299                    | 0,297 | 0,291 | 59,801     | 60,069 | 60,847 |
|                    | 40          | 0,255                    | 0,259 | 0,257 | 65,678     | 65,235 | 65,517 |
|                    | 60          | 0,2                      | 0,195 | 0,203 | 73,165     | 73,809 | 72,655 |

|                                              |     |       |        |        |                        |        |        |
|----------------------------------------------|-----|-------|--------|--------|------------------------|--------|--------|
|                                              | 80  | 0,156 | 0,099  | 0,105  | 79,068                 | 86,703 | 85,884 |
|                                              | 100 | 0,079 | 0,0756 | 0,0729 | 89,346                 | 89,856 | 90,218 |
| IC <sub>50</sub>                             |     |       |        |        | 1,9165                 | 2,296  | 2,357  |
| Rata-rata IC <sub>50</sub> & Standar Deviasi |     |       |        |        | 2,190333333 ± 0,239081 |        |        |



### 3. Herba Pegagan

| Absorbansi Kontrol                           | konsentrasi | Absorbansi (Pengulangan) |       |       | % Inhibisi         |         |         |
|----------------------------------------------|-------------|--------------------------|-------|-------|--------------------|---------|---------|
|                                              |             | I                        | II    | III   | I                  | II      | III     |
| 0,7453                                       | 50          | 0,423                    | 0,445 | 0,454 | 43,230             | 40,211  | 38,977  |
|                                              | 60          | 0,364                    | 0,357 | 0,379 | 51,160             | 52,072  | 49,040  |
|                                              | 70          | 0,323                    | 0,323 | 0,313 | 56,661             | 56,648  | 57,963  |
|                                              | 80          | 0,246                    | 0,241 | 0,258 | 66,926             | 67,610  | 65,315  |
|                                              | 90          | 0,206                    | 0,197 | 0,209 | 72,239             | 73,514  | 71,957  |
|                                              | 100         | 0,113                    | 0,119 | 0,119 | 84,798             | 84,0198 | 84,033  |
| IC <sub>50</sub>                             |             |                          |       |       | 59,4471            | 60,3203 | 61,9754 |
| Rata-rata IC <sub>50</sub> & Standar Deviasi |             |                          |       |       | 60,5809 ± 1,284153 |         |         |



### 4. Kombinasi rimpang kunyit dan herba pegagan metode DPPH

| Sampel | Perbandingan kombinasi | Kontrol | Absorbansi pengulangan |    |     | % Inhibisi |    |     |
|--------|------------------------|---------|------------------------|----|-----|------------|----|-----|
|        |                        |         | I                      | II | III | I          | II | III |

|          |      |        |      |      |      |       |       |       |
|----------|------|--------|------|------|------|-------|-------|-------|
| Rimpang  | 1:30 | 0,7453 | 0,26 | 0,27 | 0,25 | 64,06 | 62,87 | 65,79 |
| Kunyit : | 1:60 |        | 0,24 | 0,23 | 0,22 | 67,65 | 68,28 | 69,43 |
| Herba    | 2:30 |        | 0,22 | 0,23 | 0,22 | 69,31 | 68,46 | 69,26 |
| Pegagan  | 2:60 |        | 0,22 | 0,22 | 0,22 | 70,34 | 70,01 | 70,21 |

5. Kombinasi *Sheet Mask* rimpang kunyit dan herba pegagan metode DPPH

| Formula | Kontrol | Absorbansi pengulangan |      |      | % Inhibisi |       |       |
|---------|---------|------------------------|------|------|------------|-------|-------|
|         |         | I                      | II   | III  | I          | II    | III   |
| F1      | 0,7453  | 0,42                   | 0,43 | 0,46 | 43,06      | 41,39 | 38,25 |
| F2      |         | 0,36                   | 0,39 | 0,38 | 50,99      | 47,30 | 48,49 |
| F3      |         | 0,44                   | 0,44 | 0,43 | 40,48      | 39,75 | 41,28 |

6. Uji SPSS DPPH

**Tests of Normality**

|          |                | Kolmogorov-Smirnov <sup>a</sup> |    |      | Shapiro-Wilk |    |      |
|----------|----------------|---------------------------------|----|------|--------------|----|------|
| Sampel   |                | Statistic                       | df | Sig. | Statistic    | Df | Sig. |
| Inhibisi | Rimpang Kunyit | .337                            | 3  | .    | .855         | 3  | .253 |
|          | Herba Pegagan  | .269                            | 3  | .    | .950         | 3  | .567 |
|          | 1:30           | .215                            | 3  | .    | .989         | 3  | .797 |
|          | 1:60           | .243                            | 3  | .    | .972         | 3  | .681 |
|          | 2:30           | .367                            | 3  | .    | .794         | 3  | .100 |
|          | 2:60           | .222                            | 3  | .    | .985         | 3  | .767 |

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

|          |                                      | Levene Statistic | df1 | df2   | Sig. |
|----------|--------------------------------------|------------------|-----|-------|------|
| Inhibisi | Based on Mean                        | 4.446            | 3   | 8     | .041 |
|          | Based on Median                      | 1.929            | 3   | 8     | .204 |
|          | Based on Median and with adjusted df | 1.929            | 3   | 2.883 | .307 |
|          | Based on trimmed mean                | 4.243            | 3   | 8     | .045 |

**Lampiran 9. Hasil Uji Antioksidan Metode CUPRAC**

1. Vitamin C

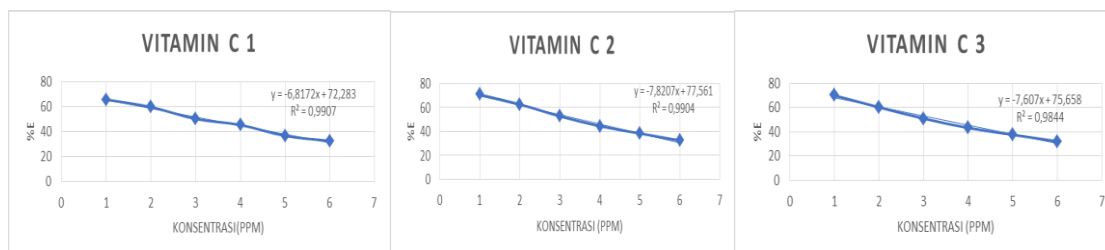
| Absorbansi Kontrol | konsentrasi | Absorbansi (Pengulangan) |    |     | Nilai a (abs sampel – abs control) |    |     |
|--------------------|-------------|--------------------------|----|-----|------------------------------------|----|-----|
|                    |             | I                        | II | III | I                                  | II | III |

|        |   |        |        |        |        |        |        |
|--------|---|--------|--------|--------|--------|--------|--------|
| 0,0952 | 1 | 0,2779 | 0,2451 | 0,2494 | 0,1827 | 0,1499 | 0,1542 |
|        | 2 | 0,319  | 0,2983 | 0,3149 | 0,2238 | 0,2031 | 0,2197 |
|        | 3 | 0,3941 | 0,3735 | 0,3879 | 0,2989 | 0,2783 | 0,2927 |
|        | 4 | 0,4376 | 0,4483 | 0,4596 | 0,3424 | 0,3531 | 0,3644 |
|        | 5 | 0,5297 | 0,5122 | 0,5207 | 0,4345 | 0,417  | 0,4255 |
|        | 6 | 0,581  | 0,5853 | 0,5891 | 0,4858 | 0,4901 | 0,4939 |

| Transmiten<br>( $1-10^{-a} \times 100\%$ ) |          |          | %E<br>( $100 - T$ ) |          |          |
|--------------------------------------------|----------|----------|---------------------|----------|----------|
| I                                          | II       | III      | I                   | II       | III      |
| 34,34013                                   | 29,18912 | 29,88677 | 65,65987            | 70,81088 | 70,11323 |
| 40,26897                                   | 37,35304 | 39,7024  | 59,73103            | 62,64696 | 60,2976  |
| 49,75417                                   | 47,31342 | 49,03172 | 50,24583            | 52,68658 | 50,96828 |
| 54,54308                                   | 55,64935 | 56,78843 | 45,45692            | 44,35065 | 43,21157 |
| 63,22946                                   | 61,71753 | 62,4595  | 36,77054            | 38,28247 | 37,5405  |
| 67,32617                                   | 67,64808 | 67,92992 | 32,67383            | 32,35192 | 32,07008 |
| EC <sub>50</sub>                           |          |          | 3,268644            | 3,268644 | 3,268644 |
| Rata-rata EC <sub>50</sub> dan SD          |          |          | 3,366872 ± 0,095336 |          |          |

Contoh perhitungan

Nilai a = *absorbansi sampel – absorbansi kontrol*  
 = 0,2779 – 0,0952  
 = 0,1827  
 Transmiten =  $1 - 10^{-a} \times 100\%$   
 =  $1 - 10^{-0,1827} \times 100\%$   
 = 34,3401  
 % Eksibisi =  $100 - T$   
 =  $100 - 34,3401$   
 = 65,65987



$$y = bx + a$$

$$x = \frac{y - a}{b}$$

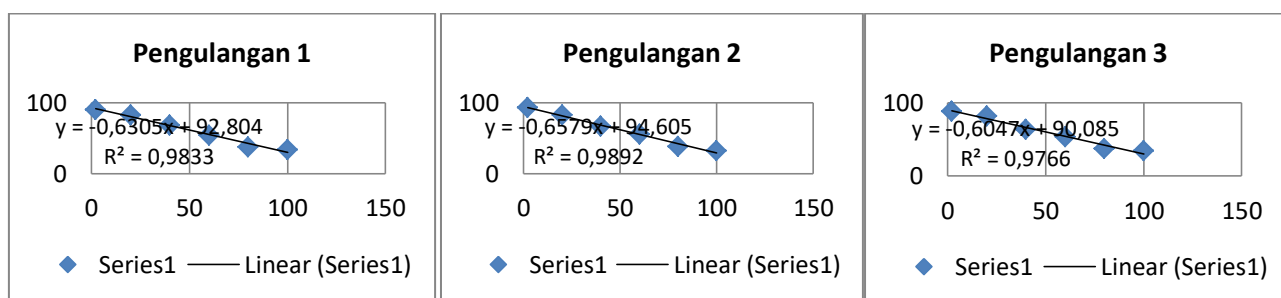
$$x = \frac{50 - 75,658}{-7,607}$$

$$EC_{50} = 3,37295$$

## 2. Rimpang Kunyit

| Absorbansi Kontrol | konsentrasi | Absorbansi (Pengulangan) |        |        | Nilai a<br>(abs sampel – abs control) |        |        |
|--------------------|-------------|--------------------------|--------|--------|---------------------------------------|--------|--------|
|                    |             | I                        | II     | III    | I                                     | II     | III    |
| 0,0715             | 2           | 0,1156                   | 0,1004 | 0,1248 | 0,0441                                | 0,0289 | 0,0533 |
|                    | 20          | 0,1541                   | 0,1527 | 0,1578 | 0,0826                                | 0,0812 | 0,0863 |
|                    | 40          | 0,237                    | 0,2474 | 0,2702 | 0,1655                                | 0,1759 | 0,1987 |
|                    | 60          | 0,3365                   | 0,3241 | 0,3478 | 0,265                                 | 0,2526 | 0,2763 |
|                    | 80          | 0,4985                   | 0,4933 | 0,4983 | 0,427                                 | 0,4218 | 0,4268 |
|                    | 100         | 0,5485                   | 0,5668 | 0,5423 | 0,477                                 | 0,4953 | 0,4708 |

| Transmiten<br>( $1-10^{-a} * 100\%$ ) |          |          | %E<br>( $100 - T$ ) |          |          |
|---------------------------------------|----------|----------|---------------------|----------|----------|
| I                                     | II       | III      | I                   | II       | III      |
| 9,655858                              | 6,437892 | 11,54956 | 90,34414            | 93,56211 | 88,45044 |
| 17,32009                              | 17,05313 | 18,02149 | 82,67991            | 82,94687 | 81,97851 |
| 31,68753                              | 33,30397 | 36,71511 | 68,31247            | 66,69603 | 63,28489 |
| 45,67497                              | 44,10152 | 47,07023 | 54,32503            | 55,89848 | 52,92977 |
| 62,58894                              | 62,13831 | 62,57171 | 37,41106            | 37,86169 | 37,42829 |
| 66,65736                              | 68,03314 | 66,17794 | 33,34264            | 31,96686 | 33,82206 |
| EC <sub>50</sub>                      |          |          | 67,889              | 67,799   | 66,289   |
| Rata-rata EC <sub>50</sub> dan SD     |          |          | 67,326 ± 0,8989     |          |          |

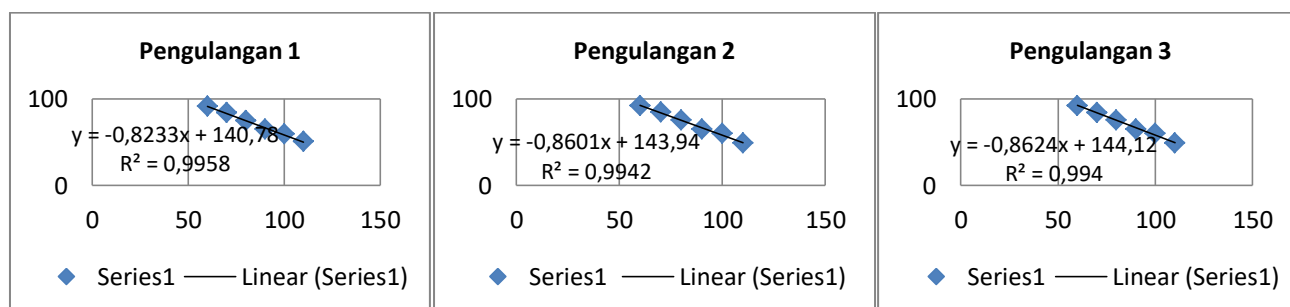


## 3. Herba Pegagan

| Absorbansi Kontrol | konsentrasi | Absorbansi (Pengulangan) |        |        | Nilai a<br>(abs sampel – abs control) |        |        |
|--------------------|-------------|--------------------------|--------|--------|---------------------------------------|--------|--------|
|                    |             | I                        | II     | III    | I                                     | II     | III    |
| 0,0715             | 60          | 0,1094                   | 0,1079 | 0,1063 | 0,0379                                | 0,0364 | 0,0348 |

|  |     |        |        |        |        |        |        |
|--|-----|--------|--------|--------|--------|--------|--------|
|  | 70  | 0,1483 | 0,1451 | 0,1459 | 0,0768 | 0,0736 | 0,0744 |
|  | 80  | 0,1995 | 0,1937 | 0,1959 | 0,128  | 0,1222 | 0,1244 |
|  | 90  | 0,2592 | 0,2607 | 0,2605 | 0,1877 | 0,1892 | 0,189  |
|  | 100 | 0,2971 | 0,2956 | 0,2942 | 0,2256 | 0,2241 | 0,2227 |
|  | 110 | 0,3681 | 0,3836 | 0,3846 | 0,2966 | 0,3121 | 0,3131 |

| Transmiten<br>( $1-10^{-a} \times 100\%$ ) |          |          | %E<br>( $100 - T$ ) |          |          |
|--------------------------------------------|----------|----------|---------------------|----------|----------|
| I                                          | II       | III      | I                   | II       | III      |
| 8,356852                                   | 8,03978  | 7,700362 | 91,64315            | 91,96022 | 92,29964 |
| 16,20849                                   | 15,58881 | 15,74416 | 83,79151            | 84,41119 | 84,25584 |
| 25,5268                                    | 24,52554 | 24,90691 | 74,4732             | 75,47446 | 75,09309 |
| 35,09174                                   | 35,31553 | 35,28574 | 64,90826            | 64,68447 | 64,71426 |
| 40,51602                                   | 40,31022 | 40,11749 | 59,48398            | 59,68978 | 59,88251 |
| 49,48737                                   | 51,25838 | 51,37048 | 50,51263            | 48,74162 | 48,62952 |
| EC <sub>50</sub>                           |          |          | 110,27              | 109,21   | 109,13   |
| Rata-rata EC <sub>50</sub> dan SD          |          |          | 109,54 $\pm$ 0,63   |          |          |



#### 4. Kombinasi rimpang kunyit dan herba pegagan metode CUPRAC

| Sampel   | Perbandingan<br>kombinasi | Kontrol | Absorbansi pengulangan |        |        | Nilai a |        |        |
|----------|---------------------------|---------|------------------------|--------|--------|---------|--------|--------|
|          |                           |         | I                      | II     | III    | I       | II     | III    |
| Rimpang  | 35:55                     | 0,0715  | 0,575                  | 0,5514 | 0,5353 | 0,5035  | 0,4799 | 0,4638 |
| Kunyit : | 35:110                    |         | 0,5955                 | 0,5933 | 0,5957 | 0,524   | 0,5218 | 0,5242 |
| Herba    | 70:55                     |         | 0,5857                 | 0,5955 | 0,5827 | 0,5142  | 0,524  | 0,5112 |
| Pegagan  | 70:110                    |         | 0,6424                 | 0,6474 | 0,6385 | 0,5709  | 0,5759 | 0,567  |

| Transmiten |          |          | %E       |          |          |
|------------|----------|----------|----------|----------|----------|
| I          | II       | III      | I        | II       | III      |
| 68,63105   | 66,87926 | 65,62838 | 31,36895 | 33,12074 | 34,37162 |
| 70,07735   | 69,92539 | 70,09113 | 29,92265 | 30,07461 | 29,90887 |

|          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|
| 69,39446 | 70,07735 | 69,18232 | 30,60554 | 29,92265 | 30,81768 |
| 73,14037 | 73,44783 | 72,89808 | 26,85963 | 26,55217 | 27,10192 |

5. Kombinasi *Sheet Mask* rimpang kunyit dan herba pegagan metode CUPRAC

| Formula | Kontrol | Absorbansi pengulangan |        |        | Nilai a |        |        |
|---------|---------|------------------------|--------|--------|---------|--------|--------|
|         |         | I                      | II     | III    | I       | II     | III    |
| F1      | 0,7453  | 0,3885                 | 0,4366 | 0,3435 | 0,317   | 0,3651 | 0,272  |
| F2      |         | 0,4519                 | 0,4419 | 0,3779 | 0,3804  | 0,3704 | 0,3064 |
| F3      |         | 0,3608                 | 0,4048 | 0,3489 | 0,2893  | 0,3333 | 0,2774 |

| Transmiten |          |          | %E       |          |          |
|------------|----------|----------|----------|----------|----------|
| I          | II       | III      | I        | II       | III      |
| 51,80522   | 56,85803 | 46,54356 | 48,19478 | 43,14197 | 53,45644 |
| 58,35144   | 57,38132 | 50,61444 | 41,64856 | 42,61868 | 49,38556 |
| 48,63113   | 53,58055 | 55,21836 | 51,36887 | 46,41945 | 44,78164 |

6. Uji SPSS CUPRAC

**Tests of Normality**

| Sampel   | Statistic      | Kolmogorov-Smirnov <sup>a</sup> |      | Statistic | Shapiro-Wilk |      | Sig. |
|----------|----------------|---------------------------------|------|-----------|--------------|------|------|
|          |                | df                              | Sig. |           | df           | Sig. |      |
| Eksibisi | Rimpang Kunyit | .183                            | 3    | .         | .999         | 3    | .933 |
|          | Herba Pegagan  | .262                            | 3    | .         | .956         | 3    | .597 |
|          | 35:55          | .211                            | 3    | .         | .991         | 3    | .814 |
|          | 35:110         | .346                            | 3    | .         | .837         | 3    | .206 |
|          | 70:55          | .299                            | 3    | .         | .915         | 3    | .435 |
|          | 70:110         | .199                            | 3    | .         | .995         | 3    | .864 |

a. Lilliefors Significance Correction

**Test of Homogeneity of Variances**

| Eksibisi |                                      | Levene Statistic | df1 | df2   | Sig. |
|----------|--------------------------------------|------------------|-----|-------|------|
|          |                                      |                  |     |       |      |
| Eksibisi | Based on Mean                        | 2.529            | 5   | 12    | .087 |
|          | Based on Median                      | 1.362            | 5   | 12    | .305 |
|          | Based on Median and with adjusted df | 1.362            | 5   | 5.973 | .355 |
|          | Based on trimmed mean                | 2.447            | 5   | 12    | .095 |

## Lampiran 10. Dokumentasi

### 1. Pembuatan Ekstrak

| Rimpang Kunyit                                                                                                                                                          | Herba Pegagan                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                                                                                          |
|     |       |
|   |   |

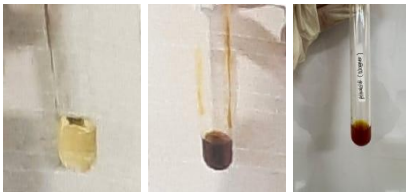
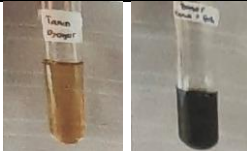
### 2. Karakterisasi Simplisia

| No | Parameter                  | Sampel                                                                              |                                                                                       |
|----|----------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|    |                            | Rimpang Kunyit                                                                      | Herba Pegagan                                                                         |
| 1  | Kadar abu total            |  |  |
| 2  | Kadar abu tidak larut asam |  |  |

|   |                         |                                                                                    |                                                                                      |
|---|-------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 3 | Kadar sari larut air    |   |   |
| 4 | Kadar sari larut etanol |   |   |
| 5 | Susut pengeringan       |  |  |

## 7. Skrining Fitokimia

| Sampel         | Golongan senyawa | Hasil                                                                                                                                                                                                                                                                                                |
|----------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rimpang Kunyit | Alkaloid         |   <br>Mayer      Dragendorff      Wegner |
|                | Flavonoid        |                                                                                                                                                                                                                   |
|                | Tanin            |  <br>Gelatin 1%      FeCl <sub>3</sub> 1%                                                                                     |

|               |              |                                                                                                                          |
|---------------|--------------|--------------------------------------------------------------------------------------------------------------------------|
| Herba Pegagan | Saponin      |                                         |
|               | Triterpenoid |                                         |
|               | Alkaloid     | <br>Mayer      Dragendorff      Wegner |
|               | Flavonoid    |                                       |
|               | Tanin        | <br>Gelatin 1% FeCl3 1%              |
|               | Saponin      |                                       |
|               | Terpenoid    |                                       |

## 8. Penetapan Kadar Flavonoid Total

| No | Perlakuan | Keterangan |
|----|-----------|------------|
|----|-----------|------------|

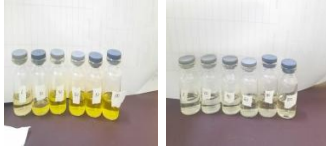
|   |                            |                                                                                      |
|---|----------------------------|--------------------------------------------------------------------------------------|
| 1 | Penimbangan Kuersetin      |    |
| 2 | Penimbangan rimpang kunyit |    |
| 3 | Penimbangan herba pegagan  |   |
| 4 | Seri konsentrasi kuersetin |  |
| 5 | Sampel                     |  |

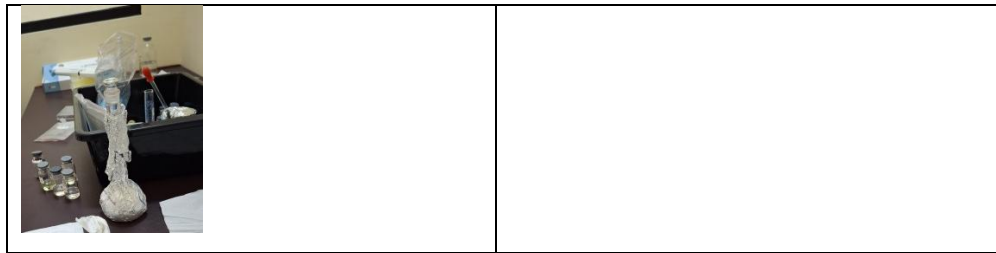
#### 9. Penetapan Kadar Fenolik Total

| No | Perlakuan                  | Keterangan                                                                           |
|----|----------------------------|--------------------------------------------------------------------------------------|
| 1. | Penimbangan rimpang kunyit |  |

|   |                           |                                                                                                                                                                                                                                                           |
|---|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | Penimbangan herba pegagan |                                                                                                                                                                         |
| 3 | Pembuatan baku asam galat |    |
| 4 | Sampel                    |                                                                                                                                                                         |

## 10. Uji aktivitas antioksidan

| Uji aktivitas antioksidan metode DPPH                                                                                                                                   | Uji aktivitas antioksidan metode CUPRAC                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |     |

11. Formulasi dan Uji Sediaan *sheet mask*

| No. | Perlakuan                           | Keterangan |
|-----|-------------------------------------|------------|
| 1.  | Pembuatan formula <i>sheet mask</i> |            |
| 2.  | Uji Organoleptik                    |            |
| 3.  | Uji Homogenitas                     |            |
| 4.  | Uji pH                              |            |
| 5.  | Uji Viskositas                      |            |
| 6.  | Uji Hedonic                         |            |
| 7.  | Uji Antioksidan                     |            |

## Lampiran 11. Turnitin

|                                             |                                                   |              |                |
|---------------------------------------------|---------------------------------------------------|--------------|----------------|
| Ratna_Dila_Ayu_Apsari_231FF04039_Skripsi 21 |                                                   |              |                |
| ORIGINALITY REPORT                          |                                                   |              |                |
| 13%                                         | 13%                                               | 5%           | 3%             |
| SIMILARITY INDEX                            | INTERNET SOURCES                                  | PUBLICATIONS | STUDENT PAPERS |
| PRIMARY SOURCES                             |                                                   |              |                |
| 1                                           | ejurnal.universitas-bth.ac.id<br>Internet Source  | 2%           |                |
| 2                                           | repository.unfari.ac.id<br>Internet Source        | 2%           |                |
| 3                                           | vbook.pub<br>Internet Source                      | 1%           |                |
| 4                                           | jurnal.anfa.co.id<br>Internet Source              | 1%           |                |
| 5                                           | eprints.poltekkesjogja.ac.id<br>Internet Source   | 1%           |                |
| 6                                           | repository.ukwms.ac.id<br>Internet Source         | 1%           |                |
| 7                                           | repository.uhamka.ac.id<br>Internet Source        | 1%           |                |
| 8                                           | repositori.uin-alauddin.ac.id<br>Internet Source  | 1%           |                |
| 9                                           | sipora.polije.ac.id<br>Internet Source            | 1%           |                |
| 10                                          | repository.unair.ac.id<br>Internet Source         | 1%           |                |
| 11                                          | repository.poltekkespim.ac.id<br>Internet Source  | 1%           |                |
| 12                                          | ejournal.uki.ac.id<br>Internet Source             | 1%           |                |
| 13                                          | repository.poltekkes-tjk.ac.id<br>Internet Source | 1%           |                |

## Lampiran 12. Bukti Bimbingan

| No | Tanggal          | Pembimbing Proposal            | Topik                                                                                         | Disetujui | Aksi                                                                                  |
|----|------------------|--------------------------------|-----------------------------------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|
| 1  | 10 Oktober 2024  | Dr.appt. Herni Kusriani, M.Si. | Bimbingan terkait dengan pengenalan dan topik yang menjadi bahasan dalam kelompok keilmuan BF | ✓         |    |
| 1  | 22 Oktober 2024  | apt Wempi Budiana, M.Si        | Bimbingan pengenalan dan pembahasan terkait tema yang akan digunakan                          | ✓         |    |
| 2  | 9 November 2024  | apt Wempi Budiana, M.Si        | Kemajuan 1                                                                                    | ✓         |    |
| 2  | 22 Oktober 2024  | Dr.appt. Herni Kusriani, M.Si. | Bimbingan terkait dengan penentuan tema yang akan digunakan dalam tugas akhir                 | ✓         |    |
| 3  | 21 November 2024 | apt Wempi Budiana, M.Si        | Bimbingan terkait proposal                                                                    | ✓         |    |
| 3  | 8 November 2024  | Dr.appt. Herni Kusriani, M.Si. | Kemajuan 1                                                                                    | ✓         |    |
| 4  | 21 November 2024 | Dr.appt. Herni Kusriani, M.Si. | Bimbingan terkait prosedur penelitian                                                         | ✓         |    |
| 4  | 12 November 2024 | apt Wempi Budiana, M.Si        | Bimbingan terkait proposal                                                                    | ✓         |    |
| 5  | 21 Desember 2024 | apt Wempi Budiana, M.Si        | Kemajuan 2                                                                                    | ✓         |    |
| 5  | 25 Januari 2025  | Dr.appt. Herni Kusriani, M.Si. | Bimbingan terkait dengan prosedur proposal                                                    | ✓         |    |
| 6  | 13 Januari 2025  | apt Wempi Budiana, M.Si        | Bimbingan proposal                                                                            | ✓         |   |
| 6  | 16 Desember 2024 | Dr.appt. Herni Kusriani, M.Si. | Bimbingan terkait dengan prosedur proposal                                                    | ✓         |  |
| 7  | 15 Januari 2025  | apt Wempi Budiana, M.Si        | Bimbingan proposal                                                                            | ✓         |  |
| 7  | 27 Desember 2024 | Dr.appt. Herni Kusriani, M.Si. | Kemajuan 2                                                                                    | ✓         |  |
| 8  | 7 Januari 2025   | Dr.appt. Herni Kusriani, M.Si. | Bimbingan terkait dengan prosedur proposal                                                    | ✓         |  |
| 8  | 16 Januari 2025  | apt Wempi Budiana, M.Si        | Bimbingan proposal                                                                            | ✓         |  |
| 9  | 14 Januari 2024  | Dr.appt. Herni Kusriani, M.Si. | Revisi dan bimbingan proposal                                                                 | ✓         |  |
| 10 | 16 Januari 2025  | Dr.appt. Herni Kusriani, M.Si. | Bimbingan proposal                                                                            | ✓         |  |

### Lampiran 13. Curriculum Vitae (CV)

## Ratna Dila Ayu Apsari

+962-445-7242, 231ff04039@bku.ac.id, Panjang, Bandar Lampung 35241

### PROFILE

An undergraduate student of Pharmacy at Bhakti Kencana University with a focus on pharmaceutical science and research.

### EDUCATION

Bhakti Kencana University September 2023 - 2025

- Bachelor Degree in Pharmacy

Politeknik Kesehatan Kementrian Kesehatan Tanjung Karang July 2019 - August 2022

- Diploma III (Associate Degree) in Pharmacy

### INTERNSHIP EXPERIENCE

RSD Dr. A. Dadi Tjokrodipo February 2022

- Assisted pharmacists in dispensing medications for inpatients and outpatients in compliance with hospital policies and regulations
- Supported patient counseling on drug usage, dosage and side effects

PBF PT. Millenium Pharmacon International January 2022

- Assisted in receiving, storing and distributing pharmaceutical products in compliance with BPOM and GDP (Good Distribution Practice) regulation
- Supported order processing and packaging for pharmacies, hospitals and healthcare facilities

### ORGANISATIONAL EXPERIENCE

Himpunan Mahasiswa Jurusan Farmasi Poltekkes Tanjung Karang January 2020 - April 2021

- Organized study groups and educational seminars for pharmacy students
- Coordinated sports events and wellness activities to promote student engagement and teamwork

Bina Vokalia State Senior High School 2 Bandar Lampung July 2016 - 2018

- Represented the school in competitions and cultural events, contributing to team achievements

### SKILLS AND ACHIEVEMENTS

- **Hard skills:** (Technical) Operation of Spectrophotometer UV-Vis
- **Hard skills:** (Software) Canva, Microsoft Office
- **Soft skills:** Communicative, Organized
- **Achievements** (2024): Panelist Pekan Karya Mahasiswa Bhakti Kencana University
- **Achievements** (2018): 3 Gold Medalist (Pop and Jazz, Teenagers, Championship - Teenagers) at Bali International Choir Festival
- **Achievements** (2017): Gold Medalist, 1st Winner Choir Competition Teknokrat University