

LAMPIRAN

Lampiran 1. Proses Pembuatan Simplisia

Dokumentasi	Keterangan
	Pengambilan Sampel
	Sortasi Basah
	Pencucian



Perajangan



Pengeringan



Sortasi Kering



Penghalusan



Penyimpanan

Lampiran 2. Proses Pembuatan Ekstrak Etanol Daun Sembung Rambut

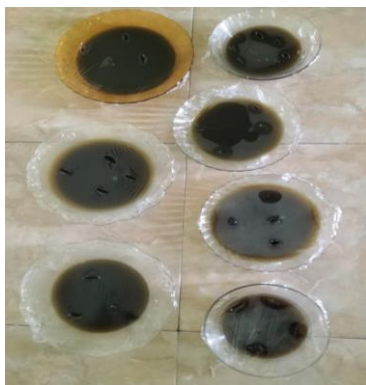
Dokumentasi	Keterangan
	Penimbangan Simplisia
	Perendaman Simplisia dengan Etanol 70%
	Penyaringan Ekstrak Daun Sembung Rambat



Remaserasi Ekstrak Sebanyak 2x



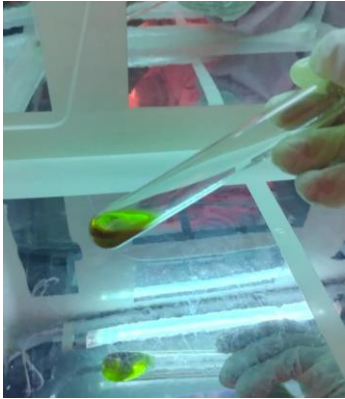
Ekstrak Dipekatkan Dengan Bantuan
Alat Rotary Evaporator Hingga
Menghasilkan Ekstrak Kental



Berikut adalah hasil penetapan % rendaman ekstrak

$$\begin{aligned}\% \text{ Rendaman} &= \frac{\text{Berat Ekstrak Kental}}{\text{Berat Simplisia}} \times 100\% \\ &= \frac{45 \text{ gram}}{300 \text{ gram}} \times 100\% \\ &= 15 \%\end{aligned}$$

Lampiran 3. Uji Pendahuluan Skrining Fitokimia

Dokumentasi	Keterangan
	<i>Alkaloid</i>
	<i>Flavonoid</i>



Tanin



Saponin



triterpenoid

Lampiran 4. Perhitungan Formulasi

1. Formulasi 0% (tanpa ekstrak)

$$\text{Setil alkohol} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Trietanolamin} = \frac{2}{100} \times 30 = 0,6 \text{ g}$$

$$\text{Asam stearat} = \frac{6}{100} \times 30 = 1,8 \text{ g}$$

$$\text{Paraffin cair} = \frac{7}{100} \times 30 = 2,1 \text{ g}$$

$$\text{Gliserin} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Metil paraben} = \frac{0,2}{100} \times 30 = 0,06 \text{ g}$$

$$\text{Propil paraben} = \frac{0,1}{100} \times 30 = 0,03 \text{ g}$$

$$\text{Oleum rosae} = 3 \text{ tetes}$$

$$\text{Aquadest ad 100} = 30 - (1,5 + 0,6 + 1,8 + 2,1 + 1,5 + 0,06 + 0,03)$$

$$= 30 - 7,59$$

$$= 22,41 \text{ ml}$$

2. Formulasi F1 (6%)

$$\text{Ekstrak etanol} = \frac{6}{100} \times 30 = 1,8 \text{ g}$$

$$\text{Setil alkohol} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Trietanolamin} = \frac{2}{100} \times 30 = 0,6 \text{ g}$$

$$\text{Asam stearat} = \frac{6}{100} \times 30 = 1,8 \text{ g}$$

$$\text{Paraffin cair} = \frac{7}{100} \times 30 = 2,1 \text{ g}$$

$$\text{Gliserin} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Metil paraben} = \frac{0,2}{100} \times 30 = 0,06 \text{ g}$$

$$\text{Propil paraben} = \frac{0,1}{100} \times 30 = 0,03 \text{ g}$$

$$\text{Oleum rosae} = 3 \text{ tetes}$$

$$\begin{aligned} \text{Aquadest ad 100} &= 30 - (1,8 + 1,5 + 0,6 + 1,8 + 2,1 + 1,5 + 0,06 + 0,03) \\ &= 30 - 9,39 \\ &= 20,61 \text{ ml} \end{aligned}$$

3. Formulasi F2 (8%)

$$\text{Ektrak kental} = \frac{8}{100} \times 30 = 2,4 \text{ g}$$

$$\text{Setil alkohol} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Trietanolamin} = \frac{2}{100} \times 30 = 0,6 \text{ g}$$

$$\text{Asam stearat} = \frac{6}{100} \times 30 = 1,8 \text{ g}$$

$$\text{Paraffin cair} = \frac{7}{100} \times 30 = 2,1 \text{ g}$$

$$\text{Gliserin} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Metil paraben} = \frac{0,2}{100} \times 30 = 0,06 \text{ g}$$

$$\text{Propil paraben} = \frac{0,1}{100} \times 30 = 0,03 \text{ g}$$

$$\text{Oleum rosae} = 3 \text{ tetes}$$

$$\begin{aligned} \text{Aquadest ad 100} &= 30 - (2,4 + 1,5 + 0,6 + 1,8 + 2,1 + 1,5 + 0,06 + 0,03) \\ &= 30 - 11,79 \\ &= 18,21 \text{ ml} \end{aligned}$$

4. Formulasi F3 (10%)

$$\text{Ekstrak kental} = \frac{10}{100} \times 30 = 3 \text{ g}$$

$$\text{Setil alkohol} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Trietanolamin} = \frac{2}{100} \times 30 = 0,6 \text{ g}$$

$$\text{Asam stearat} = \frac{6}{100} \times 30 = 1,8 \text{ g}$$

$$\text{Paraffin cair} = \frac{7}{100} \times 30 = 2,1 \text{ g}$$

$$\text{Gliserin} = \frac{5}{100} \times 30 = 1,5 \text{ g}$$

$$\text{Metil paraben} = \frac{0,2}{100} \times 30 = 0,06 \text{ g}$$

$$\text{Propil paraben} = \frac{0,1}{100} \times 30 = 0,03 \text{ g}$$

$$\text{Oleum rosae} = 3 \text{ tetes}$$

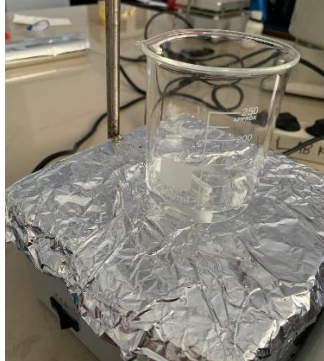
$$\text{Aquadest ad 100} = 30 - (3 + 1,5 + 0,6 + 1,8 + 2,1 + 1,5 + 0,06 + 0,03)$$

$$= 30 - 14,79$$

$$= 15,21 \text{ ml.}$$

Lampiran 5. Pembuatan Sediaan Lotion

Dokumentasi	Keterangan
	Timbang Semua Bahan Sesuai Perhitungan
	Timbang Ekstrak Etanol Daun Sembung Rambut Sesuai Perhitungan
	Leburkan Fase Air Dan Fase Minyak

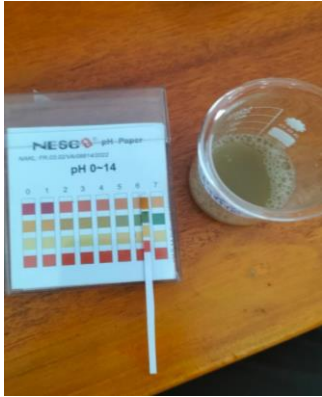
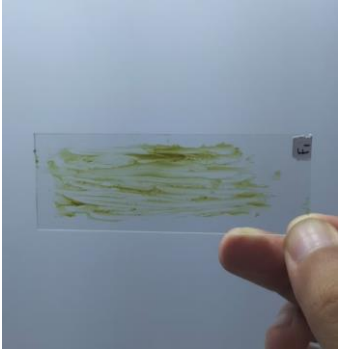


Satukan Fase Air dan Fase Minyak
Dalam Alat Magnetic Stirrer Hingga
Homogen



Masukan Sediaan Dalam Wadah

Lampiran 6. Pengujian Stabilitas

Dokumentasi	Keterangan
	Uji Organoleptik
	Uji pH
	Uji Homogen



Uji Daya Sebar



Uji Daya Lekat



Uji Viskositas

Lampiran 7. Uji Iritasi

Dokumentasi	Keterangan
	Tampak kulit sebelum dioleskan sediaan
	Tampak kulit setelah dioleskan sediaan

Populasi yang digunakan yaitu mahasiswa angkatan 6 prodi farmasi, Universitas Muhammadiyah Palopo dengan jumlah 60 orang.

Rumus:
$$n = \frac{N}{1+N(e)^2}$$

Keterangan: n = Jumlah

N = Populasi

e = Error (20%)

Perhitungan:
$$\begin{aligned} n &= \frac{N}{1+N(e)^2} \\ &= \frac{60}{1+60(20\%)^2} \\ &= \frac{60}{1+60(0,2)^2} \end{aligned}$$

$$= \frac{60}{1+60(0,04)}$$

$$= \frac{60}{1+2,4}$$

$$= \frac{60}{3,4}$$

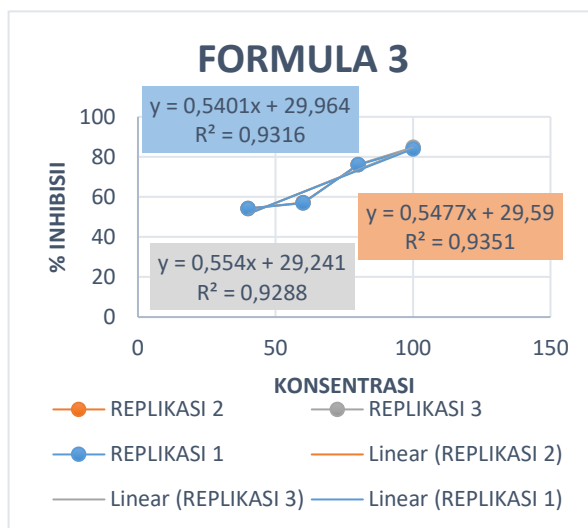
$$= 17$$

Lampiran 8. Pengujian Antioksidan

Dokumentasi	Keterangan
	Larutan Sampel
	Pencampuran Sampel



Pengukuran Absorbansi
Sampel



Kurva Antioksidan

Lampiran 9. Data mentah pembanding dan sampel

A. Data mentah pembanding larutan vitamin C

Replikasi	Blanko	4 ppm	6 ppm	8 ppm	10 ppm
1	0,692	0,451	0,469	0,430	0,354
2	0,692	0,540	0,470	0,438	0,353
3	0,692	0,450	0,470	0,438	0,354

B. Data mentah sampel sediaan lotion

1. Formulasi 0

Replikasi	Blanko	40 ppm	60 ppm	80 ppm	100 ppm
1	0,899	0,820	0,822	0,821	0,719
2	0,899	0,819	0,822	0,821	0,718
3	0,899	0,819	0,822	0,821	0,719

2. Formulasi 1

Replikasi	Blanko	40 ppm	60 ppm	80 ppm	100 ppm
1	0,899	0,755	0,700	0,687	0,308
2	0,899	0,756	0,700	0,686	0,313
3	0,899	0,757	0,702	0,685	0,315

3. Formulasi 2

Replikasi	Blanko	40 ppm	60 ppm	80 ppm	100 ppm
1	0,899	0,719	0,653	0,600	0,427
2	0,899	0,719	0,653	0,599	0,426
3	0,899	0,718	0,652	0,600	0,425

4. Formulasi 3

Replikasi	Blanko	40 ppm	60 ppm	80 ppm	100 ppm
1	0,899	0,412	0,385	0,216	0,140
2	0,899	0,412	0,386	0,216	0,145
3	0,899	0,411	0,388	0,214	0,137

Lampiran 10. Perhitungan Antioksidan Daun Sembung Rambat

A. Pengenceran larutan pembanding dan sampel

$$\text{Rumus : } V1.M1 = V2.M2$$

Diketahui: V1 = Konsentrasi awal

V2 = Konsentrasi yang diinginkan

M1 = Volume larutan yang diambil

M2 = Volume setelah pengenceran

a. Pengenceran larutan vit c 10 ppm

Dik: V1 = 1000ppm

V2 = 10ppm, 8ppm, 6ppm, 4ppm

M2 = 5ml

Dit: M1 ?

$$\begin{aligned}
 10 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 1000.M1 = 10.5 \\
 &= 0,05\text{ml} + 4,95\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 8 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 1000.M1 = 8.5 \\
 &= 0,04\text{ml} + 4,96\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 6 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 8.M1 = 6.5 \\
 &= 3,75\text{ml} + 1,25\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 4 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 6.M1 = 4.5 \\
 &= 3,3\text{ml} + 1,7\text{ml methanol}
 \end{aligned}$$

b. Pengenceran larutan sampel F0 100 ppm

$$\text{Dik: } V1 = 1000 \text{ ppm}$$

$$V2 = 100\text{ppm}, 80\text{ppm}, 60\text{ppm}, 40\text{ppm}$$

$$M2 = 5\text{ml}$$

Dit: M1 ?

$$\begin{aligned}
 100 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 1000.M1 = 100.5 \\
 &= 0,5\text{ml} + 4,5\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 80 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 100.M1 = 80.5 \\
 &= 4\text{ml} + 1\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 60 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 80.M1 = 60.5 \\
 &= 3,75\text{ml} + 1,25\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 40 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 60.M1 = 40.5 \\
 &= 3,3\text{ml} + 1,7\text{ml methanol}
 \end{aligned}$$

c. Pengenceran larutan sampel F1 100 ppm

$$\text{Dik: } V1 = 1000 \text{ ppm}$$

$$V2 = 100\text{ppm}, 80\text{ppm}, 60\text{ppm}, 40\text{ppm}$$

$$M2 = 5\text{ml}$$

Dit: M1 ?

$$\begin{aligned}
 100 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 1000.M1 = 100.5 \\
 &= 0,5\text{ml} + 4,5\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 80 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 100.M1 = 80.5 \\
 &= 4\text{ml} + 1\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 60 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 80.M1 = 60.5 \\
 &= 3,75\text{ml} + 1,25\text{ml methanol}
 \end{aligned}$$

$$\begin{aligned}
 40 \text{ ppm} &= V1.M1 = V2.M2 \\
 &= 60.M1 = 40.5 \\
 &= 3,3\text{ml} + 1,7\text{ml methanol}
 \end{aligned}$$

d. Pengenceran larutan sampel F2 1000 ppm

Dik: $V_1 = 1000 \text{ ppm}$

$V_2 = 100\text{ppm}, 80\text{ppm}, 60\text{ppm}, 40\text{ppm}$

$M_2 = 5\text{ml}$

Dit: M_1 ?

$$100 \text{ ppm} = V_1.M_1 = V_2.M_2$$

$$= 1000.M_1 = 100.5$$

$$= 0,5\text{ml} + 4,5\text{ml methanol}$$

$$80 \text{ ppm} = V_1.M_1 = V_2.M_2$$

$$= 100.M_1 = 80.5$$

$$= 4\text{ml} + 1\text{ml methanol}$$

$$60 \text{ ppm} = V_1.M_1 = V_2.M_2$$

$$= 80.M_1 = 60.5$$

$$= 3,75\text{ml} + 1,25\text{ml methanol}$$

$$40 \text{ ppm} = V_1.M_1 = V_2.M_2$$

$$= 60.M_1 = 40.5$$

$$= 3,3\text{ml} + 1,7\text{ml methanol}$$

e. Pengenceran larutan sampel F3 1000 ppm

Dik: $V_1 = 1000 \text{ ppm}$

$V_2 = 100\text{ppm}, 80\text{ppm}, 60\text{ppm}, 40\text{ppm}$

$M_2 = 5\text{ml}$

Dit: M_1 ?

$$100 \text{ ppm} = V_1.M_1 = V_2.M_2$$

$$= 1000.M1 = 100.5$$

$$= 0,5\text{ml} + 4,5\text{ml methanol}$$

$$80 \text{ ppm} = V1.M1 = V2.M2$$

$$= 100.M1 = 80.5$$

$$= 4\text{ml} + 1\text{ml methanol}$$

$$60 \text{ ppm} = V1.M1 = V2.M2$$

$$= 80.M1 = 60.5$$

$$= 3,75\text{ml} + 1,25\text{ml methanol}$$

$$40 \text{ ppm} = V1.M1 = V2.M2$$

$$= 60.M1 = 40.5$$

$$= 3,3\text{ml} + 1,7\text{ml methanol}$$

B. Perhitungan % inhibisi pembanding dan sampel

Rumus:

$$\% \text{ Inhibisi} = \frac{(\text{abs. blanko} - \text{abs. sampel})}{\text{abs. blanko}} \times 100\%$$

1. Pembanding larutan vitamin c

a. Replikasi 1

$$4 \text{ ppm} = \frac{0,692 - 0,451}{0,692} \times 100\%$$

$$= 34,82\%$$

$$6 \text{ ppm} = \frac{0,692 - 0,469}{0,692} \times 100\%$$

$$= 32,22\%$$

$$8 \text{ ppm} = \frac{0,692 - 0,430}{0,692} \times 100\%$$

$$= 37,86\%$$

$$\begin{aligned}
 10 \text{ ppm} &= \frac{0,692 - 0,354}{0,692} \times 100\% \\
 &= 48,84\%
 \end{aligned}$$

b. Replikasi 2

$$\begin{aligned}
 4 \text{ ppm} &= \frac{0,692 - 0,450}{0,692} \times 100\% \\
 &= 34,97\%
 \end{aligned}$$

$$\begin{aligned}
 6 \text{ ppm} &= \frac{0,692 - 0,470}{0,692} \times 100\% \\
 &= 32,08\%
 \end{aligned}$$

$$\begin{aligned}
 8 \text{ ppm} &= \frac{0,692 - 0,438}{0,692} \times 100\% \\
 &= 36,70\%
 \end{aligned}$$

$$\begin{aligned}
 10 \text{ ppm} &= \frac{0,692 - 0,353}{0,692} \times 100\% \\
 &= 48,98\%
 \end{aligned}$$

c. Replikasi 3

$$\begin{aligned}
 4 \text{ ppm} &= \frac{0,692 - 0,450}{0,692} \times 100\% \\
 &= 34,97\%
 \end{aligned}$$

$$\begin{aligned}
 6 \text{ ppm} &= \frac{0,692 - 0,470}{0,692} \times 100\% \\
 &= 3208\%
 \end{aligned}$$

$$\begin{aligned}
 8 \text{ ppm} &= \frac{0,692 - 0,438}{0,692} \times 100\% \\
 &= 36,70\%
 \end{aligned}$$

$$\begin{aligned}
 10 \text{ ppm} &= \frac{0,692 - 0,354}{0,692} \times 100\% \\
 &= 48,84\%
 \end{aligned}$$

2. Sampel

a. Replikasi 1

$$\begin{aligned} F0 = 40 \text{ ppm} &= \frac{0,899 - 0,820}{0,899} \times 100\% \\ &= 8,78\% \end{aligned}$$

$$\begin{aligned} 60 \text{ ppm} &= \frac{0,899 - 0,822}{0,899} \times 100\% \\ &= 8,56\% \end{aligned}$$

$$\begin{aligned} 80 \text{ ppm} &= \frac{0,899 - 0,821}{0,899} \times 100\% \\ &= 8,67\% \end{aligned}$$

$$\begin{aligned} 100 \text{ ppm} &= \frac{0,899 - 0,718}{0,899} \times 100\% \\ &= 20,13\% \end{aligned}$$

$$\begin{aligned} F1 = 40 \text{ ppm} &= \frac{0,899 - 0,755}{0,899} \times 100\% \\ &= 16,01\% \end{aligned}$$

$$\begin{aligned} 60 \text{ ppm} &= \frac{0,899 - 0,700}{0,899} \times 100\% \\ &= 22,13\% \end{aligned}$$

$$\begin{aligned} 80 \text{ ppm} &= \frac{0,899 - 0,687}{0,899} \times 100\% \\ &= 23,58\% \end{aligned}$$

$$\begin{aligned} 100 \text{ ppm} &= \frac{0,899 - 0,308}{0,899} \times 100\% \\ &= 65,73\% \end{aligned}$$

$$F2= \quad 40 \text{ ppm} \quad = \frac{0,899 - 0,719}{0,899} \times 100\%$$

$$= 79,87\%$$

$$60 \text{ ppm} \quad = \frac{0,899 - 0,653}{0,899} \times 100\%$$

$$= 27,36\%$$

$$80 \text{ ppm} \quad = \frac{0,899 - 0,600}{0,899} \times 100\%$$

$$= 33,25\%$$

$$100 \text{ ppm} \quad = \frac{0,899 - 0,427}{0,899} \times 100\%$$

$$= 52,50\%$$

$$F3= \quad 40 \text{ ppm} \quad = \frac{0,899 - 0,412}{0,899} \times 100\%$$

$$= 54,17\%$$

$$60 \text{ ppm} \quad = \frac{0,899 - 0,385}{0,899} \times 100\%$$

$$= 57,17\%$$

$$80 \text{ ppm} \quad = \frac{0,899 - 0,216}{0,899} \times 100\%$$

$$= 75,97\%$$

$$100 \text{ ppm} \quad = \frac{0,899 - 0,140}{0,899} \times 100\%$$

$$=84,42\%$$

b. Replikasi 2

$$F0= \quad 40 \text{ ppm} \quad = \frac{0,899 - 0,819}{0,899} \times 100\%$$

$$= 8,89\%$$

$$60 \text{ ppm} \quad = \frac{0,899 - 0,822}{0,899} \times 100\%$$

$$= 8,56\%$$

$$80 \text{ ppm} \quad = \frac{0,899 - 0,821}{0,899} \times 100\%$$

$$= 8,67\%$$

$$100 \text{ ppm} \quad = \frac{0,899 - 0,718}{0,899} \times 100\%$$

$$= 20,13\%$$

$$F1= \quad 40 \text{ ppm} \quad = \frac{0,899 - 0,756}{0,899} \times 100\%$$

$$= 15,90\%$$

$$60 \text{ ppm} \quad = \frac{0,899 - 0,700}{0,899} \times 100\%$$

$$= 22,13\%$$

$$80 \text{ ppm} \quad = \frac{0,899 - 0,686}{0,899} \times 100\%$$

$$= 23,69\%$$

$$100 \text{ ppm} \quad = \frac{0,899 - 0,313}{0,899} \times 100\%$$

$$= 65,18\%$$

$$F2= \quad 40 \text{ ppm} \quad = \frac{0,899 - 0,719}{0,899} \times 100\%$$

$$= 79,87\%$$

$$60 \text{ ppm} \quad = \frac{0,899 - 0,653}{0,899} \times 100\%$$

$$= 27,36\%$$

$$80 \text{ ppm} = \frac{0,899 - 0,599}{0,899} \times 100\%$$

$$= 33,37\%$$

$$100 \text{ ppm} = \frac{0,899 - 0,426}{0,899} \times 100\%$$

$$= 52,61\%$$

$$F3= 40 \text{ ppm} = \frac{0,899 - 0,412}{0,899} \times 100\%$$

$$= 54,17\%$$

$$600 \text{ ppm} = \frac{0,899 - 0,386}{0,899} \times 100\%$$

$$= 57,06\%$$

$$80 \text{ ppm} = \frac{0,899 - 0,216}{0,899} \times 100\%$$

$$= 75,97\%$$

$$100 \text{ ppm} = \frac{0,899 - 0,145}{0,899} \times 100\%$$

$$= 83,87\%$$

c. Replikasi 3

$$F0= 40 \text{ ppm} = \frac{0,899 - 0,819}{0,899} \times 100\%$$

$$= 8,89\%$$

$$60 \text{ ppm} = \frac{0,899 - 0,822}{0,899} \times 100\%$$

$$= 8,56\%$$

$$80 \text{ ppm} = \frac{0,899 - 0,821}{0,899} \times 100\%$$

$$= 8,65\%$$

	100 ppm	$= \frac{0,899 - 0,719}{0,899} \times 100\%$
		$= 20,02\%$
F1=	40 ppm	$= \frac{0,899 - 0,757}{0,899} \times 100\%$
		$= 15,79\%$
	60 ppm	$= \frac{0,899 - 0,702}{0,899} \times 100\%$
		$= 21,91\%$
	80 ppm	$= \frac{0,899 - 0,685}{0,899} \times 100\%$
		$= 23,80\%$
	100 ppm	$= \frac{0,899 - 0,315}{0,899} \times 100\%$
		$= 64,96\%$
F2=	40 ppm	$= \frac{0,899 - 0,718}{0,899} \times 100\%$
		$= 20,13\%$
	60 ppm	$= \frac{0,899 - 0,652}{0,899} \times 100\%$
		$= 27,47\%$
	80 ppm	$= \frac{0,899 - 0,600}{0,899} \times 100\%$
		$= 33,25\%$
	100 ppm	$= \frac{0,899 - 0,425}{0,899} \times 100\%$
		$= 52,50\%$
F3=	40 ppm	$= \frac{0,899 - 0,411}{0,899} \times 100\%$
		$= 54,28\%$

$$60 \text{ ppm} = \frac{0,899 - 0,388}{0,899} \times 100\%$$

$$= 56,84\%$$

$$80 \text{ ppm} = \frac{0,899 - 0,214}{0,899} \times 100\%$$

$$= 76,19\%$$

$$100 \text{ ppm} = \frac{0,899 - 0,137}{0,899} \times 100\%$$

$$= 84,76\%$$

C. Perhitungan IC 50 pembanding dan sampel

Rumus:

$$IC_{50} = \frac{(50 - a)}{b}$$

Keterangan:

a= Intercept (perpotongan garis di sumbu y)

b= Slope (kemiringan kurva)

x= Konsentrasi sampel (IC_{50})

1. Pembanding larutan vitamin C

a. Replikasi 1

$$= \frac{(50 - 21,967)}{2,3115}$$

$$= \frac{(28,033)}{2,3115}$$

$$= 12,12 \text{ } \mu\text{g/mL (Sangat Kuat)}$$

b. Replikasi 2

$$= \frac{(50 - 21,74)}{2,385}$$

$$= \frac{(28,26)}{2,385}$$

$$= 11,84 \mu\text{g/mL (Sangat Kuat)}$$

c. Replikasi 3

$$= \frac{(50 - 21,855)}{2,3325}$$

$$= \frac{(28,145)}{2,3325}$$

$$= 12,06 \mu\text{g/mL (Sangat Kuat)}$$

2. Sampel

a. Replikasi 1

$$F0 = \frac{(50 - 0,278)}{0,1692}$$

$$= \frac{(50,278)}{0,1692}$$

$$= 297,15 \mu\text{g/mL (lemah)}$$

$$F1 = \frac{(50 + 20,565)}{0,7312}$$

$$= \frac{(70,565)}{0,7312}$$

$$= 96,50 \mu\text{g/mL (Kuat)}$$

$$F2 = \frac{(50 + 20,565)}{0,747}$$

$$= \frac{(70,565)}{0,747}$$

$$= 94,46 \mu\text{g/mL (Kuat)}$$

$$F3 = \frac{(50 - 29,964)}{0,5401}$$

$$= \frac{(20,036)}{0,5401}$$

$$= 37,09 \mu\text{g/mL (Sangat Kuat)}$$

b. Replikasi 2

$$\begin{aligned} F0 &= \frac{(50 + 0,421)}{0,1708} \\ &= \frac{(50,421)}{0,1708} \\ &= 295,20 \text{ } \mu\text{g/mL (lemah)} \end{aligned}$$

$$\begin{aligned} F1 &= \frac{(50 - 20,851)}{0,7531} \\ &= \frac{(70,851)}{0,7531} \\ &= 94,04 \text{ } \mu\text{g/mL (Kuat)} \end{aligned}$$

$$\begin{aligned} F2 &= \frac{(50 + 20,851)}{0,7531} \\ &= \frac{(70,851)}{0,7531} \\ &= 94,07 \text{ } \mu\text{g/mL (Kuat)} \end{aligned}$$

$$\begin{aligned} F3 &= \frac{(50 - 29,59)}{0,5477} \\ &= \frac{(20,41)}{0,5477} \\ &= 37,26 \text{ } \mu\text{g/mL (Sangat kuat)} \end{aligned}$$

c. Replikasi 3

$$\begin{aligned} F0 &= \frac{(50 + 0,188)}{0,1674} \\ &= \frac{(50,188)}{0,1674} \\ &= 299,38 \text{ } \mu\text{g/mL (lemah)} \end{aligned}$$

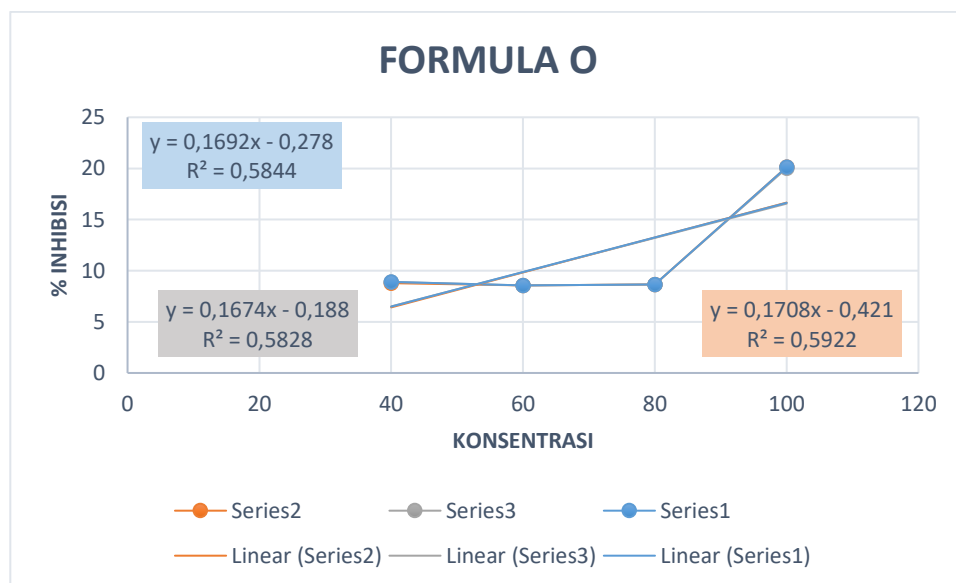
$$\begin{aligned} F1 &= \frac{(50 + 20,675)}{0,747} \\ &= \frac{(70,674)}{0,747} \\ &= 94,61 \text{ } \mu\text{g/mL (Kuat)} \end{aligned}$$

$$\begin{aligned}
 F2 &= \frac{(50 + 20,675)}{0,747} \\
 &= \frac{(70,675)}{0,747} \\
 &= 94,61 \text{ } \mu\text{g/mL (Kuat)}
 \end{aligned}$$

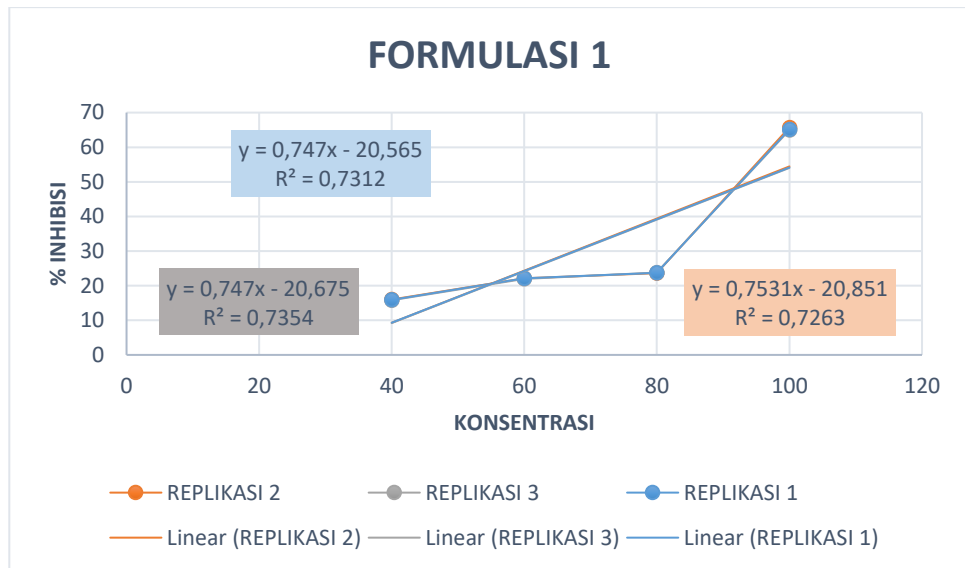
$$\begin{aligned}
 F3 &= \frac{(50 - 29,241)}{0,554} \\
 &= \frac{(20,759)}{0,544} \\
 &= 37,16 \text{ } \mu\text{g/mL (Sangat kuat)}
 \end{aligned}$$

Lampiran 11. Gambar Kurva Sampel

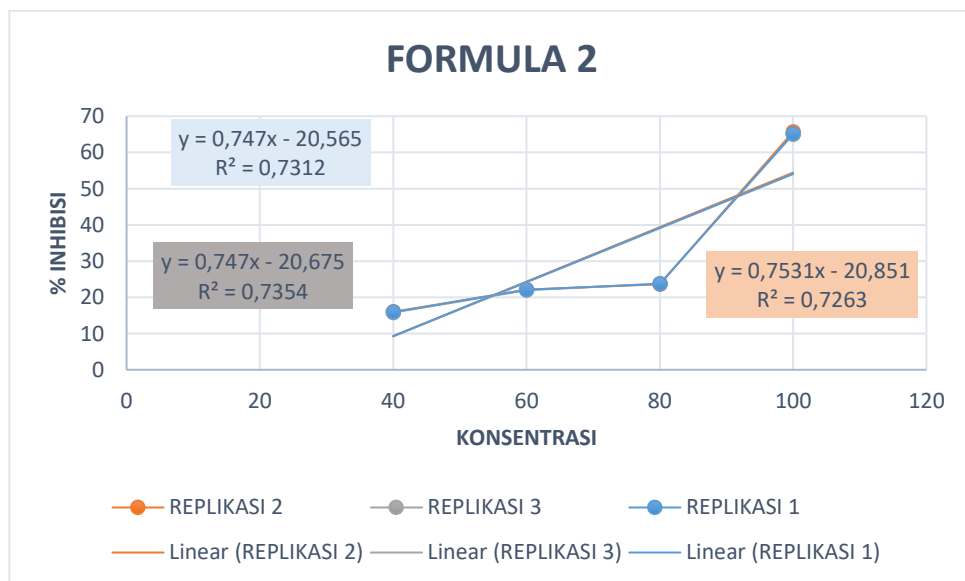
1. Formulasi 0



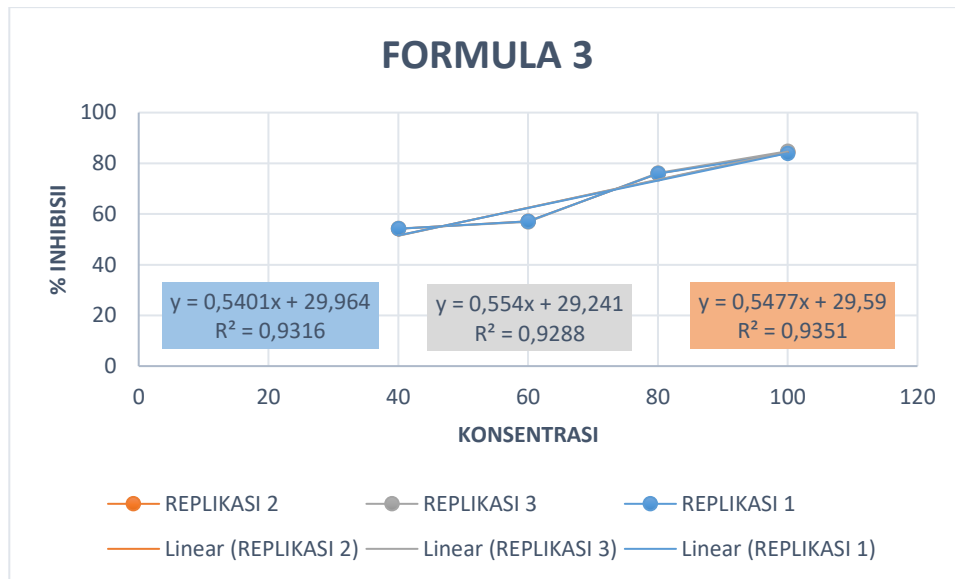
2. Formulasi 1



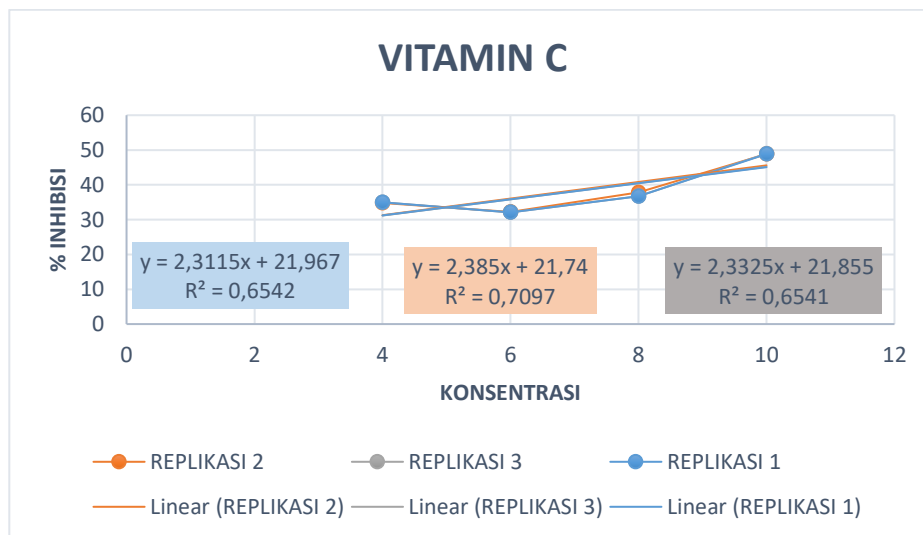
3. Formulasi 2



4. Formulasi 3



Lampiran 12. Kurva larutan pembeding vitamin C



Lampiran 13. Hasil uji One Way Anova

Sumber variabel	Jumlah kuadrat	df	Rata-rata kuadrat	F	Sig	Syarat
Antar kelompok	1513464137.067	4	378366034.267	26772.697	0.000	<0,05 (Sawiji, 2023)
Dalam kelompok	141325.333	10	14132.533	-	-	
Total	1513 605462.400	14	-	-	-	

Lampiran 14. Hasil uji normalitas data

Tests of Normality						
formulasi	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	statistic	df	Sig.	statistic	df	Sig.
F0	0.207	3	.000	0.992	3	0.833
F1	0.307	3	.000	0.907	3	0.407
F2	0.280	3	.000	0.938	3	0.520
F3	0.299	3	.000	0.915	3	0.433
Vit C	0.308	3	.000	0.902	3	0.391

Lampiran 15. Hasil uji homogenitas data

Test of Homogeneity of Variances				
Metode pengukuran	Statistik	df1	df2	Sig.
Berdasarkan rata-rata	4.034	4	10	0.034
Berdasarkan median	2.105	4	10	0.155
Berdasarkan median dan df yang disesuaikan	2.105	4	3.748	0.253
Berdasarkan Trimmed Mean	3.898	4	10	0.037

Lampiran 16. Kode Etik

**Lembaga Penelitian dan Pengabdian kepada Masyarakat
Universitas Muhammadiyah Palopo
*Institution of Research and Community Services
Muhammadiyah University Palopo***

**KETERANGAN LAYAK PENELITIAN
ETHICAL APPROVAL LETTER**
Nomor/Number: 122/KEP/III.3.AU/F/2026

Komisi Etik Penelitian Universitas Muhammadiyah Palopo, setelah mempelajari dan melakukan kajian etik secara seksama usulan rancangan penelitian, dengan ini menyatakan bahwa penelitian dengan:

The Research Ethics Commission of Muhammadiyah University Palopo, having thoroughly scrutinized and completed ethical reviews on the research plan proposal, hereby certifies that:

Judul : Formulasi Dan Uji Stabilitas Fisik Sediaan Lotion Ekstrak Daun Sembung Rambut (*Mikania Micrantha*) Sebagai Antioksidan

Title : Formulation and Physical Stability Test of Sembung Rambut Leaf Extract Lotion (*Mikania Micrantha*) as an Antioxidant

Researcher : 1. Indiyani Addas
2. Apt. Al Syahril Samsi, S.Farm., M.Si
3. Bd. Patmahwati, S.ST., M.Keb

Dengan ini menyatakan bahwa protokol tersebut DITERIMA
Hereby declares that the protocol is APPROVED

Palopo, 12 Maret 2026
Ketua / Chairman



Junaidi, S.E., M.Ak., Ph.D.
NIDN.0910067705

Lampiran 17. Surat permohonan izi penelitian



MAJELIS PENDIDIKAN TINGGI, PENELITIAN DAN PENGEMBANGAN
UNIVERSITAS MUHAMMADIYAH PALOPO
LEMBAGA PENELITIAN DAN PENGABDIAN KEPADA
MASYARAKAT (LPPM)

Jl. 2 Gedung MCC Universitas Muhammadiyah Palopo
Jl. Jend. Sudirman Km. 03 Binturu, Kota Palopo (91959) – Telp/Fax: (0471) 327429

Nomor : 552/III.3.AU/LPPM/F/2025
Lampiran : -
Perihal : Permohonan Izin Penelitian
Palopo, 14 Oktober 2025

Kepada Yth
Kepala Laboratorium Farmasi Universitas Muhammadiyah Palopo
Di
Tempat

Assalamu'alaikum warahmatullahi wabarakatuh

Dengan hormat, disampaikan bahwa dalam rangka pelaksanaan penelitian Mahasiswa Universitas Muhammadiyah Palopo, mohon kiranya diberikan izin kepada:

Nama : Indiyani Addas
NIM : 221320001
Jurusan : S1 Farmasi
Alamat : Sampano, Kab. Luwu
Jenis Kelamin : Perempuan
No. Telp/WA : 085343530623

Untuk melakukan penelitian dengan judul "FORMULASI DAN UJI STABILITAS FISIK SEDIAAN LOTION EKSTRAK DAUN SEMBUNG RAMBAT (*Mikania micrantha*) SEBAGAI ANTIOKSIDAN" penelitian akan dilaksanakan pada bulan November 2025.

Demikian permohonan dari kami, atas kerjasama yang baik diucapkan terima kasih.

Wassalamu'alaikum warahmatullahi wabarakatuh

Ka.LPPM,


Junaidi, SE., Ak., SI., Ak., CA., Ph.D
NIDN: 0910067705

Tembusan:
- Dekan Bersangkutan
- Peringgal

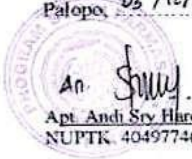
Lampiran 18. Surat izin penelitian

SURAT IZIN PENELITIAN

Yang bertanda tangan di bawah ini Sekretaris Program Studi Farmasi menyatakan,

Nama : INDIYANI ADDAS
NIM : 221320001
Dapat melaksanakan penelitian di Laboratorium TEKNO & KIMIA Fakultas Farmasi
Universitas Muhammadiyah Palopo.

Palopo, 03/12/2025


Apt. Andi Sry Hardiyanti, S.Farm., M.Farm.
NUPTK. 4049774675230303

Lampira 19. Surat keterangan selesai penelitian

**PIMPINAN PUSAT MUHAMMADIYAH
MAJELIS PENDIDIKAN TINGGI, PENELITIAN, DAN PENGEMBANGAN
UNIVERSITAS MUHAMMADIYAH PALOPO
FAKULTAS ILMU KESEHATAN
PROGRAM STUDI FARMASI
LABORATORIUM FARMASI**
Kampus: Jl. Jenderal Sudirman Km. 3 Binturu Kota Palopo
Telp/Fax. (0471) 327429 Email: institusi@umpalopo.ac.id
Website: <http://www.umpalopo.ac.id>

SURAT KETERANGAN
NOMOR: 004KET/III.3.AU/LAB-FARM/F/2024

Yang bertanda tangan dibawah ini :

Nama : apt. Waode Suiyarti., S.Si., M.Si
Jabatan : Ketua Program Studi Farmasi

Menerangkan dengan sesungguhnya bahwa :

Nama : Indiyani Addas
Nim : 221320001
Judul : Formulasi dan uji stabilitas fisik sediaan lotion ekstrak daun sembung rambat (*Mikania micrantha*) sebagai antioksidan
Jurusan/Prodi : Farmasi (S1)
Perguruan Tinggi : Universitas Muhammadiyah Palopo

Telah menyelesaikan segala kewajiban terkait dengan peminjaman/penggunaan fasilitas Laboratorium selama yang bersangkutan melaksanakan kegiatan penelitian di lingkup laboratorium Farmasi Universitas Muhammadiyah Palopo, sehingga diberikan Surat Keterangan bebas Laboratorium ini.
Demikian Surat Keterangan ini diberikan untuk dipergunakan sebagaimana mestinya.

Palopo, 19 Mei 2026

Ketua Program Studi Farmasi




Apt. Waode Suiyarti., S.Si., M.Si
NIDN. 0904108703

Lampiran 20. Lembar konsultasi dan monitoring skripsi

a. Pembimbing 1

KONSULTASI DAN MONITORING SKRIPSI

Nama	Indiyani Adhas		
Nomor Induk Mahasiswa	221320001		
Program Studi	S1 Farmasi		
Nama Dosen Pembimbing	1. apt. AL Syahril Samri, S. Farm., M.S. 2.		
Tanggal Berita Acara Seminar UP	13 Mei 2026		
Judul Skripsi:	Formulasi dan Uji Stabilitas Fisik Sediaan lotion ekstrak daun Sembung rambut (<i>Mitania micrantha</i>) sebagai antioksidan		
No	Tanggal	Arahan Pembimbing/Prodi	Tanda Tangan Pembimbing
1.	27/04/26	Revisi bab 4	
2.	01/05/26	Revisi bab 4	
3.	04/05/26	Revisi bab 4 dan perbaikan Penulisan	

Ket: *)Melampirkan bukti bimbingan jika tanpa tatap muka.

Cat: Halaman berikutnya mulai dari judul kolom, dapat ditambah sesuai kebutuhan.

Palopo,

Ketua Program Studi Ilmu



NIP/NIDN. _____

b. Pembimbing 2

KONSULTASI DAN MONITORING SKRIPSI

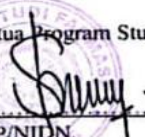
Nama	Indiyani Adelas		
Nomor Induk Mahasiswa	221320001		
Program Studi	S1 Farmasi		
Nama Dosen Pembimbing	1. 2. Bd. Patmahwati. S.ST., M.Keb		
Tanggal Berita Acara Seminar UP	13 Mei 2026		
Judul Skripsi:	Formulasi dan uji stabilitas fisik sediaan lotion ekstrak daun cembung rambut (<i>Mitonia micrantha</i>) sebagai antioftisida		
No	Tanggal	Arahan Pembimbing/Prodi	Tanda Tangan Pembimbing
1.	28/04/26	Perbaikan daftar isi	
2.	05/05/26	Perbaikan bab 9	
3.	06/05/26	Perbaikan daftar isi pustaka	

Ket: *)Melampirkan bukti bimbingan jika tanpa tatap muka.

Cat: Halaman berikutnya mulai dari judul kolom, dapat ditambah sesuai kebutuhan.

Palopo,

Ketua Program Studi Ilmu


NIP/NIDN.

Lampiran 21. Hasil cek turnitin

Indiyani Addas

(1) Naskah Indiyani Addas

 Farmasi
 Fak. Ilmu Kesehatan
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