L A M P I R A N

Lampiran 1 Hasil Determinasi Tanaman

UPT-LABORATORIUM

Jl. Letjen Sutoyo, Mojosongo-Solo 57127 Telp. 0271-852518, Fax. 0271-853275

Nomor : 309/DET/UPT-LAB/25.11/2021
Hal : Hasil determinasi tumbuhan
Lamp. : -

Nama Pemesan : Melinda Hidayatul Munawaroh
NIM : 24185498A
Alamat : Program Studi S-1 Farmasi, Universitas Setia Budi, Surakarta.
Nama sampel : Kembang Telang / *Clitoria ternatea*, L

HASIL DETERMINASI TUMBUHAN

Klasifikasi

Kingdom : Plantae
Super Divisi : Spermatophyta
Divisi : Magnoliophyta
Kelas : Magnoliopsida
Ordo : Fabales
Famili : Fabaceae/Papilionaceae
Genus : Clitoria
Species : *Clitoria ternatea*, L

Hasil Determinasi menurut Steenis, C.G.G.J.V, Bloembergen, H, Eyma, P.J. 1992 : 1b – 2b – 3b – 4b – 6b – 7b – 9b – 10b – 11b – 12b – 13b – 15b. golongan 9. 197b – 208b – 219b – 220b – 224b – 225b – 227b – 229b – 230a – 231b – 233a. familia 60. Papilionaceae. 1b - 5b - 16b - 19b - 20a -21a. *Clitoria ternatea*, L.

Jl. Letjen Sutoyo, Mojosongo-Solo 57127 Telp. 0271-852518, Fax. 0271-853275
Homepage : www.setiabudi.ac.id, e-mail : Info@setiabudi.ac.id

Deskripsi:

Habitus : Perdu, tinggi 5-10 m.

Akar : Akar tunggang.

Batang : Batang bulat, permukaanya berambut, arah tumbuhnya membelit ke kiri.

Daun : Daun menyirip berdaun 3-9, anak daun bertangkai sangat pendek, ellips atau bulat telur, tumpul, kebanyakan agak melekuk ke dalam, ukuran 2-7 kali 1-4,5 cm. Daun penumpu bentuk garis.

Bunga : Bunga dengan bendera mengarah ke bawah, jarang berjumlah dua, tangkai karangan bunga sampai 1,5 cm; anak tangkai bunga lk 0,5 cm. Daun pelindung pada pangkal kelopak oval lebar sampai bentuk lingkaran, bergaris, Panjang 0,5-1 cm. Kelopak tinggi 1,5-2,5 cm, gundul, taju 5, runcing. Bidang bendera oval yang lebar atau bulat telur terbalik, warna biru tua, biru muda, violet atau putih, di tengah dengan noda kuning pucat dilingkupi tepi warna putih, Panjang 4-5 cm; lunas bergandengan dengan sayap yang lebih pendek.

Buah : Buah polong bertangkai sangat pendek dengan sisa kelopak, bentuk garis, membengkok lemah, pipih sekali, berparuh, dengan sekat antara, Panjang 5-12,5 cm, berkatup 2,

Biji : Biji 6-10, pipih sekali, bentuk ginjal.

Surakarta, 25 November 2021

Kepala UPT-LAB	Penanggung jawab
Universitas Setia Budi	Determinasi Tumbuhan
Asik Gunawan, Amdk.	Dra. Dewi Sulistyawati. M.Sc.

Lampiran 2 Perhitungan persen bobot kering terhadap bobot basah bunga telang

Berat basah (g)	Berat kering (g)	Rendemen (%)
22500	1500	6,67%

Perhitungan persentase bobot kering terhadap bobot basah :

$$\frac{1500\ gram}{22500\ gram} \times 100\% = 6{,}67\%$$

Lampiran 3 Perhitungan persen rendemen serbuk bunga telang

Berat kering (gram)	Berat serbuk (gram)	Rendemen (%)
1500	1300	86,67

Perhitungan persentase rendemen serbuk :

$$\frac{1300\ gram}{1500\ gram} \times 100\% = 86{,}67\%$$

Lampiran 4 Perhitungan persen rendemen ekstrak bunga telang

Berat serbuk (gram)	Berat ekstrak (gram)	Rendemen (%)
600	356	59,67%

Perhitungan persentase rendemen serbuk :

$$\frac{356\ gram}{600\ gram} \times 100\% = 59{,}67\%$$

Lampiran 5 Penetapan susut pengeringan serbuk bunga telang

Proses oven serbuk	Penimbangan serbuk oven ke 1
	
Penimbangan serbuk oven ke 2	**Penimbangan serbuk oven ke 3**
	

A. Bobot krus kosong

Krus 1 = 36,2413 gram

Krus 2 = 34,5376 gram

Krus 3 = 34,1824 gram

B. Bobot krus dan sampel

Krus 1 =37,2571 gram

Krus 2 = 35,5475 gram

Krus 3 = 35,1905 gram

C. Bobot sampel

Krus 1 = 1,0158 gram

Krus 2 = 1,0099 gram

Krus 3 = 1,0081 gram

Replikasi	Bobot (gram)	Susut pengeringan (%)		
		Oven 1	Oven 2	Oven 3
Krus 1	1,0158	0,9845	0,9822	0,9808
Krus 2	1,0099	0,9837	0,9814	0,9799
Krus 3	1,0081	0,9854	0,9842	0,9820

Rumus perhitungan susut pengeringan :

$$\text{Susut pengeringan} = \frac{\text{bobot sebelum dikeringkan} - \text{bobot setelah dikeringkan}}{\text{bobot sebelum dikeringkan}} \text{x } 100\%$$

1. Susut pengeringan krus 1

$$\text{Oven 1} = \frac{1{,}0158 \text{ gram} - 0{,}9845 \text{ gram}}{1{,}0158 \text{ gram}} \text{x } 100\%$$

$$= 3{,}081\%$$

$$\text{Oven 2} = \frac{1{,}0158 \text{ gram} - 0{,}9822 \text{ gram}}{1{,}0158 \text{ gram}} \text{x } 100\%$$

$$= 3{,}308\%$$

$$\text{Oven 3} = \frac{1{,}0158 \text{ gram} - 0{,}9808 \text{ gram}}{1{,}0158 \text{ gram}} \text{x } 100\%$$

$$= \mathbf{3{,}446\%}$$

2. Susut pengeringan krus 2

$$\text{Oven 1} = \frac{1{,}0099 \text{ gram} - 0{,}9837 \text{ gram}}{1{,}0099 \text{ gram}} \text{x } 100\%$$

$$= 2{,}594\%$$

$$\text{Oven 2} = \frac{1{,}0099 \text{ gram} - 0{,}9814 \text{ gram}}{1{,}0099 \text{ gram}} \text{x } 100\%$$

$$= 2{,}822\%$$

$$\text{Oven 3} = \frac{1{,}0099 \text{ gram} - 0{,}9799 \text{gram}}{1{,}0099 \text{ gram}} \text{x } 100\%$$

$$= \mathbf{2{,}971\%}$$

3. Susut pengeringan krus 3

$$\text{Oven 1} = \frac{1{,}0081 \text{ gram} - 0{,}9854 \text{ gram}}{1{,}0081 \text{ gram}} \text{x } 100\%$$

$$= 2{,}252\%$$

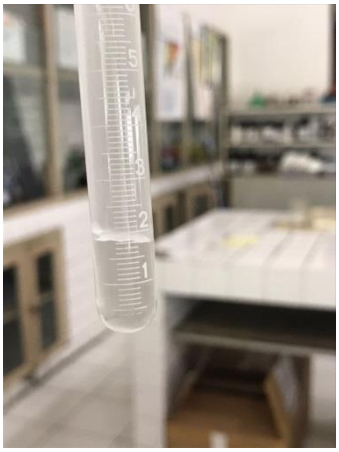
$$\text{Oven 2} = \frac{1{,}0081 \text{ gram} - 0{,}9842 \text{ gram}}{1{,}0081 \text{ gram}} \text{x } 100\%$$

$= 2{,}371\%$

$$\text{Oven 3} = \frac{1{,}0081\ \text{gram} - 0{,}9820\text{gram}}{1{,}0081\ \text{gram}} \text{x } 100\%$$

$= \mathbf{2{,}589\%}$

Lampiran 6 Penetapan kadar air serbuk bunga telang

Sterling-Bidwell	**Destilasi 1**
	
Destilasi 2	**Destilasi 2**
	

Penetapan kadar air :

Destilasi 1 : $\frac{1{,}8\ mL}{20\ gram} x100\% = 9\%$

Destilasi 2 : $\frac{1{,}9\ mL}{20\ gram} x100\% = 9{,}5\%$

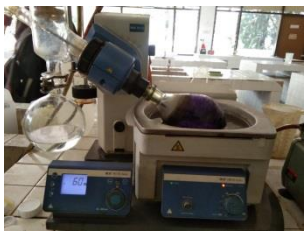
Destilasi 3 : $\frac{1{,}8\ mL}{20\ gram} x100\% = 9\%$

Rata-rata penetapan kadar air : $\frac{9\%+9{,}5\%+9\%}{3} = 9{,}17\%$

Lampiran 7 Penetapan kadar lembab ekstrak

Pengukuran 1	Pengukuran 2	Pengukuran 3
		

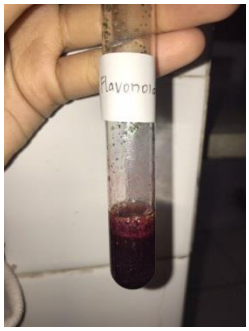
Lampiran 8 Pembuatan ekstrak bunga telang

<table>
<tr><td>Pengeringan
  </td><td>Penyerbukan
  </td><td>Pengayakan
  </td></tr>
<tr><td>Penimbangan
  </td><td>Proses maserasi
  </td><td>Proses maserasi
  </td></tr>
<tr><td>Penyaringan 1
  </td><td>Penyaringan 2
  </td><td>Evaporasi
  </td></tr>
<tr><td colspan="3">Hasil Ekstrak Bunga Telang
    </td></tr>
</table>

Lampiran 9 Identifikasi kandungan kimia ekstrak bunga telang

Uji Antosianin

Uji Flavonoid



Uji Tanin

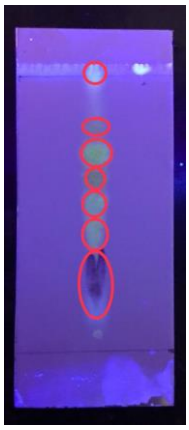
Uji Triterpenoid

Uji Saponin

Uji Alkaloid

Uji Bebas Etanol

Lampiran 10 Hasil uji KLT

Sinar tampak	UV 254	UV 366
		

Perhitungan Rf bercak 1 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

$= \frac{1{,}5\ cm}{5{,}1\ cm} = 0{,}29$

Perhitungan Rf bercak 2 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

$= \frac{2{,}3\ cm}{5{,}1\ cm} = 0{,}45$

Perhitungan Rf bercak 3 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

$= \frac{2{,}7\ cm}{5{,}1\ cm} = 0{,}53$

Perhitungan Rf bercak 4 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

$= \frac{3{,}3\ cm}{5{,}1\ cm} = 0{,}65$

Perhitungan Rf bercak 5 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

$= \frac{3{,}7\ cm}{5{,}1\ cm} = 0{,}73$

Perhitungan Rf bercak 6 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

$= \frac{4{,}3\ cm}{5{,}1\ cm} = 0{,}84$

Perhitungan Rf bercak 7 = $\frac{Jarak\ tempuh\ senyawa}{Jarak\ tempuh\ fase\ gerak}$

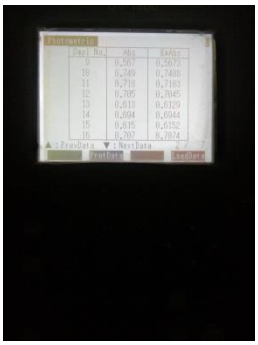
$= \frac{5{,}1\ cm}{5{,}1\ cm} = 1$

Lampiran 11 Pengujian aktivitas antioksidan

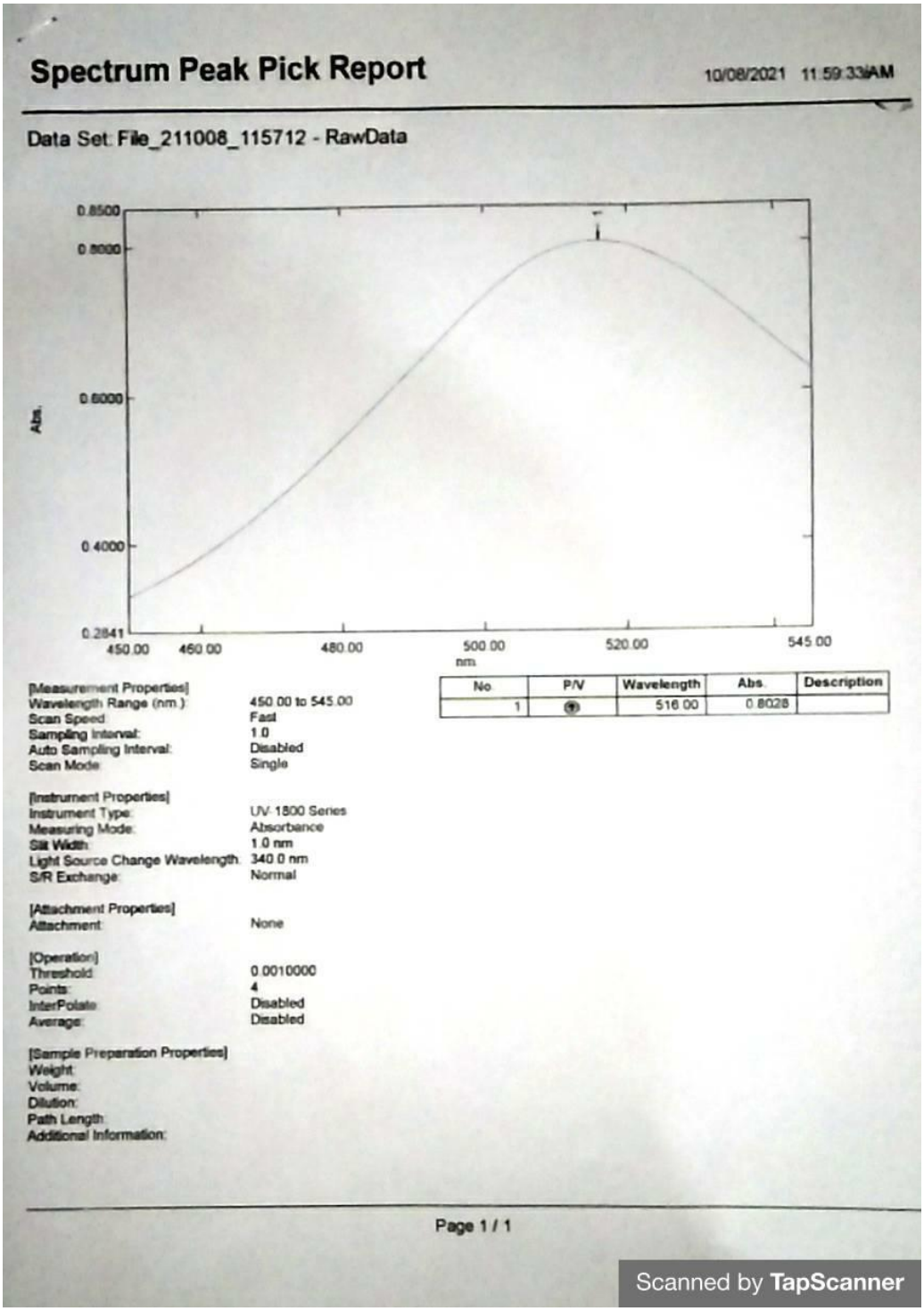
<table>
<tr><td>Penimbangan
ekstrak bunga telang
  </td><td>Larutan induk
ekstrak bunga telang
  </td></tr>
<tr><td>Pengenceran larutan induk
ekstrak bunga telang
  </td><td>Pengenceran larutan induk
kuersetin
  </td></tr>
<tr><td colspan="2">Inkubasi larutan DPPH+sampel
  </td></tr>
</table>

Pembacaan absorbansi dengan Spektrofotometri Uv-Vis

Hasil absorbansi



Lampiran 12 Hasil panjang gelombang



Spectrum Peak Pick Report

10/08/2021 11:59:33 AM

Data Set: File_211008_115712 - RawData

No.	P/V	Wavelength	Abs.	Description
1	P	516.00	0.8028	

[Measurement Properties]
Wavelength Range (nm.): 450.00 to 545.00
Scan Speed: Fast
Sampling Interval: 1.0
Auto Sampling Interval: Disabled
Scan Mode: Single

[Instrument Properties]
Instrument Type: UV-1800 Series
Measuring Mode: Absorbance
Slit Width: 1.0 nm
Light Source Change Wavelength: 340.0 nm
S/R Exchange: Normal

[Attachment Properties]
Attachment: None

[Operation]
Threshold: 0.0010000
Points: 4
InterPolate: Disabled
Average: Disabled

[Sample Preparation Properties]
Weight:
Volume:
Dilution:
Path Length:
Additional Information:

Page 1 / 1

Lampiran 13 Data penimbangan dan pembuatan larutan DPPH

Penimbangan serbuk DPPH

Serbuk DPPH untuk uji aktivitas antioksidan ditimbang sesuai perhitungan sebagai berikut :

Penimbangan DPPH = BM DPPH x volume larutan x molaritas DPPH

= 394,32 gram/mol x 0,100 liter x 0,0004 M

= 0,01578 gram ∞ 15,8 mg

Pembuatan larutan DPPH

Serbuk DPPH ditimbang sebanyak 15,8 mg, kemudian dilarutkan dengan menggunakan etanol *p.a* dalam labu takar 100 mL.

Lampiran 14 Data perhitungan seri konsentrasi dari larutan induk

a. Larutan induk kuersetin

Pembuatan larutan stok dilakukan dengan cara menimbang kuersetin sebanyak 50 mg, kemudian dimasukkan ke dalam labu takar 50 mL dan ditambahkan etanol *p.a* sampai tanda batas, sehingga diperoleh konsentrasi 1000 ppm. Larutan induk kuersetin kemudian diencerkan menjadi 100 ppm, dari larutan 100 ppm dibuat 5 seri pengenceran dari, yaitu 6 ppm, 8 ppm, 10 ppm, 12 ppm, dan 14 ppm.

- Konsentrasi 6 ppm

  V1 x C1 = V2 x C2

  V1 x 10 ppm = 10 mL x 6 ppm

  V1 = 6 mL

- Konsentrasi 8 ppm

  V1 x C1 = V2 x C2

  V1 x 10 ppm = 10 mL x 8 ppm

  V1 = 8 mL

- Konsentrasi 10 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 10 ppm

  V1 = 1 mL

- Konsentrasi 12 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 12 ppm

  V1 = 1,2 mL

- Konsentrasi 14 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 14 ppm

  V1 = 1,4 mL

b. Larutan induk ekstrak bunga telang

Pembuatan larutan stok dilakukan dengan cara menimbang ekstrak bunga telang sebanyak 50 mg, kemudian ditambahkan aquadest secukupnya dan diaduk

hingga larut, larutan kemudian dimasukkan ke dalam labu takar 50 mL dan ditambahkan etanol *p.a* sampai tanda batas, sehingga diperoleh konsentrasi 1000 ppm. Larutan induk ekstrak bunga telang kemudian diencerkan menjadi 100 ppm, dari larutan 100 ppm dibuat 5 seri pengenceran dari, yaitu 40 ppm, 50 ppm, 60 ppm, 70 ppm, dan 80 ppm.

- Konsentrasi 100 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 50 mL x 100 ppm

  V1 = 5 mL

- Konsentrasi 40 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 40 ppm

  V1 = 4 mL

- Konsentrasi 50 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 50 ppm

  V1 = 5 mL

- Konsentrasi 60 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 60 ppm

  V1 = 6 mL

- Konsentrasi 70 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 70 ppm

  V1 = 7 mL

- Konsentrasi 80 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 80 ppm

  V1 = 8 mL

c. Larutan induk formula gel terbaik

Pembuatan larutan stok dilakukan dengan cara menimbang formula gel terbaik sebanyak 50 mg, kemudian ditambahkan etanol *p.a* secukupnya dan diaduk hingga larut, larutan kemudian dimasukkan ke dalam labu takar 50 mL dan ditambahkan etanol *p.a* sampai tanda batas, sehingga diperoleh konsentrasi 1000 ppm. Larutan induk formula gel terbaik kemudian dibuat 5 seri pengenceran dari, yaitu 120 ppm, 140 ppm, 160 ppm, 180 ppm, dan 200 ppm.

- Konsentrasi 120 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 10 mL x 120 ppm

  V1 = 1,2 mL

- Konsentrasi 140 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 10 mL x 140 ppm

  V1 = 1,4 mL

- Konsentrasi 160 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 10 mL x 160 ppm

  V1 = 1,6 mL

- Konsentrasi 180 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 10 mL x 180 ppm

  V1 = 1,8 mL

- Konsentrasi 200 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 10 mL x 200 ppm

  V1 = 2 mL

d. Larutan induk kontrol positif

Pembuatan larutan stok dilakukan dengan cara menimbang kontrol positif sebanyak 50 mg, kemudian ditambahkan etanol *p.a* secukupnya dan diaduk hingga larut, larutan kemudian dimasukkan ke dalam labu takar 50 mL dan ditambahkan etanol *p.a* sampai tanda batas, sehingga diperoleh konsentrasi 1000

ppm. Larutan induk formula gel terbaik kemudian diencerkan menjadi 100 ppm, dari larutan 100 ppm dibuat 5 seri pengenceran dari, yaitu 30 ppm, 40 ppm, 50 ppm, 60 ppm, dan 70 ppm.

- Konsentrasi 100 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 50 mL x 100 ppm

  V1 = 5 mL

- Konsentrasi 30 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 30 ppm

  V1 = 3 mL

- Konsentrasi 40 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 40 ppm

  V1 = 4 mL

- Konsentrasi 50 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 50 ppm

  V1 = 5 mL

- Konsentrasi 60 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 60 ppm

  V1 = 6 mL

- Konsentrasi 70 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 70 ppm

  V1 = 7 mL

e. Larutan induk kontrol negatif

Pembuatan larutan stok dilakukan dengan cara menimbang kontrol negatif sebanyak 50 mg, kemudian ditambahkan etanol *p.a* secukupnya dan diaduk hingga larut, larutan kemudian dimasukkan ke dalam labu takar 50 mL dan

ditambahkan etanol *p.a* sampai tanda batas, sehingga diperoleh konsentrasi 1000 ppm. Larutan induk formula gel terbaik kemudian dibuat 5 seri pengenceran dari, yaitu 150 ppm, 170 ppm, 190 ppm, 210 ppm, dan 230 ppm.

- Konsentrasi 150 ppm

  V1 x C1 = V2 x C2

  V1 x 1000 ppm = 10 mL x 150 ppm

  V1 = 1,5 mL

- Konsentrasi 170 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 170 ppm

  V1 = 1,7 mL

- Konsentrasi 190 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 190 ppm

  V1 = 1,9 mL

- Konsentrasi 210 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 210 ppm

  V1 = 2,1 mL

- Konsentrasi 230 ppm

  V1 x C1 = V2 x C2

  V1 x 100 ppm = 10 mL x 230 ppm

  V1 = 2,3 mL

Lampiran 15 Data Operating time kuersetin, ekstrak bunga telang, formula gel terbaik, kontrol positif dan kontrol negatif

Waktu (menit)	Absorbansi				
	Kuersetin	**Ekstrak**	**Formula Terbaik**	**K(+)**	**K(-)**
0	0,362	0,723	0,702	0,752	0,695
1	0,350	0,721	0,700	0,747	0,679
2	0,343	0,719	0,699	0,743	0,650
3	0,338	0,717	0,699	0,739	0,664
4	0,333	0,715	0,698	0,735	0,661
5	0,329	0,714	0,697	0,731	0,651
6	0,326	0,712	0,697	0,728	0,648
7	0,323	0,711	0,697	0,725	0,645
8	0,321	0,710	0,696	0,723	0,643
9	0,318	0,709	0,696	0,720	0,640
10	0,316	0,708	0,695	0,717	0,638
11	0,314	0,707	0,695	0,715	0,635
12	0,312	0,706	0,694	0,714	0,634
13	0,310	0,708	0,694	0,711	0,632
14	0,308	0,707	0,694	0,710	0,630
15	0,307	0,706	**0,693**	0,708	0,629
16	0,305	0,705	**0,693**	0,707	0,627
17	0,303	0,704	**0,693**	0,706	0,626
18	0,302	0,703	**0,693**	0,704	0,625
19	0,300	0,702	**0,693**	0,704	0,623

20	0,299	0,701	**0,693**	0,703	0,621
21	0,298	0,700	**0,693**	0,701	0,620
22	0,296	0,700	0,694	0,701	0,619
23	0,295	0,699	0,694	0,701	0,618
24	0,294	0,698	0,695	0,699	0,616
25	**0,292**	0,698	0,695	0,699	0,616
26	**0,292**	0,698	0,695	0,698	0,614
27	0,290	0,697	0,696	0,698	0,613
28	0,289	0,697	0,696	0,697	0,612
29	0,288	0,697	0,696	0,697	0,611
30	0,287	0,696	0,696	0,697	0,611
31	0,286	0,696	0,697	0,696	0,609
32	0,285	0,695	0,697	0,696	0,609
33	0,284	0,696	0,697	0,696	0,608
34	0,283	0,696	0,698	0,696	0,607
35	0,282	0,696	0,698	0,696	0,607
36	0,281	0,696	0,698	0,696	0,606
37	0,280	0,695	0,698	0,696	0,605
38	0,279	0,695	0,698	0,696	0,604
39	0,278	**0,696**	0,699	0,695	0,604
40	0,277	**0,696**	0,699	0,696	0,603
41	0,276	**0,696**	0,699	**0,695**	0,602
42	0,276	**0,696**	0,700	**0,695**	0,601
43	0,275	**0,696**	0,700	**0,695**	0,600

44	0,274	**0,696**	0,701	**0,695**	0,599
45	0,273	**0,696**	0,701	**0,695**	0,599
46	0,272	**0,696**	0,701	**0,695**	0,598
47	0,272	**0,696**	0,702	**0,695**	0,598
48	0,271	0,697	0,702	**0,695**	0,597
49	0,270	0,697	0,703	**0,695**	0,597
50	0,269	0,697	0,704	**0,695**	0,596
51	0,269	0,697	0,704	**0,695**	0,596
52	0,268	0,697	0,705	**0,695**	0,595
53	0,268	0,697	0,705	**0,695**	0,595
54	0,267	0,698	0,706	**0,695**	0,594
55	0,266	0,698	0,708	**0,695**	0,594
56	0,266	0,698	0,708	0,696	**0,593**
57	0,265	0,698	0,709	0,696	**0,593**
58	0,264	0,699	0,709	0,696	**0,593**
59	0,264	0,700	0,710	0,696	0,592
60	0,263	0,700	0,711	0,696	0,592

Lampiran 16 Data perhitungan aktivitas antioksidan dan IC50

Perhitungan % peredaman atau % inhibisi menggunakan rumus :

$$\text{Inhibisi (\%)} = \frac{\text{Absorbansi kontrol - Absorbansi sampel x 100\%}}{\text{Absorbansi kontrol}}$$

a. Aktivitas antioksidan dan IC_{50} kuersetin

- Persen peredaman (%) replikasi 1 (Abs DPPH : 0,860)

6 ppm $= \frac{0,860 - 0,716}{0,860} \times 100\%$

$= 16,744\%$

8 ppm $= \frac{0,860 - 0,671}{0,860} \times 100\%$

$= 21,977\%$

10 ppm $= \frac{0,860 - 0,618}{0,860} \times 100\%$

$= 28,139\%$

12 ppm $= \frac{0,860 - 0,485}{0,860} \times 100\%$

$= 43,605\%$

14 ppm $= \frac{0,860 - 0,413}{0,860} \times 100\%$

$= 51,977\%$

- Persen peredaman (%) replikasi 2 (Abs DPPH : 0,860)

6 ppm $= \frac{0,860 - 0,690}{0,860} \times 100\%$

$= 19,767\%$

8 ppm $= \frac{0,860 - 0,658}{0,860} \times 100\%$

$= 23,488\%$

10 ppm $= \frac{0,860 - 0,579}{0,860} \times 100\%$

= 32,674%

12 ppm $= \frac{0,860 - 0,504}{0,860} \times 100\%$

= 41,395%

14 ppm $= \frac{0,860 - 0,420}{0,860} \times 100\%$

= 51,163%

Replikasi	Konsentrasi	Absorbansi	% Inhibisi	
Replikasi 1	6 ppm	0,716	16,744%	
	8 ppm	0,671	21,977%	a : -13,5454
	10 ppm	0,618	28,139%	b : 4,6036
	12 ppm	0,485	43,605%	r : 0,9813062
	14 ppm	0,413	51,977%	
Replikasi 2	6 ppm	0,690	19,767%	
	8 ppm	0,658	23,488%	a : -6,6521
	10 ppm	0,579	32,674%	b : 4,03495
	12 ppm	0,524	41,395%	r : 0,9906114
	14 ppm	0,469	51,163%	

Nilai IC_{50} replikasi 1 => Y = a + bx

50 = -13,5454+ 4,6036X

X = 13,803 ppm

Nilai IC_{50} replikasi 2 => Y = a + bx

50 = -6,6521+ 4,03495X

X = 14,04 ppm

Rata-rata nilai IC_{50} kuersetin $= \frac{13,803 \text{ ppm} + 14,04 \text{ ppm}}{2}$

= 13,922 ppm

b. Aktivitas antioksidan dan IC_{50} ekstrak bunga telang

- Persen peredaman (%) replikasi 1(Abs DPPH : 0,789)

40 ppm $= \frac{0,789 - 0,595}{0,789} \times 100\%$

= 24,589%

50 ppm $= \frac{0,789 - 0,510}{0,789} \times 100\%$

$= 35,361\%$

60 ppm $= \frac{0,789 - 0,433}{0,789} \times 100\%$

$= 45,120\%$

70 ppm $= \frac{0,789 - 0,352}{0,789} \times 100\%$

$= 55,387\%$

80 ppm $= \frac{0,789 - 0,317}{0,789} \times 100\%$

$= 59,823\%$

- Persen peredaman (%) replikasi 2(Abs DPPH : 0,789)

40 ppm $= \frac{0,789 - 0,613}{0,789} \times 100\%$

$= 22,307\%$

50 ppm $= \frac{0,789 - 0,567}{0,789} \times 100\%$

$= 28,137\%$

60 ppm $= \frac{0,789 - 0,487}{0,789} \times 100\%$

$= 38,277\%$

70 ppm $= \frac{0,789 - 0,380}{0,789} \times 100\%$

$= 51,838\%$

80 ppm $= \frac{0,789 - 0,322}{0,789} \times 100\%$

$= 59,189\%$

Replikasi	Konsentrasi	Absorbansi	% Inhibisi	
Replikasi 1	40 ppm	0,595	24,589%	
	50 ppm	0,510	35,361%	a : -10.2404
	60 ppm	0,433	45,120%	b : 0.90494
	70 ppm	0,352	55,387%	r : 0.991696
	80 ppm	0,317	59,823%	
Replikasi 2	40 ppm	0,613	22,307%	
	50 ppm	0,567	28,137%	a : -18.5294
	60 ppm	0,487	38,277%	b : 0.97465
	70 ppm	0,380	51,838%	r : 0.992124
	80 ppm	0,322	59,189%	

Nilai IC_{50} replikasi 1 => Y = a + bx

50 = -10.2404 + 0.90494 X

X = 66,568 ppm

Nilai IC_{50} replikasi 2 => Y = a + bx

50 = -18.5294 + 0.97465 X

X = 70,312 ppm

Rata-rata nilai IC_{50} ekstrak $= \frac{66,568 \text{ ppm} + 70,312 \text{ ppm}}{2}$

= 68,440 ppm

c. Aktivitas antioksidan dan IC_{50} formula gel terbaik

- Persen peredaman (%) replikasi 1(Abs DPPH : 0,861)

120 ppm $= \frac{0,861 - 0,712}{0,861} \times 100\%$

= 17,305%

140 ppm $= \frac{0,861 - 0,632}{0,861} \times 100\%$

= 26,597%

160 ppm $= \frac{0,861 - 0,581}{0,861} \times 100\%$

= 32,520%

180 ppm $= \frac{0,861 - 0,516}{} \times 100\%$

0,861

= 40,07%

200 ppm = 0,861 – 0,412 x 100%

0,861

= 52,149%

➢ Persen peredaman (%) replikasi 2 (Abs DPPH : 0,861)

120 ppm = 0,861 – 0,700 x 100%

0,861

= 18,699%

140 ppm = 0,861 – 0,622 x 100%

0,861

= 27,758%

160 ppm = 0,861 – 0,575 x 100%

0,861

= 33,217%

180 ppm = 0,861 – 0,502 x 100%

0,861

= 41,696%

200 ppm = 0,861 – 0,410 x 100%

0,861

= 52,381%

Replikasi	Konsentrasi	Absorbansi	% Inhibisi	
Replikasi 1	120 ppm	0,712	17,305%	
	140 ppm	0,632	26,597%	a : -32,8006
	160 ppm	0,581	32,520%	b : 0,415805
	180 ppm	0,516	40,070%	r : 0,9928445
	200 ppm	0,412	52,149%	
Replikasi 2	120 ppm	0,700	18,699%	
	140 ppm	0,622	27,758%	a : -30,2914
	160 ppm	0,575	33,217%	b : 0,40651

	180 ppm	0,502	41,696%	r : 0,9947687
	200 ppm	0,410	52,381%	

Nilai IC_{50} replikasi 1 => Y = a + bx

50 = -32,8006 + 0,415805 X

X = 199,133 ppm

Nilai IC_{50} replikasi 2 => Y = a + bx

50 = -30,2914 + 0,40651 X

X = 197,514 ppm

Rata-rata nilai IC_{50} ekstrak $= \frac{199,133 \text{ ppm} + 197,514 \text{ ppm}}{2}$

= 198,324 ppm

d. Aktivitas antioksidan dan IC_{50} K(+)

- Persen peredaman (%) replikasi 1(Abs DPPH : 0,876)

30 ppm $= \frac{0,876 - 0,675}{0,876} \times 100\%$

= 22,945%

40 ppm $= \frac{0,876 - 0,571}{0,876} \times 100\%$

= 34,817%

50 ppm $= \frac{0,876 - 0,515}{0,876} \times 100\%$

= 41,210%

60 ppm $= \frac{0,876 - 0,432}{0,876} \times 100\%$

= 50,685%

70 ppm $= \frac{0,876 - 0,387}{0,876} \times 100\%$

= 55,823%

- Persen peredaman (%) replikasi 2 (Abs DPPH : 0,876)

30 ppm $= \frac{0,876 - 0,681}{0,876} \times 100\%$

= 22,260%

40 ppm $= \frac{0{,}876 - 0{,}584}{0{,}876} \times 100\%$

$= 33{,}333\%$

50 ppm $= \frac{0{,}876 - 0{,}537}{0{,}876} \times 100\%$

$= 38{,}699\%$

60 ppm $= \frac{0{,}876 - 0{,}460}{0{,}876} \times 100\%$

$= 47{,}489\%$

70 ppm $= \frac{0{,}876 - 0{,}401}{0{,}876} \times 100\%$

$= 54{,}224\%$

Replikasi	Konsentrasi	Absorbansi	% Inhibisi	
Replikasi 1	30 ppm	0,675	22,945%	
	40 ppm	0,571	34,817%	a : 0,284
	50 ppm	0,515	41,210%	b : 0,81624
	60 ppm	0,432	50,685%	r : 0,9914918
	70 ppm	0,387	55,823%	
Replikasi 2	30 ppm	0,681	22,260%	
	40 ppm	0,584	33,333%	a : 0,159
	50 ppm	0,537	38,699%	b : 0,78084
	60 ppm	0,460	47,489%	r : 0,9948302
	70 ppm	0,401	54,224%	

Nilai IC_{50} replikasi 1 => $Y = a + bx$

$50 = 0{,}284 + 0{,}81624X$

$X = 60{,}909$ ppm

Nilai IC_{50} replikasi 2 => $Y = a + bx$

$50 = 0{,}159 + 0{,}78084X$

$X = 63{,}829$ ppm

Rata-rata nilai IC_{50} ekstrak $= \frac{60{,}909 \text{ ppm} + 63{,}829 \text{ ppm}}{2}$

$= 62{,}369$ ppm

e. Aktivitas antioksidan dan IC_{50} K(-)

- Persen peredaman (%) replikasi 1(Abs DPPH : 0,861)

150 ppm $= \frac{0,861 - 0,769}{0,861} \times 100\%$

$= 10,685\%$

170 ppm $= \frac{0,861 - 0,636}{0,861} \times 100\%$

$= 26,132\%$

190 ppm $= \frac{0,861 - 0,532}{0,861} \times 100\%$

$= 38,211\%$

210 ppm $= \frac{0,861 - 0,454}{0,861} \times 100\%$

$= 47,271\%$

230 ppm $= \frac{0,861 - 0,408}{0,861} \times 100\%$

$= 52,613\ \%$

- Persen peredaman (%) replikasi 2 (Abs DPPH : 0,861)

150 ppm $= \frac{0,861 - 0,764}{0,861} \times 100\%$

$= 11,266\%$

170 ppm $= \frac{0,861 - 0,643}{0,861} \times 100\%$

$= 25,319\%$

190 ppm $= \frac{0,861 - 0,528}{0,861} \times 100\%$

$= 38,676\%$

210 ppm $= \frac{0,861 - 0,471}{0,861} \times 100\%$

$= 45,296\%$

230 ppm $= 0,861 - 0,413 \times 100\%$

0,861

= 52,033%

Replikasi	Konsentrasi	Absorbansi	% Inhibisi	
Replikasi 1	150 ppm	0,769	10,685%	
	170 ppm	0,636	26,132%	a : -64,76285
	190 ppm	0,532	38,211%	b : 0,524975
	210 ppm	0,454	47,271%	r : 0,9829524
	230 ppm	0,408	52,613%	
Replikasi 2	150 ppm	0,764	11,266%	
	170 ppm	0,643	25,319%	a : -61,91745
	190 ppm	0,528	38,676%	b : 0,507555
	210 ppm	0,471	45,296%	r : 0,994729
	230 ppm	0,413	52,033%	

Nilai IC_{50} replikasi 1 => Y = a + bx

50 = -64,76285 + 0,524975 X

X = 218,606 ppm

Nilai IC_{50} replikasi 2 => Y = a + bx

50 = -61,91745 + 0,507555 X

X = 220,503 ppm

Rata-rata nilai IC_{50} ekstrak = $\frac{218,606 \text{ ppm} + 220,503 \text{ ppm}}{2}$

= 219,555 ppm

Lampiran 17 Hasil uji statistika aktivitas antioksidan

Tests of Normality

		Kolmogorov-Smirnov[a]		
	Formula	Statistic	Df	Sig.
IC50	Kuersetin	.260	2	.
	Ekstrak bunga telang	.260	2	.
	Formula terbaik	.260	2	.
	Kontrol positif	.260	2	.
	Kontrol negatif	.260	2	.

a. Lilliefors Significance Correction

Oneway

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
IC50	Based on Mean	1101317448420735600000000000.000	4	5	.000
	Based on Median	1101317448420735600000000000.000	4	5	.000
	Based on Median and with adjusted df	1101317448420735600000000000.000	4	1.000	.000
	Based on trimmed mean	1101317448420735600000000000.000	4	5	.000

ANOVA

IC50

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	65996.916	4	16499.229	5724.948	.000
Within Groups	14.410	5	2.882		
Total	66011.326	9			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: IC50

Dunnett T3

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Kuersetin	Ekstrak bunga telang	-54.518500	1.875747	.051	-109.61635	.57935
	Formula terbaik	-184.402000*	.818127	.006	-206.45356	-162.35044
	Kontrol positif	-48.447500*	1.464801	.044	-90.91272	-5.98228
	Kontrol negatif	-205.633000*	.955874	.007	-232.12965	-179.13635
Ekstrak bunga telang	Kuersetin	54.518500	1.875747	.051	-.57935	109.61635
	Formula terbaik	-129.883500*	2.039528	.007	-160.91306	-98.85394
	Kontrol positif	6.071000	2.374023	.424	-15.77652	27.91852
	Kontrol negatif	-151.114500*	2.098580	.004	-178.63482	-123.59418
Formula terbaik	Kuersetin	184.402000*	.818127	.006	162.35044	206.45356
	Ekstrak bunga telang	129.883500*	2.039528	.007	98.85394	160.91306
	Kontrol positif	135.954500*	1.669398	.003	115.85338	156.05562
	Kontrol negatif	-21.231000*	1.246973	.014	-32.24056	-10.22144
Kontrol positif	Kuersetin	48.447500*	1.464801	.044	5.98228	90.91272
	Ekstrak bunga telang	-6.071000	2.374023	.424	-27.91852	15.77652
	Formula terbaik	-135.954500*	1.669398	.003	-156.05562	-115.85338
	Kontrol negatif	-157.185500*	1.741049	.001	-175.39131	-138.97969
Kontrol negatif	Kuersetin	205.633000*	.955874	.007	179.13635	232.12965
	Ekstrak bunga telang	151.114500*	2.098580	.004	123.59418	178.63482
	Formula terbaik	21.231000*	1.246973	.014	10.22144	32.24056
	Kontrol positif	157.185500*	1.741049	.001	138.97969	175.39131

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

Lampiran 18 Formulasi gel bunga telang

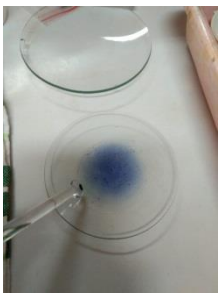
Perhitungan konsentrasi ekstrak bunga telang :

Nilai IC_{50} : 68,440 ppm => 0,006%

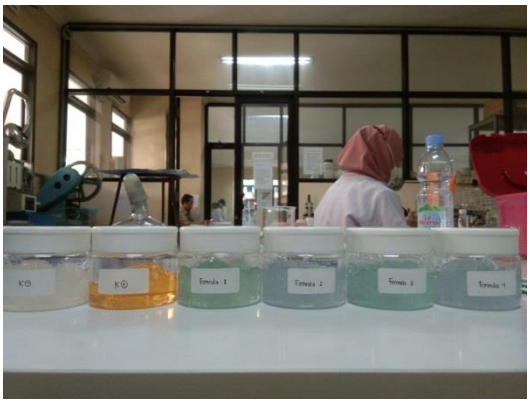
Bobot ekstrak = 6 mg / 100 gram gel

$$= \frac{200 \text{ gram} \times 6 \text{ mg}}{100 \text{ gram}}$$

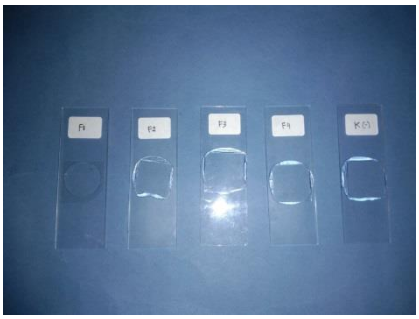
= 12 mg /200 gram gel

Penimbangan Ekstrak 	**Penimbangan Karbopol 940** 	**Penimbangan Propilen glikol** 
Penimbangan Metil paraben 	**Penimbangan Propil paraben** 	**Penimbangan TEA** 
Pembuatan gel ekstrak bunga telang    		

Hasil formulasi gel ekstrak bunga telang



Lampiran 19 Hasil uji mutu fisik gel ekstrak bunga telang

Uji homogenitas	**Uji pH**
	
Uji viskositas	**Uji daya lekat**
	

Uji daya sebar

Lampiran 20 Hasil uji stabilitas

Hari ke-1

Hari ke-21

Lampiran 21 Hasil uji pH gel bunga telang

Formula	F1	F2	F3	F4	F5
Replikasi 1	6,47	5,31	6,51	5,14	6,32
Replikasi 2	6,46	5,21	6,48	5,15	6,29
Replikasi 3	6,45	5,24	6,52	5,16	6,31
Rata-rata±SD	**6,46±0,01**	**5,25±0,05**	**6,50±0,02**	**5,15±0,01**	**6,31±0,02**

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
pH	Formula 1	.175	3	.	1.000	3	1.000
	Formula 2	.269	3	.	.949	3	.567
	Formula 3	.292	3	.	.923	3	.463
	Formula 4	.175	3	.	1.000	3	1.000
	Formula 5	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Oneway

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
pH	Based on Mean	3.716	4	10	.042
	Based on Median	1.143	4	10	.391
	Based on Median and with adjusted df	1.143	4	3.360	.465
	Based on trimmed mean	3.470	4	10	.050

ANOVA

pH

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.453	4	1.363	1947.490	.000

Within Groups	.007	10	.001		
Total	5.460	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: pH

Dunnett T3

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Formula 1	Formula 2	1.20667*	.03018	.002	.9687	1.4447
	Formula 3	-.04333	.01333	.222	-.1234	.0367
	Formula 4	1.31000*	.00816	.000	1.2707	1.3493
	Formula 5	.15333*	.01054	.002	.0978	.2089
Formula 2	Formula 1	-1.20667*	.03018	.002	-1.4447	-.9687
	Formula 3	-1.25000*	.03197	.000	-1.4562	-1.0438
	Formula 4	.10333	.03018	.252	-.1347	.3413
	Formula 5	-1.05333*	.03091	.001	-1.2755	-.8312
Formula 3	Formula 1	.04333	.01333	.222	-.0367	.1234
	Formula 2	1.25000*	.03197	.000	1.0438	1.4562
	Formula 4	1.35333*	.01333	.000	1.2733	1.4334
	Formula 5	.19667*	.01491	.002	.1212	.2722
Formula 4	Formula 1	-1.31000*	.00816	.000	-1.3493	-1.2707
	Formula 2	-.10333	.03018	.252	-.3413	.1347
	Formula 3	-1.35333*	.01333	.000	-1.4334	-1.2733
	Formula 5	-1.15667*	.01054	.000	-1.2122	-1.1011
Formula 5	Formula 1	-.15333*	.01054	.002	-.2089	-.0978
	Formula 2	1.05333*	.03091	.001	.8312	1.2755
	Formula 3	-.19667*	.01491	.002	-.2722	-.1212
	Formula 4	1.15667*	.01054	.000	1.1011	1.2122

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

Lampiran 22 Hasil uji viskositas gel bunga telang

Formula	F1	F2	F3	F4	F5
Replikasi 1	160	420	250	530	250
Replikasi 2	140	435	260	540	250
Replikasi 3	150	435	250	530	240
Rata-rata±SD	**150±10**	**430±8,66**	**253,33±5, 77**	**533,33±5, 77**	**246,67±5, 77**

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Kelompok	Statistic	df	Sig.	Statistic	df	Sig.
Hasil	F1	.175	3	.	1.000	3	1.000
	F2	.385	3	.	.750	3	.000
	F3	.385	3	.	.750	3	.000
	F4	.385	3	.	.750	3	.000
	F5	.385	3	.	.750	3	.000

NPar Tests
Kruskal-Wallis Test

Ranks

	Kelompok	N	Mean Rank
Hasil	F1	3	2.00
	F2	3	11.00
	F3	3	7.33
	F4	3	14.00
	F5	3	5.67
	Total	15	

Test Statistics[a,b]

	Hasil
Kruskal-Wallis H	13.319
df	4

Asymp. Sig.	.010

a. Kruskal Wallis Test

b. Grouping Variable: Kelompok

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F1	3	2.00	6.00
	F2	3	5.00	15.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.993
Asymp. Sig. (2-tailed)	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F1	3	2.00	6.00
	F3	3	5.00	15.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.993
Asymp. Sig. (2-tailed)	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F1	3	2.00	6.00
	F4	3	5.00	15.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.993
Asymp. Sig. (2-tailed)	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F1	3	2.00	6.00
	F5	3	5.00	15.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-1.993
Asymp. Sig. (2-tailed)	.046
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F2	3	5.00	15.00
	F3	3	2.00	6.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F2	3	2.00	6.00
	F4	3	5.00	15.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F2	3	5.00	15.00
	F5	3	2.00	6.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F3	3	2.00	6.00
	F4	3	5.00	15.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F3	3	4.33	13.00
	F5	3	2.67	8.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	2.000
Wilcoxon W	8.000
Z	-1.291
Asymp. Sig. (2-tailed)	.197
Exact Sig. [2*(1-tailed Sig.)]	.400[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

NPar Tests
Mann-Whitney Test

Ranks

	Kelompok	N	Mean Rank	Sum of Ranks
Hasil	F4	3	5.00	15.00
	F5	3	2.00	6.00
	Total	6		

Test Statistics[a]

	Hasil
Mann-Whitney U	.000
Wilcoxon W	6.000
Z	-2.023
Asymp. Sig. (2-tailed)	.043
Exact Sig. [2*(1-tailed Sig.)]	.100[b]

a. Grouping Variable: Kelompok

b. Not corrected for ties.

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Hasil	Based on Mean	.421	4	10	.790
	Based on Median	.160	4	10	.954
	Based on Median and with adjusted df	.160	4	8.621	.953
	Based on trimmed mean	.393	4	10	.809

ANOVA

Hasil

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	288893.333	4	72223.333	1313.152	.000
Within Groups	550.000	10	55.000		
Total	289443.333	14			

Lampiran 23 Hasil uji daya sebar gel bunga telang

Formula	Beban (gram)	Replikasi			Rata-rata±SD
		1	2	3	
Formula 1	50	5,3	5,2	5,2	5,3±0,1
	100	5,7	5,8	5,9	5,8±0,1
	150	6,3	6,4	6,2	6,3±0,1
Formula 2	50	3,5	3,3	3,1	3,3±0,2
	100	3,5	3,7	3,9	3,7±0,2
	150	4,2	4,4	4,3	4,3±0,1
Formula 3	50	5,2	5,3	5,1	5,2±0,1
	100	5,5	5,3	5,4	5,4±0,1
	150	6,1	6,4	6,3	5,6±0,03
Formula 4	50	3,2	3,6	3,4	3,4±0,2
	100	3,3	3,8	3,5	3,5±0,25
	150	4,2	3,9	4,1	4,07±0,15
Formula 5	50	5,0	5,2	5,1	5,1±0,1
	100	5,4	5,5	5,3	5,4±0,1
	150	6,1	6,4	6,2	6,23±0,15

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	Df	Sig.	Statistic	df	Sig.
DayaSebar	F1"Beban 50"	.175	3	.	1.000	3	1.000
	F1"Beban 100"	.175	3	.	1.000	3	1.000
	F1"Beban 150"	.175	3	.	1.000	3	1.000
	F2"Beban 50"	.175	3	.	1.000	3	1.000
	F2"Beban 100"	.175	3	.	1.000	3	1.000

	F2"Beban 150"	.175	3	.	1.000	3	1.000
	F3"Beban 50"	.175	3	.	1.000	3	1.000
	F3"Beban 100"	.175	3	.	1.000	3	1.000
	F3"Beban 150"	.253	3	.	.964	3	.637
	F4"Beban 50"	.175	3	.	1.000	3	1.000
	F4"Beban 100"	.219	3	.	.987	3	.780
	F4"Beban 150"	.253	3	.	.964	3	.637
	F5"Beban 50"	.175	3	.	1.000	3	1.000
	F5"Beban 100"	.175	3	.	1.000	3	1.000
	F5"Beban 150"	.253	3	.	.964	3	.637

a. Lilliefors Significance Correction

Oneway

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
DayaSebar	Based on Mean	.611	14	30	.835
	Based on Median	.429	14	30	.952
	Based on Median and with adjusted df	.429	14	19.636	.945
	Based on trimmed mean	.600	14	30	.844

ANOVA

DayaSebar

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49.125	14	3.509	157.903	.000
Within Groups	.667	30	.022		
Total	49.792	44			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: DayaSebar

Tukey HSD

		Mean Difference			95% Confidence Interval	
(I) Formula	(J) Formula	(I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
F1"Beban 50"	F1"Beban 100"	-.50000*	.12172	.018	-.9485	-.0515

	F1"Beban 150"	-1.00000*	.12172	.000	-1.4485	-.5515
	F2"Beban 50"	2.00000*	.12172	.000	1.5515	2.4485
	F2"Beban 100"	1.60000*	.12172	.000	1.1515	2.0485
	F2"Beban 150"	1.00000*	.12172	.000	.5515	1.4485
	F3"Beban 50"	.10000	.12172	1.000	-.3485	.5485
	F3"Beban 100"	-.10000	.12172	1.000	-.5485	.3485
	F3"Beban 150"	-.96667*	.12172	.000	-1.4152	-.5181
	F4"Beban 50"	1.90000*	.12172	.000	1.4515	2.3485
	F4"Beban 100"	1.76667*	.12172	.000	1.3181	2.2152
	F4"Beban 150"	1.23333*	.12172	.000	.7848	1.6819
	F5"Beban 50"	.20000	.12172	.934	-.2485	.6485
	F5"Beban 100"	-.10000	.12172	1.000	-.5485	.3485
	F5"Beban 150"	-.93333*	.12172	.000	-1.3819	-.4848
F1"Beban 100"	F1"Beban 50"	.50000*	.12172	.018	.0515	.9485
	F1"Beban 150"	-.50000*	.12172	.018	-.9485	-.0515
	F2"Beban 50"	2.50000*	.12172	.000	2.0515	2.9485
	F2"Beban 100"	2.10000*	.12172	.000	1.6515	2.5485
	F2"Beban 150"	1.50000*	.12172	.000	1.0515	1.9485
	F3"Beban 50"	.60000*	.12172	.002	.1515	1.0485
	F3"Beban 100"	.40000	.12172	.120	-.0485	.8485
	F3"Beban 150"	-.46667*	.12172	.035	-.9152	-.0181
	F4"Beban 50"	2.40000*	.12172	.000	1.9515	2.8485
	F4"Beban 100"	2.26667*	.12172	.000	1.8181	2.7152
	F4"Beban 150"	1.73333*	.12172	.000	1.2848	2.1819
	F5"Beban 50"	.70000*	.12172	.000	.2515	1.1485
	F5"Beban 100"	.40000	.12172	.120	-.0485	.8485
	F5"Beban 150"	-.43333	.12172	.066	-.8819	.0152
F1"Beban 150"	F1"Beban 50"	1.00000*	.12172	.000	.5515	1.4485
	F1"Beban 100"	.50000*	.12172	.018	.0515	.9485
	F2"Beban 50"	3.00000*	.12172	.000	2.5515	3.4485
	F2"Beban 100"	2.60000*	.12172	.000	2.1515	3.0485
	F2"Beban 150"	2.00000*	.12172	.000	1.5515	2.4485
	F3"Beban 50"	1.10000*	.12172	.000	.6515	1.5485
	F3"Beban 100"	.90000*	.12172	.000	.4515	1.3485
	F3"Beban 150"	.03333	.12172	1.000	-.4152	.4819
	F4"Beban 50"	2.90000*	.12172	.000	2.4515	3.3485
	F4"Beban 100"	2.76667*	.12172	.000	2.3181	3.2152

	F4"Beban 150"	2.23333*	.12172	.000	1.7848	2.6819
	F5"Beban 50"	1.20000*	.12172	.000	.7515	1.6485
	F5"Beban 100"	.90000*	.12172	.000	.4515	1.3485
	F5"Beban 150"	.06667	.12172	1.000	-.3819	.5152
F2"Beban 50"	F1"Beban 50"	-2.00000*	.12172	.000	-2.4485	-1.5515
	F1"Beban 100"	-2.50000*	.12172	.000	-2.9485	-2.0515
	F1"Beban 150"	-3.00000*	.12172	.000	-3.4485	-2.5515
	F2"Beban 100"	-.40000	.12172	.120	-.8485	.0485
	F2"Beban 150"	-1.00000*	.12172	.000	-1.4485	-.5515
	F3"Beban 50"	-1.90000*	.12172	.000	-2.3485	-1.4515
	F3"Beban 100"	-2.10000*	.12172	.000	-2.5485	-1.6515
	F3"Beban 150"	-2.96667*	.12172	.000	-3.4152	-2.5181
	F4"Beban 50"	-.10000	.12172	1.000	-.5485	.3485
	F4"Beban 100"	-.23333	.12172	.827	-.6819	.2152
	F4"Beban 150"	-.76667*	.12172	.000	-1.2152	-.3181
	F5"Beban 50"	-1.80000*	.12172	.000	-2.2485	-1.3515
	F5"Beban 100"	-2.10000*	.12172	.000	-2.5485	-1.6515
	F5"Beban 150"	-2.93333*	.12172	.000	-3.3819	-2.4848
F2"Beban 100"	F1"Beban 50"	-1.60000*	.12172	.000	-2.0485	-1.1515
	F1"Beban 100"	-2.10000*	.12172	.000	-2.5485	-1.6515
	F1"Beban 150"	-2.60000*	.12172	.000	-3.0485	-2.1515
	F2"Beban 50"	.40000	.12172	.120	-.0485	.8485
	F2"Beban 150"	-.60000*	.12172	.002	-1.0485	-.1515
	F3"Beban 50"	-1.50000*	.12172	.000	-1.9485	-1.0515
	F3"Beban 100"	-1.70000*	.12172	.000	-2.1485	-1.2515
	F3"Beban 150"	-2.56667*	.12172	.000	-3.0152	-2.1181
	F4"Beban 50"	.30000	.12172	.491	-.1485	.7485
	F4"Beban 100"	.16667	.12172	.984	-.2819	.6152
	F4"Beban 150"	-.36667	.12172	.206	-.8152	.0819
	F5"Beban 50"	-1.40000*	.12172	.000	-1.8485	-.9515
	F5"Beban 100"	-1.70000*	.12172	.000	-2.1485	-1.2515
	F5"Beban 150"	-2.53333*	.12172	.000	-2.9819	-2.0848
F2"Beban 150"	F1"Beban 50"	-1.00000*	.12172	.000	-1.4485	-.5515
	F1"Beban 100"	-1.50000*	.12172	.000	-1.9485	-1.0515
	F1"Beban 150"	-2.00000*	.12172	.000	-2.4485	-1.5515
	F2"Beban 50"	1.00000*	.12172	.000	.5515	1.4485
	F2"Beban 100"	.60000*	.12172	.002	.1515	1.0485

	F3"Beban 50"	-.90000*	.12172	.000	-1.3485	-.4515
	F3"Beban 100"	-1.10000*	.12172	.000	-1.5485	-.6515
	F3"Beban 150"	-1.96667*	.12172	.000	-2.4152	-1.5181
	F4"Beban 50"	.90000*	.12172	.000	.4515	1.3485
	F4"Beban 100"	.76667*	.12172	.000	.3181	1.2152
	F4"Beban 150"	.23333	.12172	.827	-.2152	.6819
	F5"Beban 50"	-.80000*	.12172	.000	-1.2485	-.3515
	F5"Beban 100"	-1.10000*	.12172	.000	-1.5485	-.6515
	F5"Beban 150"	-1.93333*	.12172	.000	-2.3819	-1.4848
F3"Beban 50"	F1"Beban 50"	-.10000	.12172	1.000	-.5485	.3485
	F1"Beban 100"	-.60000*	.12172	.002	-1.0485	-.1515
	F1"Beban 150"	-1.10000*	.12172	.000	-1.5485	-.6515
	F2"Beban 50"	1.90000*	.12172	.000	1.4515	2.3485
	F2"Beban 100"	1.50000*	.12172	.000	1.0515	1.9485
	F2"Beban 150"	.90000*	.12172	.000	.4515	1.3485
	F3"Beban 100"	-.20000	.12172	.934	-.6485	.2485
	F3"Beban 150"	-1.06667*	.12172	.000	-1.5152	-.6181
	F4"Beban 50"	1.80000*	.12172	.000	1.3515	2.2485
	F4"Beban 100"	1.66667*	.12172	.000	1.2181	2.1152
	F4"Beban 150"	1.13333*	.12172	.000	.6848	1.5819
	F5"Beban 50"	.10000	.12172	1.000	-.3485	.5485
	F5"Beban 100"	-.20000	.12172	.934	-.6485	.2485
	F5"Beban 150"	-1.03333*	.12172	.000	-1.4819	-.5848
F3"Beban 100"	F1"Beban 50"	.10000	.12172	1.000	-.3485	.5485
	F1"Beban 100"	-.40000	.12172	.120	-.8485	.0485
	F1"Beban 150"	-.90000*	.12172	.000	-1.3485	-.4515
	F2"Beban 50"	2.10000*	.12172	.000	1.6515	2.5485
	F2"Beban 100"	1.70000*	.12172	.000	1.2515	2.1485
	F2"Beban 150"	1.10000*	.12172	.000	.6515	1.5485
	F3"Beban 50"	.20000	.12172	.934	-.2485	.6485
	F3"Beban 150"	-.86667*	.12172	.000	-1.3152	-.4181
	F4"Beban 50"	2.00000*	.12172	.000	1.5515	2.4485
	F4"Beban 100"	1.86667*	.12172	.000	1.4181	2.3152
	F4"Beban 150"	1.33333*	.12172	.000	.8848	1.7819
	F5"Beban 50"	.30000	.12172	.491	-.1485	.7485
	F5"Beban 100"	.00000	.12172	1.000	-.4485	.4485
	F5"Beban 150"	-.83333*	.12172	.000	-1.2819	-.3848

F3"Beban 150"	F1"Beban 50"	.96667*	.12172	.000	.5181	1.4152
	F1"Beban 100"	.46667*	.12172	.035	.0181	.9152
	F1"Beban 150"	-.03333	.12172	1.000	-.4819	.4152
	F2"Beban 50"	2.96667*	.12172	.000	2.5181	3.4152
	F2"Beban 100"	2.56667*	.12172	.000	2.1181	3.0152
	F2"Beban 150"	1.96667*	.12172	.000	1.5181	2.4152
	F3"Beban 50"	1.06667*	.12172	.000	.6181	1.5152
	F3"Beban 100"	.86667*	.12172	.000	.4181	1.3152
	F4"Beban 50"	2.86667*	.12172	.000	2.4181	3.3152
	F4"Beban 100"	2.73333*	.12172	.000	2.2848	3.1819
	F4"Beban 150"	2.20000*	.12172	.000	1.7515	2.6485
	F5"Beban 50"	1.16667*	.12172	.000	.7181	1.6152
	F5"Beban 100"	.86667*	.12172	.000	.4181	1.3152
	F5"Beban 150"	.03333	.12172	1.000	-.4152	.4819
F4"Beban 50"	F1"Beban 50"	-1.90000*	.12172	.000	-2.3485	-1.4515
	F1"Beban 100"	-2.40000*	.12172	.000	-2.8485	-1.9515
	F1"Beban 150"	-2.90000*	.12172	.000	-3.3485	-2.4515
	F2"Beban 50"	.10000	.12172	1.000	-.3485	.5485
	F2"Beban 100"	-.30000	.12172	.491	-.7485	.1485
	F2"Beban 150"	-.90000*	.12172	.000	-1.3485	-.4515
	F3"Beban 50"	-1.80000*	.12172	.000	-2.2485	-1.3515
	F3"Beban 100"	-2.00000*	.12172	.000	-2.4485	-1.5515
	F3"Beban 150"	-2.86667*	.12172	.000	-3.3152	-2.4181
	F4"Beban 100"	-.13333	.12172	.998	-.5819	.3152
	F4"Beban 150"	-.66667*	.12172	.000	-1.1152	-.2181
	F5"Beban 50"	-1.70000*	.12172	.000	-2.1485	-1.2515
	F5"Beban 100"	-2.00000*	.12172	.000	-2.4485	-1.5515
	F5"Beban 150"	-2.83333*	.12172	.000	-3.2819	-2.3848
F4"Beban 100"	F1"Beban 50"	-1.76667*	.12172	.000	-2.2152	-1.3181
	F1"Beban 100"	-2.26667*	.12172	.000	-2.7152	-1.8181
	F1"Beban 150"	-2.76667*	.12172	.000	-3.2152	-2.3181
	F2"Beban 50"	.23333	.12172	.827	-.2152	.6819
	F2"Beban 100"	-.16667	.12172	.984	-.6152	.2819
	F2"Beban 150"	-.76667*	.12172	.000	-1.2152	-.3181
	F3"Beban 50"	-1.66667*	.12172	.000	-2.1152	-1.2181
	F3"Beban 100"	-1.86667*	.12172	.000	-2.3152	-1.4181
	F3"Beban 150"	-2.73333*	.12172	.000	-3.1819	-2.2848

	F4"Beban 50"	.13333	.12172	.998	-.3152	.5819
	F4"Beban 150"	-.53333*	.12172	.009	-.9819	-.0848
	F5"Beban 50"	-1.56667*	.12172	.000	-2.0152	-1.1181
	F5"Beban 100"	-1.86667*	.12172	.000	-2.3152	-1.4181
	F5"Beban 150"	-2.70000*	.12172	.000	-3.1485	-2.2515
F4"Beban 150"	F1"Beban 50"	-1.23333*	.12172	.000	-1.6819	-.7848
	F1"Beban 100"	-1.73333*	.12172	.000	-2.1819	-1.2848
	F1"Beban 150"	-2.23333*	.12172	.000	-2.6819	-1.7848
	F2"Beban 50"	.76667*	.12172	.000	.3181	1.2152
	F2"Beban 100"	.36667	.12172	.206	-.0819	.8152
	F2"Beban 150"	-.23333	.12172	.827	-.6819	.2152
	F3"Beban 50"	-1.13333*	.12172	.000	-1.5819	-.6848
	F3"Beban 100"	-1.33333*	.12172	.000	-1.7819	-.8848
	F3"Beban 150"	-2.20000*	.12172	.000	-2.6485	-1.7515
	F4"Beban 50"	.66667*	.12172	.000	.2181	1.1152
	F4"Beban 100"	.53333*	.12172	.009	.0848	.9819
	F5"Beban 50"	-1.03333*	.12172	.000	-1.4819	-.5848
	F5"Beban 100"	-1.33333*	.12172	.000	-1.7819	-.8848
	F5"Beban 150"	-2.16667*	.12172	.000	-2.6152	-1.7181
F5"Beban 50"	F1"Beban 50"	-.20000	.12172	.934	-.6485	.2485
	F1"Beban 100"	-.70000*	.12172	.000	-1.1485	-.2515
	F1"Beban 150"	-1.20000*	.12172	.000	-1.6485	-.7515
	F2"Beban 50"	1.80000*	.12172	.000	1.3515	2.2485
	F2"Beban 100"	1.40000*	.12172	.000	.9515	1.8485
	F2"Beban 150"	.80000*	.12172	.000	.3515	1.2485
	F3"Beban 50"	-.10000	.12172	1.000	-.5485	.3485
	F3"Beban 100"	-.30000	.12172	.491	-.7485	.1485
	F3"Beban 150"	-1.16667*	.12172	.000	-1.6152	-.7181
	F4"Beban 50"	1.70000*	.12172	.000	1.2515	2.1485
	F4"Beban 100"	1.56667*	.12172	.000	1.1181	2.0152
	F4"Beban 150"	1.03333*	.12172	.000	.5848	1.4819
	F5"Beban 100"	-.30000	.12172	.491	-.7485	.1485
	F5"Beban 150"	-1.13333*	.12172	.000	-1.5819	-.6848
F5"Beban 100"	F1"Beban 50"	.10000	.12172	1.000	-.3485	.5485
	F1"Beban 100"	-.40000	.12172	.120	-.8485	.0485
	F1"Beban 150"	-.90000*	.12172	.000	-1.3485	-.4515
	F2"Beban 50"	2.10000*	.12172	.000	1.6515	2.5485

	F2"Beban 100"	1.70000*	.12172	.000	1.2515	2.1485
	F2"Beban 150"	1.10000*	.12172	.000	.6515	1.5485
	F3"Beban 50"	.20000	.12172	.934	-.2485	.6485
	F3"Beban 100"	.00000	.12172	1.000	-.4485	.4485
	F3"Beban 150"	-.86667*	.12172	.000	-1.3152	-.4181
	F4"Beban 50"	2.00000*	.12172	.000	1.5515	2.4485
	F4"Beban 100"	1.86667*	.12172	.000	1.4181	2.3152
	F4"Beban 150"	1.33333*	.12172	.000	.8848	1.7819
	F5"Beban 50"	.30000	.12172	.491	-.1485	.7485
	F5"Beban 150"	-.83333*	.12172	.000	-1.2819	-.3848
F5"Beban 150"	F1"Beban 50"	.93333*	.12172	.000	.4848	1.3819
	F1"Beban 100"	.43333	.12172	.066	-.0152	.8819
	F1"Beban 150"	-.06667	.12172	1.000	-.5152	.3819
	F2"Beban 50"	2.93333*	.12172	.000	2.4848	3.3819
	F2"Beban 100"	2.53333*	.12172	.000	2.0848	2.9819
	F2"Beban 150"	1.93333*	.12172	.000	1.4848	2.3819
	F3"Beban 50"	1.03333*	.12172	.000	.5848	1.4819
	F3"Beban 100"	.83333*	.12172	.000	.3848	1.2819
	F3"Beban 150"	-.03333	.12172	1.000	-.4819	.4152
	F4"Beban 50"	2.83333*	.12172	.000	2.3848	3.2819
	F4"Beban 100"	2.70000*	.12172	.000	2.2515	3.1485
	F4"Beban 150"	2.16667*	.12172	.000	1.7181	2.6152
	F5"Beban 50"	1.13333*	.12172	.000	.6848	1.5819
	F5"Beban 100"	.83333*	.12172	.000	.3848	1.2819

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

Homogeneous Subsets

DayaSebar

Tukey HSD[a]

		Subset for alpha = 0.05						
Formula	N	1	2	3	4	5	6	7
F2"Beban 50"	3	3.3000						
F4"Beban 50"	3	3.4000						
F4"Beban 100"	3	3.5333						
F2"Beban 100"	3	3.7000	3.7000					
F4"Beban 150"	3		4.0667	4.0667				

F2"Beban 150"	3			4.3000				
F5"Beban 50"	3				5.1000			
F3"Beban 50"	3				5.2000			
F1"Beban 50"	3				5.3000			
F5"Beban 100"	3				5.4000	5.4000		
F3"Beban 100"	3				5.4000	5.4000		
F1"Beban 100"	3					5.8000	5.8000	
F5"Beban 150"	3						6.2333	6.2333
F3"Beban 150"	3							6.2667
F1"Beban 150"	3							6.3000
Sig.		.120	.206	.827	.491	.120	.066	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

Lampiran 24 Hasil uji daya lekat gel bunga telang

Formula	F1	F2	F3	F4	F5
Replikasi 1	2.31	4.84	2.83	5.71	2.97
Replikasi 2	2.45	4.8	2.78	5.69	2.93
Replikasi 3	2.41	4.76	2.85	5.58	2.89
Rata-rata±SD	**2,39±0,07**	**4,80±0,04**	**2,82±0,04**	**5,66±0,07**	**2,93±0,04**

Case Processing Summary

		Cases					
		Valid		Missing		Total	
	Kelompok	N	Percent	N	Percent	N	Percent
Hasil	F1	3	100.0%	0	0.0%	3	100.0%
	F2	3	100.0%	0	0.0%	3	100.0%
	F3	3	100.0%	0	0.0%	3	100.0%
	F4	3	100.0%	0	0.0%	3	100.0%
	F5	3	100.0%	0	0.0%	3	100.0%

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Kelompok	Statistic	df	Sig.	Statistic	df	Sig.
Hasil	F1	.276	3	.	.942	3	.537
	F2	.175	3	.	1.000	3	1.000
	F3	.276	3	.	.942	3	.537
	F4	.333	3	.	.862	3	.274
	F5	.175	3	.	1.000	3	1.000

Oneway

Descriptives

Hasil

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1	3	2.3900	.07211	.04163	2.2109	2.5691	2.31	2.45
F2	3	4.8000	.04000	.02309	4.7006	4.8994	4.76	4.84
F3	3	2.8200	.03606	.02082	2.7304	2.9096	2.78	2.85
F4	3	5.6600	.07000	.04041	5.4861	5.8339	5.58	5.71
F5	3	2.9300	.04000	.02309	2.8306	3.0294	2.89	2.97
Total	15	3.7200	1.32094	.34106	2.9885	4.4515	2.31	5.71

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Hasil	Based on Mean	1.116	4	10	.402
	Based on Median	.228	4	10	.916
	Based on Median and with adjusted df	.228	4	6.130	.913
	Based on trimmed mean	1.023	4	10	.441

ANOVA

Hasil

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	24.399	4	6.100	2088.955	.000
Within Groups	.029	10	.003		
Total	24.428	14			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Hasil

Tukey HSD

(I) Kelompok	(J) Kelompok	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
F1	F2	-2.41000*	.04412	.000	-2.5552	-2.2648

	F3	-.43000*	.04412	.000	-.5752	-.2848
	F4	-3.27000*	.04412	.000	-3.4152	-3.1248
	F5	-.54000*	.04412	.000	-.6852	-.3948
F2	F1	2.41000*	.04412	.000	2.2648	2.5552
	F3	1.98000*	.04412	.000	1.8348	2.1252
	F4	-.86000*	.04412	.000	-1.0052	-.7148
	F5	1.87000*	.04412	.000	1.7248	2.0152
F3	F1	.43000*	.04412	.000	.2848	.5752
	F2	-1.98000*	.04412	.000	-2.1252	-1.8348
	F4	-2.84000*	.04412	.000	-2.9852	-2.6948
	F5	-.11000	.04412	.168	-.2552	.0352
F4	F1	3.27000*	.04412	.000	3.1248	3.4152
	F2	.86000*	.04412	.000	.7148	1.0052
	F3	2.84000*	.04412	.000	2.6948	2.9852
	F5	2.73000*	.04412	.000	2.5848	2.8752
F5	F1	.54000*	.04412	.000	.3948	.6852
	F2	-1.87000*	.04412	.000	-2.0152	-1.7248
	F3	.11000	.04412	.168	-.0352	.2552
	F4	-2.73000*	.04412	.000	-2.8752	-2.5848

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

Homogeneous Subsets

Hasil

Tukey HSD[a]

		Subset for alpha = 0.05			
Kelompok	N	1	2	3	4
F1	3	2.3900			
F3	3		2.8200		
F5	3		2.9300		
F2	3			4.8000	
F4	3				5.6600
Sig.		1.000	.168	1.000	1.000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.

Lampiran 25 Hasil pengujian stabilitas gel bunga telang

1. Uji Stabilitas Viskositas

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1H1	.175	3	.	1.000	3	1.000
F1H14	.385	3	.	.750	3	.000
F1H21	.385	3	.	.750	3	.000
F2H1	.385	3	.	.750	3	.000
F2H14	.385	3	.	.750	3	.000
F2H21	.175	3	.	1.000	3	1.000
F3H1	.385	3	.	.750	3	.000
F3H14	.175	3	.	1.000	3	1.000
F3H21	.385	3	.	.750	3	.000
F4H1	.385	3	.	.750	3	.000
F4H14	.385	3	.	.750	3	.000
F4H21	.385	3	.	.750	3	.000
F5H1	.385	3	.	.750	3	.000
F5H14	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

NPar Tests
Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
F1H14 - F1H1	Negative Ranks	3[a]	2.00	6.00
	Positive Ranks	0[b]	.00	.00
	Ties	0[c]		
	Total	3		
F1H21 - F1H1	Negative Ranks	3[d]	2.00	6.00
	Positive Ranks	0[e]	.00	.00
	Ties	0[f]		
	Total	3		
F1H21 - F1H14	Negative Ranks	3[g]	2.00	6.00
	Positive Ranks	0[h]	.00	.00
	Ties	0[i]		

	Total	3		
F2H14 - F2H1	Negative Ranks	3[j]	2.00	6.00
	Positive Ranks	0[k]	.00	.00
	Ties	0[l]		
	Total	3		
F2H21 - F2H1	Negative Ranks	3[m]	2.00	6.00
	Positive Ranks	0[n]	.00	.00
	Ties	0[o]		
	Total	3		
F2H21 - F2H14	Negative Ranks	3[p]	2.00	6.00
	Positive Ranks	0[q]	.00	.00
	Ties	0[r]		
	Total	3		
F3H14 - F3H1	Negative Ranks	3[s]	2.00	6.00
	Positive Ranks	0[t]	.00	.00
	Ties	0[u]		
	Total	3		
F3H21 - F3H1	Negative Ranks	3[v]	2.00	6.00
	Positive Ranks	0[w]	.00	.00
	Ties	0[x]		
	Total	3		
F3H21 - F3H14	Negative Ranks	2[y]	2.25	4.50
	Positive Ranks	1[z]	1.50	1.50
	Ties	0[aa]		
	Total	3		
F4H14 - F4H1	Negative Ranks	3[ab]	2.00	6.00
	Positive Ranks	0[ac]	.00	.00
	Ties	0[ad]		
	Total	3		
F4H21 - F4H1	Negative Ranks	3[ae]	2.00	6.00
	Positive Ranks	0[af]	.00	.00
	Ties	0[ag]		
	Total	3		
F4H21 - F4H14	Negative Ranks	3[ah]	2.00	6.00
	Positive Ranks	0[ai]	.00	.00
	Ties	0[aj]		
	Total	3		

F5H14 - F5H1	Negative Ranks	3[ak]	2.00	6.00
	Positive Ranks	0[al]	.00	.00
	Ties	0[am]		
	Total	3		
F5H21 - F5H1	Negative Ranks	3[an]	2.00	6.00
	Positive Ranks	0[ao]	.00	.00
	Ties	0[ap]		
	Total	3		
F5H21 - F5H14	Negative Ranks	2[aq]	1.50	3.00
	Positive Ranks	0[ar]	.00	.00
	Ties	1[as]		
	Total	3		

a. F1H14 < F1H1

b. F1H14 > F1H1

c. F1H14 = F1H1

d. F1H21 < F1H1

e. F1H21 > F1H1

f. F1H21 = F1H1

g. F1H21 < F1H14

h. F1H21 > F1H14

i. F1H21 = F1H14

j. F2H14 < F2H1

k. F2H14 > F2H1

l. F2H14 = F2H1

m. F2H21 < F2H1

n. F2H21 > F2H1

o. F2H21 = F2H1

p. F2H21 < F2H14

q. F2H21 > F2H14

r. F2H21 = F2H14

s. F3H14 < F3H1

t. F3H14 > F3H1

u. F3H14 = F3H1

v. F3H21 < F3H1

w. F3H21 > F3H1

x. F3H21 = F3H1

y. F3H21 < F3H14

z. F3H21 > F3H14

aa. F3H21 = F3H14

ab. F4H14 < F4H1

ac. F4H14 > F4H1

ad. F4H14 = F4H1

ae. F4H21 < F4H1

af. F4H21 > F4H1

ag. F4H21 = F4H1

ah. F4H21 < F4H14

ai. F4H21 > F4H14

aj. F4H21 = F4H14

ak. F5H14 < F5H1

al. F5H14 > F5H1

am. F5H14 = F5H1

an. F5H21 < F5H1

ao. F5H21 > F5H1

ap. F5H21 = F5H1

aq. F5H21 < F5H14

ar. F5H21 > F5H14

as. F5H21 = F5H14

Test Statistics[a]

	F1H14 - F1H1	F1H21 - F1H1	F1H21 - F1H14	F2H14 - F2H1	F2H21 - F2H1	F2H21 - F2H14	F3H14 - F3H1	F3H21 - F3H1	F3H21 - F3H14	F4H14 - F4H1	F4H21 - F4H1	F4H21 - F4H14	F5H14 - F5H1	F5H21 - F5H1	F5H21 - F5H14
Z	-1.633[b]	-1.633[b]	-1.732[b]	-1.633[b]	-1.604[b]	-1.604[b]	-1.633[b]	-1.604[b]	-.816[b]	-1.732[b]	-1.633[b]	-1.633[b]	-1.604[b]	-1.633[b]	-1.342[b]
Asymp. Sig. (2-tailed)	.102	.102	.083	.102	.109	.109	.102	.109	.414	.083	.102	.102	.109	.102	.180

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

2. Uji Stabilitas pH

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1H1	.175	3	.	1.000	3	1.000
F1H14	.253	3	.	.964	3	.637
F1H21	.253	3	.	.964	3	.637
F2H1	.269	3	.	.949	3	.567
F2H14	.175	3	.	1.000	3	1.000
F2H21	.175	3	.	1.000	3	1.000
F3H1	.292	3	.	.923	3	.463
F3H14	.292	3	.	.923	3	.463
F3H21	.253	3	.	.964	3	.637
F4H1	.175	3	.	1.000	3	1.000
F4H14	.292	3	.	.923	3	.463
F4H21	.219	3	.	.987	3	.780
F5H1	.253	3	.	.964	3	.637
F5H14	.175	3	.	1.000	3	1.000
F5H21	.175	3	.	1.000	3	1.000

a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	F1H1	6.4600	3	.01000	.00577
	F1H14	6.2267	3	.01528	.00882
Pair 2	F1H1	6.4600	3	.01000	.00577
	F1H21	6.1233	3	.01528	.00882
Pair 3	F1H14	6.2267	3	.01528	.00882
	F1H21	6.1233	3	.01528	.00882
Pair 4	F2H1	5.2533	3	.05132	.02963
	F2H14	5.1500	3	.01000	.00577
Pair 5	F2H1	5.2533	3	.05132	.02963
	F2H21	5.0700	3	.02000	.01155
Pair 6	F2H14	5.1500	3	.01000	.00577
	F2H21	5.0700	3	.02000	.01155

Pair 7	F3H1	6.5033	3	.02082	.01202
	F3H14	6.4833	3	.02082	.01202
Pair 8	F3H1	6.5033	3	.02082	.01202
	F3H21	6.4467	3	.01528	.00882
Pair 9	F3H14	6.4833	3	.02082	.01202
	F3H21	6.4467	3	.01528	.00882
Pair 10	F4H1	5.1500	3	.01000	.00577
	F4H14	5.0733	3	.02082	.01202
Pair 11	F4H1	5.1500	3	.01000	.00577
	F4H21	5.0467	3	.02517	.01453
Pair 12	F4H14	5.0733	3	.02082	.01202
	F4H21	5.0467	3	.02517	.01453
Pair 13	F5H1	6.3067	3	.01528	.00882
	F5H14	6.3000	3	.01000	.00577
Pair 14	F5H1	6.3067	3	.01528	.00882
	F5H21	6.2800	3	.01000	.00577
Pair 15	F5H14	6.3000	3	.01000	.00577
	F5H21	6.2800	3	.01000	.00577

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	F1H1 & F1H14	3	.327	.788
Pair 2	F1H1 & F1H21	3	-.327	.788
Pair 3	F1H14 & F1H21	3	-1.000	.000
Pair 4	F2H1 & F2H14	3	.292	.811
Pair 5	F2H1 & F2H21	3	.682	.522
Pair 6	F2H14 & F2H21	3	-.500	.667
Pair 7	F3H1 & F3H14	3	.885	.309
Pair 8	F3H1 & F3H21	3	.052	.967
Pair 9	F3H14 & F3H21	3	-.419	.725
Pair 10	F4H1 & F4H14	3	-.961	.179
Pair 11	F4H1 & F4H21	3	.397	.740
Pair 12	F4H14 & F4H21	3	-.636	.561
Pair 13	F5H1 & F5H14	3	-.327	.788
Pair 14	F5H1 & F5H21	3	.655	.546
Pair 15	F5H14 & F5H21	3	.500	.667

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	F1H1 - F1H14	.23333	.01528	.00882	.19539	.27128	26.458	2	.001
Pair 2	F1H1 - F1H21	.33667	.02082	.01202	.28496	.38838	28.012	2	.001
Pair 3	F1H14 - F1H21	.10333	.03055	.01764	.02744	.17922	5.858	2	.028
Pair 4	F2H1 - F2H14	.10333	.04933	.02848	-.01921	.22587	3.628	2	.068
Pair 5	F2H1 - F2H21	.18333	.04041	.02333	.08294	.28373	7.857	2	.016
Pair 6	F2H14 - F2H21	.08000	.02646	.01528	.01428	.14572	5.237	2	.035
Pair 7	F3H1 - F3H14	.02000	.01000	.00577	-.00484	.04484	3.464	2	.074
Pair 8	F3H1 - F3H21	.05667	.02517	.01453	-.00585	.11918	3.900	2	.060
Pair 9	F3H14 - F3H21	.03667	.03055	.01764	-.03922	.11256	2.079	2	.173
Pair 10	F4H1 - F4H14	.07667	.03055	.01764	.00078	.15256	4.347	2	.049
Pair 11	F4H1 - F4H21	.10333	.02309	.01333	.04596	.16070	7.750	2	.016
Pair 12	F4H14 - F4H21	.02667	.04163	.02404	-.07676	.13009	1.109	2	.383
Pair 13	F5H1 - F5H14	.00667	.02082	.01202	-.04504	.05838	.555	2	.635
Pair 14	F5H1 - F5H21	.02667	.01155	.00667	-.00202	.05535	4.000	2	.057
Pair 15	F5H14 - F5H21	.02000	.01000	.00577	-.00484	.04484	3.464	2	.074

3. Uji Stabilitas Daya Sebar

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1H1	.175	3	.	1.000	3	1.000
F1H14	.175	3	.	1.000	3	1.000
F1H21	.385	3	.	.750	3	.000
F2H1	.175	3	.	1.000	3	1.000
F2H14	.253	3	.	.964	3	.637
F2H21	.175	3	.	1.000	3	1.000
F3H1	.253	3	.	.964	3	.637
F3H14	.175	3	.	1.000	3	1.000
F3H21	.385	3	.	.750	3	.000
F4H1	.253	3	.	.964	3	.637
F4H14	.385	3	.	.750	3	.000
F4H21	.385	3	.	.750	3	.000
F5H1	.253	3	.	.964	3	.637
F5H14	.175	3	.	1.000	3	1.000
F5H21	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
F1H14 - F1H1	Negative Ranks	0[a]	.00	.00
	Positive Ranks	3[b]	2.00	6.00
	Ties	0[c]		
	Total	3		
F1H21 - F1H1	Negative Ranks	0[d]	.00	.00
	Positive Ranks	3[e]	2.00	6.00
	Ties	0[f]		
	Total	3		
F1H21 - F1H14	Negative Ranks	0[g]	.00	.00
	Positive Ranks	3[h]	2.00	6.00
	Ties	0[i]		
	Total	3		

F2H14 - F2H1	Negative Ranks	0[j]	.00	.00
	Positive Ranks	3[k]	2.00	6.00
	Ties	0[l]		
	Total	3		
F2H21 - F2H1	Negative Ranks	0[m]	.00	.00
	Positive Ranks	3[n]	2.00	6.00
	Ties	0[o]		
	Total	3		
F2H21 - F2H14	Negative Ranks	0[p]	.00	.00
	Positive Ranks	2[q]	1.50	3.00
	Ties	1[r]		
	Total	3		
F3H14 - F3H1	Negative Ranks	1[s]	1.00	1.00
	Positive Ranks	1[t]	2.00	2.00
	Ties	1[u]		
	Total	3		
F3H21 - F3H1	Negative Ranks	0[v]	.00	.00
	Positive Ranks	3[w]	2.00	6.00
	Ties	0[x]		
	Total	3		
F3H21 - F3H14	Negative Ranks	0[y]	.00	.00
	Positive Ranks	3[z]	2.00	6.00
	Ties	0[aa]		
	Total	3		
F4H14 - F4H1	Negative Ranks	0[ab]	.00	.00
	Positive Ranks	3[ac]	2.00	6.00
	Ties	0[ad]		
	Total	3		
F4H21 - F4H1	Negative Ranks	0[ae]	.00	.00
	Positive Ranks	3[af]	2.00	6.00
	Ties	0[ag]		
	Total	3		
F4H21 - F4H14	Negative Ranks	0[ah]	.00	.00
	Positive Ranks	3[ai]	2.00	6.00
	Ties	0[aj]		
	Total	3		
F5H14 - F5H1	Negative Ranks	1[ak]	2.00	2.00

	Positive Ranks	2[al]	2.00	4.00
	Ties	0[am]		
	Total	3		
F5H21 - F5H1	Negative Ranks	0[an]	.00	.00
	Positive Ranks	2[ao]	1.50	3.00
	Ties	1[ap]		
	Total	3		
F5H21 - F5H14	Negative Ranks	0[aq]	.00	.00
	Positive Ranks	3[ar]	2.00	6.00
	Ties	0[as]		
	Total	3		

a. F1H14 < F1H1

b. F1H14 > F1H1

c. F1H14 = F1H1

d. F1H21 < F1H1

e. F1H21 > F1H1

f. F1H21 = F1H1

g. F1H21 < F1H14

h. F1H21 > F1H14

i. F1H21 = F1H14

j. F2H14 < F2H1

k. F2H14 > F2H1

l. F2H14 = F2H1

m. F2H21 < F2H1

n. F2H21 > F2H1

o. F2H21 = F2H1

p. F2H21 < F2H14

q. F2H21 > F2H14

r. F2H21 = F2H14

s. F3H14 < F3H1

t. F3H14 > F3H1

u. F3H14 = F3H1

v. F3H21 < F3H1

w. F3H21 > F3H1

x. F3H21 = F3H1

y. F3H21 < F3H14

z. F3H21 > F3H14

aa. F3H21 = F3H14

ab. F4H14 < F4H1

ac. F4H14 > F4H1

ad. F4H14 = F4H1

ae. F4H21 < F4H1

af. F4H21 > F4H1

ag. F4H21 = F4H1

ah. F4H21 < F4H14

ai. F4H21 > F4H14

aj. F4H21 = F4H14

ak. F5H14 < F5H1

al. F5H14 > F5H1

am. F5H14 = F5H1

an. F5H21 < F5H1

ao. F5H21 > F5H1

ap. F5H21 = F5H1

aq. F5H21 < F5H14

ar. F5H21 > F5H14

as. F5H21 = F5H14

Test Statistics[a]

	F1H14 - F1H1	F1H21 - F1H1	F1H214 - F1H1	F2H14 - F2H1	F2H21 - F2H1	F2H214 - F2H1	F3H14 - F3H1	F3H21 - F3H1	F3H214 - F3H1	F4H14 - F4H1	F4H21 - F4H1	F4H214 - F4H1	F5H14 - F5H1	F5H21 - F5H1	F5H214 - F5H1
Z	-1.732[b]	-1.633[b]	-1.633[b]	-1.604[b]	-1.633[b]	-1.342[b]	-.447[b]	-1.604[b]	-1.604[b]	-1.604[b]	-1.633[b]	-1.604[b]	-.577[b]	-1.414[b]	-1.633[b]
Asymp. Sig. (2-tailed)	.083	.102	.102	.109	.102	.180	.655	.109	.109	.109	.102	.109	.564	.157	.102

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

4. Uji Stabilitas Daya Lekat

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
F1H1	.276	3	.	.942	3	.537
F1H14	.219	3	.	.987	3	.780
F1H21	.232	3	.	.980	3	.726
F2H1	.175	3	.	1.000	3	1.000
F2H14	.292	3	.	.923	3	.463
F2H21	.196	3	.	.996	3	.878
F3H1	.276	3	.	.942	3	.537
F3H14	.276	3	.	.942	3	.537
F3H21	.219	3	.	.987	3	.780
F4H1	.333	3	.	.862	3	.274
F4H14	.253	3	.	.964	3	.637
F4H21	.272	3	.	.947	3	.554
F5H1	.175	3	.	1.000	3	1.000
F5H14	.292	3	.	.923	3	.463
F5H21	.187	3	.	.998	3	.915

a. Lilliefors Significance Correction

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	F1H1	2.3900	3	.07211	.04163
	F1H14	2.0833	3	.02517	.01453
Pair 2	F1H1	2.3900	3	.07211	.04163
	F1H21	1.5533	3	.04041	.02333
Pair 3	F1H14	2.0833	3	.02517	.01453
	F1H21	1.5533	3	.04041	.02333
Pair 4	F2H1	4.8000	3	.04000	.02309
	F2H14	4.1000	3	.06245	.03606
Pair 5	F2H1	4.8000	3	.04000	.02309
	F2H21	3.8833	3	.04509	.02603
Pair 6	F2H14	4.1000	3	.06245	.03606
	F2H21	3.8833	3	.04509	.02603

Pair 7	F3H1	2.8200	3	.03606	.02082
	F3H14	2.6800	3	.03606	.02082
Pair 8	F3H1	2.8200	3	.03606	.02082
	F3H21	2.5867	3	.02517	.01453
Pair 9	F3H14	2.6800	3	.03606	.02082
	F3H21	2.5867	3	.02517	.01453
Pair 10	F4H1	5.6600	3	.07000	.04041
	F4H14	5.1700	3	.04583	.02646
Pair 11	F4H1	5.6600	3	.07000	.04041
	F4H21	4.6933	3	.08737	.05044
Pair 12	F4H14	5.1700	3	.04583	.02646
	F4H21	4.6933	3	.08737	.05044
Pair 13	F5H1	2.9300	3	.04000	.02309
	F5H14	2.7967	3	.02082	.01202
Pair 14	F5H1	2.9300	3	.04000	.02309
	F5H21	2.4533	3	.06506	.03756
Pair 15	F5H14	2.7967	3	.02082	.01202
	F5H21	2.4533	3	.06506	.03756

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	F1H1 & F1H14	3	-.992	.081
Pair 2	F1H1 & F1H21	3	-.412	.730
Pair 3	F1H14 & F1H21	3	.524	.649
Pair 4	F2H1 & F2H14	3	.240	.846
Pair 5	F2H1 & F2H21	3	-.554	.626
Pair 6	F2H14 & F2H21	3	.675	.529
Pair 7	F3H1 & F3H14	3	-.885	.309
Pair 8	F3H1 & F3H21	3	-.606	.585
Pair 9	F3H14 & F3H21	3	.165	.894
Pair 10	F4H1 & F4H14	3	.047	.970
Pair 11	F4H1 & F4H21	3	-.907	.276
Pair 12	F4H14 & F4H21	3	-.462	.694
Pair 13	F5H1 & F5H14	3	.240	.846
Pair 14	F5H1 & F5H21	3	.461	.695
Pair 15	F5H14 & F5H21	3	.972	.151

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	F1H1 - F1H14	.30667	.09713	.05608	.06539	.54794	5.469	2	.032
Pair 2	F1H1 - F1H21	.83667	.09609	.05548	.59797	1.07537	15.081	2	.004
Pair 3	F1H14 - F1H21	.53000	.03464	.02000	.44395	.61605	26.500	2	.001
Pair 4	F2H1 - F2H14	.70000	.06557	.03786	.53710	.86290	18.489	2	.003
Pair 5	F2H1 - F2H21	.91667	.07506	.04333	.73022	1.10311	21.154	2	.002
Pair 6	F2H14 - F2H21	.21667	.04619	.02667	.10193	.33140	8.125	2	.015
Pair 7	F3H1 - F3H14	.14000	.07000	.04041	-.03389	.31389	3.464	2	.074
Pair 8	F3H1 - F3H21	.23333	.05508	.03180	.09652	.37015	7.338	2	.018
Pair 9	F3H14 - F3H21	.09333	.04041	.02333	-.00706	.19373	4.000	2	.057
Pair 10	F4H1 - F4H14	.49000	.08185	.04726	.28666	.69334	10.369	2	.009
Pair 11	F4H1 - F4H21	.96667	.15373	.08876	.58478	1.34856	10.891	2	.008
Pair 12	F4H14 - F4H21	.47667	.11590	.06692	.18875	.76458	7.123	2	.019
Pair 13	F5H1 - F5H14	.13333	.04041	.02333	.03294	.23373	5.714	2	.029
Pair 14	F5H1 - F5H21	.47667	.05859	.03383	.33111	.62222	14.090	2	.005
Pair 15	F5H14 - F5H21	.34333	.04509	.02603	.23132	.45535	13.188	2	.006