LAMPIRAN

Lampiran 1. Hasil determinasi tanaman matoa

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DINAS KESEHATAN
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Nomor : 074/ 184/ 102.20-A/ 2022
Sifat : Biasa
Perihal : **Determinasi Tanaman Matoa**

Memenuhi permohonan saudara :

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Fakultas : FARMASI, UNIVERSITAS SETIA BUDI SURAKARTA

1. Perihal determinasi tanaman matoa
   - Kingdom : Plantae (Tumbuhan)
   - Divisi : Magnoliophyta (Tumbuhan berbunga)
   - Sub divisi : Angiospermae
   - Kelas : Dicotyledonae
   - Bangsa : Sapindales
   - Suku : Sapindaceae
   - Marga : Pometia
   - Jenis : *Pometia pinnata* J.R.& G.Forst
   - Nama umum : Pakam (Batak), Langsek anggang (Minangkabau), Kungki (Melayu), Leungsir (Sunda), Kayu sapi (Jawa), Matoa (Indonesia)
   - Kunci determinasi : 1b-2b-3b-4b-6b-7b-9b-10b-11b-12b-13b-14a-15b-197b-208b-219b-220b-224b-225b-227b-229b-230a-231a-232a:Sapindaceae-1b-2b-4a-5a-6b:Pometia-16-1a:*P.pinnata*.
2. Deskripsi : Pohon besar dengan tinggi rata-rata 18 meter, diameter rata-rata 100 cm. Di Papua dikenal 2 jenis matoa, yaitu Matoa Kelapa dan Matoa Papeda. Ciri yang membedakan keduanya adalah terdapat pada tekstur buahnya, Matoa Kelapa dicirikan oleh daging buah yang kenyal seperti rambutan aceh, diameter buah 2,2-2,9 cm dan diameter biji 1,25-1,40 cm. Sedangkan Matoa Papeda dicirikan oleh daging buahnya yang agak lembek dan lengket dengan diamater buah 1,4-2,0 cm. Tanaman ini mudah beraptasi dengan kondisi panas maupun dingin. Pohon ini juga tahan terhadap serangga, yang pada umumnya merusak buah.
3. Bagian yang digunakan : Daun.
4. Penggunaan : Penelitian (Skripsi).
5. Daftar Pustaka
   - Van Steenis, CGGJ. 2008. *FLORA: untuk Sekolah di Indonesia*. Pradnya Paramita, Jakarta.

Demikian surat keterangan determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 04 Maret 2022

KEPALA UPT LABORATORIUM HERBAL
MATERIA MEDICA BATU

ACHMAD MABRUR, SKM, M.Kes.
PEMBINA
NIP. 19680203 199203 1 004

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Lampiran 4. Perhitungan dan hasil persentase rendemen bobot kering terhadap bobot basah daun matoa

Sampel	Bobot Basah (g)	Bobot Kering (g)	Rendemen (% b/b)
Daun matoa	6000	2900	48,3

Perhitungan:

$$\% \text{ rendemen kering} = \frac{\text{Berat kering}}{\text{Berat basah}} \times 100\%$$

$$= \frac{2900}{6000} \times 100\%$$

$$= 48{,}3\%$$

Lampiran 5. Hasil perhitungan susut pengeringan serbuk daun matoa

No	Berat serbuk (g)	Susut pengeringan (%)
1	2	9,0
2	2	9,0
3	2	8,7
Rata – rata ± SD		**8,9 ± 0,17**

$$\text{Prosentase rata-rata} = \frac{9{,}0\% + 9{,}0\% + 8{,}7\%}{3} = 8{,}9\%$$

Lampiran 6. Hasil perhitungan kadar air serbuk daun matoa

No	Bobot serbuk (g)	Volume air (mL)	Kadar air (%v/b)
1	20	1,8	9,0
2	20	1,9	9,5
3	20	1,8	9,0
	Rata – rata ± SD		9,1 ± 0,28

Perhitungan kadar air serbuk:

$$\text{Kadar air} = \frac{\text{volume terbaca (ml)}}{\text{Bobot serbuk (g)}} \text{ x } 100\%$$

$$\text{Kadar air}_1 = \frac{1,8}{20} \times 100\%$$
$$= 9,0\%$$

$$\text{Kadar air}_2 = \frac{1,9}{20} \text{ x } 100\%$$
$$= 9,5\%$$

$$\text{Kadar air}_3 = \frac{1,8}{20} \text{ x } 100\%$$
$$= 9,0\%$$

$$\text{Rata-rata kadar air serbuk daun matoa} = \frac{\text{kadar 1} + \text{kadar 2} + \text{kadar 3}}{3}$$
$$= \frac{9,0\% + 9,5\% + 9,0\%}{3}$$
$$= 9,1\%$$

Lampiran 7. Hasil persentase rendemen ekstrak terhadap serbuk halus daun matoa

Berat Serbuk (g)	Bobot Ekstrak (g)	Rendemen (%)
800	160	20

Perhitungan rendemen :

$$\text{\% rendemen ekstrak} = \frac{\text{Bobot ekstrak}}{\text{Bobot serbuk}} \times 100\%$$
$$= \frac{160}{800} \times 100\%$$
$$= 20\%$$

Lampiran 8. Hasil penetapan kadar air ekstrak daun matoa.

Perhitungan penetapan kadar air ekstrak etanol daun matoa (Gravimetri)

Kurs 1

No	Bobot Ekstrak Awal (g)	Bobot Ekstrak Akhir (g)	Kadar Air (% b/v)
1	2,045	1,930	5,62
2	2,045	1,917	6,25
3	2,045	1,906	6,79
Rata – rata ± SD			**6,22 ± 0,58**

Perhitungan kadar air ekstrak:

$$\text{Kadar air} = \frac{\text{Bobot Sebelum Pengeringan-Bobot Setelah Pengeringan}}{\text{Bobot Sebelum Pengeringan}} \times 100\%$$

$$\text{Replikasi 1} = \frac{2,045\text{-}1,930}{2,045} \times 100\% = 5,62\%$$

$$\text{Replikasi 2} = \frac{2,045\text{-}1,917}{2,045} \times 100\% = 6,25\%$$

$$\text{Replikasi 3} = \frac{2,045\text{-}1,906}{2,045} \times 100\% = 6,79\%$$

$$\text{Rata-rata kadar air ekstrak} = \frac{5,62+6,25+6,79}{3} = 6,22\%$$

Kurs 2

No	Bobot Ekstrak Awal (g)	Bobot Ekstrak Akhir (g)	Kadar Air (% b/v)
1	2,042	1,922	5,87
2	2,042	1,909	6,51
3	2,042	1,898	7,05
Rata – rata ± SD			**6,47 ± 0,59**

Perhitungan kadar air ekstrak:

$$\text{Kadar air} = \frac{\text{Bobot Sebelum Pengeringan-Bobot Setelah Pengeringan}}{\text{Bobot Sebelum Pengeringan}} \times 100\%$$

$$\text{Replikasi 1} = \frac{2,042\text{-}1,922}{2,042} \times 100\% = 5,87\%$$

$$\text{Replikasi 2} = \frac{2,042\text{-}1,909}{2,042} \times 100\% = 6,51\%$$

$$\text{Replikasi 3} = \frac{2,042\text{-}1,898}{2,042} \times 100\% = 7,05\%$$

$$\text{Rata-rata kadar air ekstrak} = \frac{5,87+6,51+7,05}{3} = 6,47\%$$

Kurs 3

No	Bobot Ekstrak Awal (g)	Bobot Ekstrak Akhir (g)	Kadar Air (% b/v)
1	2,037	1,915	5,98
2	2,037	1,909	6,51
3	2,037	1,890	7,21
Rata – rata ± SD			**6,56 ± 0,61**

Perhitungan kadar air ekstrak:

$$\text{Kadar air} = \frac{\text{Bobot Sebelum Pengeringan-Bobot Setelah Pengeringan}}{\text{Bobot Sebelum Pengeringan}} \times 100\%$$

$$\text{Replikasi 1} = \frac{2{,}037\text{-}1{,}915}{2{,}037} \times 100\% = 5{,}98\%$$

$$\text{Replikasi 2} = \frac{2{,}037\text{-}1{,}909}{2{,}037} \times 100\% = 6{,}51\%$$

$$\text{Replikasi 3} = \frac{2{,}037\text{- }1{,}890}{2{,}037} \times 100\% = 7{,}21\%$$

$$\text{Rata-rata kadar air ekstrak} = \frac{5{,}98+6{,}51+7{,}21}{3} = 6{,}56\%$$

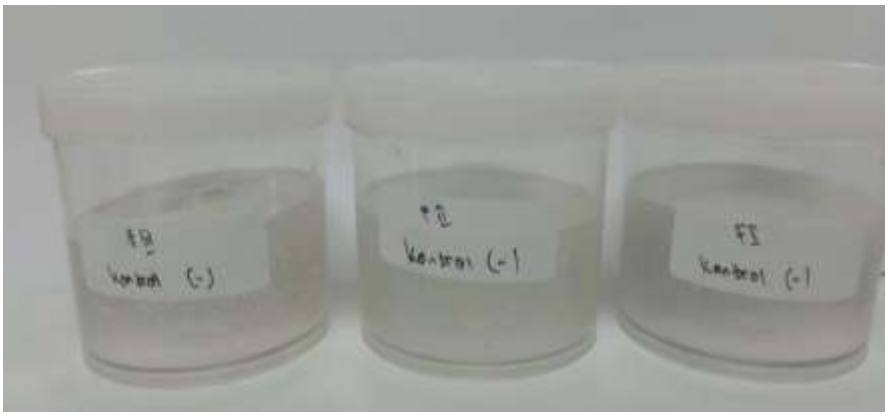
Lampiran 9. Gambar hasil skrining fitokimia ekstrak daun matoa

Senyawa	Gambar	Hasil
Flavonoid		Terbentuk larutan berwarna jingga. Hasil positif mengandung flavonoid.
Saponin		Terdapat busa pada larutan
Alkaloid	*Dragendorff* 	Terdapat endapan jingga, menunjukkan hasil positif mengandung alkaloid.
	Wagner 	Terdapat endapan coklat, menunjukkan hasil positif mengandung alkaloid

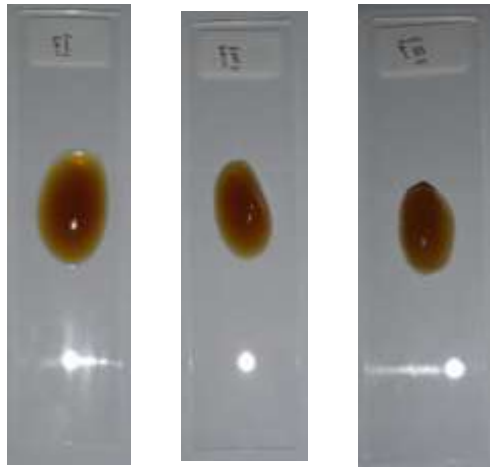
Tanin		Terbentuk larutan berwarna kehitaman, menunjukkan hasil positif tanin.
Terpenoid		Terbentuk warna orange, menunjukkan hasil positif terpenoid.

Lampiran 10. Gambar proses pengujian sifat fisik serum daun matoa

a. Gambar masing-masing formula serum daun matoa

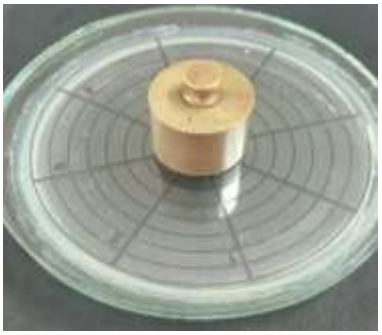


b. Gambar organoleptis serum daun matoa

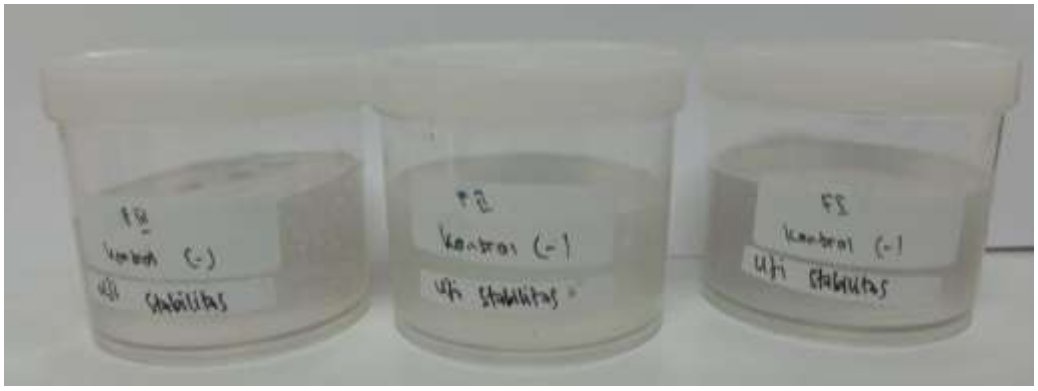
Gambar	Keterangan
	Formula I Konsistensi : Cair Warna : Coklat Bau : Khas ekstrak Formula II Konsistensi : Agak kental Warna : Coklat Bau : Khas ekstrak Formula III Konsistensi : Kental Warna : Coklat Bau : Khas ekstrak
	Kontrol Basis Serum I Konsistensi : Cair Warna : Putih bening Bau : Bau lemah Kontrol Basis Serum II Konsistensi : Agak kental Warna : Putih bening Bau : Bau lemah Kontrol Basis Serum III Konsistensi: Kental Warna : Putih bening Bau : Bau lemah

c. Gambar uji homogenitas serum

Formula I  Homogen	Formula II  Homogen
Formula III  Homogen	Kontrol Basis I  Homogen
Kontrol Basis II  Homogen	Kontrol Basis III  Homogen

d. Gambar alat uji *pH*	e. Gambar uji viskositas	f. Gambar uji daya sebar
		

g. Gambar uji stabilitas sediaan serum



Lampiran 11. Data hasil pengujian sifat fisik serum

a. Hasil uji *p*H

Formula	Waktu	*p*H			Rata-rata	SD
		Replikasi 1	Replikasi 2	Replikasi 3		
1	Hari ke-1	5,86	5,89	5,87	5,87	0,01
	Hari ke- 8	5,84	5,80	5,77	5,80	0,03
2	Hari ke-1	5,62	5,65	5,63	5,63	0,01
	Hari ke- 8	5,03	5,06	5,02	5,03	0,02
3	Hari ke-1	5,53	5,54	5,55	5,54	0,01
	Hari ke- 8	5,39	5,41	5,43	5,41	0,02
4	Hari ke-1	6,79	6,78	6,80	6,79	0,01
	Hari ke- 8	6,24	6,25	6,26	6,25	0,01
5	Hari ke-1	6,58	6,54	6,56	6,56	0,02
	Hari ke- 8	6,06	6,04	6,08	6,06	0,02
6	Hari ke-1	6,39	6,38	6,40	6,39	0,01
	Hari ke- 8	5,87	5,88	5,89	5,88	0,01

Keterangan:

F1- F3 : Serum ekstrak etanol daun matoa

F4 – F6 : K- (Basis serum)

b. Hasil uji viskositas

Formula	Waktu	Viskositas (cP)			Rata-rata	± SD
		Replikasi 1	Replikasi 2	Replikasi 3		
1	Hari ke-1	730	740	750	740	10
	Hari ke- 8	700	730	740	723	20,8
2	Hari ke-1	1100	1115	1122	1112	11,2
	Hari ke- 8	1010	998	892	966	64,9
3	Hari ke-1	1750	1766	1773	1763	11,7
	Hari ke- 8	1700	1660	1600	1653	50,3
4	Hari ke-1	750	763	771	761	10,5
	Hari ke- 8	695	680	689	688	7,5
5	Hari ke-1	1510	1508	1504	1507	3,0
	Hari ke- 8	1353	1357	1359	1356	3,0
6	Hari ke-1	2900	2910	2925	2911	12
	Hari ke- 8	2653	2660	2665	2659	6

Keterangan :

F1- F3 : Serum ekstrak etanol daun matoa

F4 – F6 : K- (Basis serum)

c. Hasil uji daya sebar

Formula	Waktu	Diameter penyebaran (cm)			Rata-rata	±SD
		Replikasi 1	Replikasi 2	Replikasi 3		
1	1	7	7,3	7	7,1	0,17320508
		7,4	7,6	7,3	7,43333333	0,15275252
		7,7	7,8	7,5	7,66666667	0,15275252
		8	8,2	7,9	8,03333333	0,15275252
		Rata-rata			7,55833333	0,15786566
	8	7,4	7,6	7,3	7,43333333	0,15275252
		7,6	7,8	7,5	7,63333333	0,15275252
		7,9	8	7,8	7,9	0,1
		8,2	8,3	8	8,16666667	0,15275252
		Rata-rata			7,78333333	0,13956439
2	1	6,3	6	6,1	6,13333333	0,15275252
		6,5	6,4	6,3	6,4	0,1
		6,8	6,6	6,5	6,63333333	0,15275252
		7	6,9	6,8	6,9	0,1
		Rata-rata			6,51666667	0,12637626
	8	6,5	6,3	6,4	6,4	0,1
		6,8	6,6	6,5	6,63333333	0,15275252
		7,2	7	7	7,06666667	0,11547005
		7,4	7,1	7,3	7,26666667	0,15275252
		Rata-rata			6,84166667	0,13024378
3	1	5,2	5,3	5	5,16666667	0,15275252
		5,4	5,6	5,4	5,46666667	0,11547005
		5,7	5,9	5,8	5,8	0,1
		5,9	6	5,8	5,9	0,1
		Rata-rata			5,58333333	0,11705564
	8	5,5	5,6	5,8	5,63333333	0,15275252
		5,9	6	6,2	6,03333333	0,15275252
		6,3	6,5	6,4	6,4	0,1
		6,5	6,7	6,5	6,56666667	0,11547005
		Rata-rata			6,15833333	0,13024378
4	1	6	6,3	6,2	6,16666667	0,15275252
		6,4	6,7	6,5	6,53333333	0,15275252
		6,6	6,9	6,8	6,76666667	0,15275252

		7	7,3	7,2	7,16666667	0,15275252
		Rata-rata			6,65833333	0,15275252
	8	5,7	5,9	5,7	5,76666667	0,11547005
		6,2	6,4	6	6,2	0,2
		6,4	6,7	6,5	6,53333333	0,15275252
		6,6	6,9	6,7	6,73333333	0,15275252
		Rata-rata			6,30833333	0,15524378
5	1	5	5,4	5,3	5,23333333	0,2081666
		5,3	5,7	5,6	5,53333333	0,2081666
		5,7	5,9	5,8	5,8	0,1
		6	6,2	6,1	6,1	0,1
		Rata-rata			5,66666667	0,1540833
	8	5,4	5,6	5,4	5,46666667	0,11547005
		5,8	6,1	5,8	5,9	0,17320508
		6,3	6,4	6,3	6,33333333	0,05773503
		6,5	6,6	6,5	6,53333333	0,05773503
		Rata-rata			6,05833333	0,1010363
6	1	4	4,3	4,2	4,16666667	0,15275252
		4,4	4,7	4,5	4,53333333	0,15275252
		4,7	4,9	4,8	4,8	0,1
		5	5,4	5,2	5,2	0,2
		Rata-rata			4,675	0,15137626
	8	4,8	4,4	4,5	4,56666667	0,2081666
		5,2	5	5,1	5,1	0,1
		6	5,8	6	5,93333333	0,11547005
		6,3	6,1	6,3	6,23333333	0,11547005
		Rata-rata			5,45833333	0,13477668

Keterangan :

F1- F3 : Serum ekstrak etanol daun matoa

F4 – F6 : K- (Basis serum)

Lampiran 12. Data penimbangan dan pembuatan DPPH

Pembuatan larutan stok DPPH

Serbuk DPPH untuk uji aktivitas antioksidan ditimbang sesuai dengan hasil perhitungan berikut :

Penimbangan DPPH = BM DPPH x volume larutan x molaritas DPPH
= 394,32 g/mol x 0,100 liter x 0,0004 M
= 0,01578 gram
= 15,78 mg ≈ 15,8 mg

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

Pembuatan larutan stok ekstrak daun matoa

Pembuatan larutan ekstrak dilakukan dengan menimbang ekstrak sebanyak 100 mg dan dimasukkan dalam labu tentukur 100 ml selanjutnya dilarutkan dengan etanol *p.a* sampai tanda batas sehingga diperoleh konsentrasi 1000 ppm.

Konsentrasi ekstrak = 100 mg/ 100 mL
= 100 mg/ 1000 ml
= 1000 ppm

Larutan stok ekstrak 1000 ppm diencerkan menjadi 100 ppm dengan cara dipipet 1 mL larutan 1000 ppm kemudian dimasukkan dalam labu tentukur 10 mL tambah etanol p.*a* sampai tanda batas. Kemudian dibuat 5 seri pengenceran yakni 10 ppm, 20 ppm, 30 ppm, 40 ppm, dan 50 ppm sebanyak 10 mL.

Konsentrasi 10 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 10 ppm
V1 = 1 mL

Konsentrasi 20 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 20 ppm
V1 = 2 mL

Konsentrasi 30 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 30 ppm
V1 = 3 mL

Konsentrasi 40 ppm

V1 x C1 = V2 x C2

V1 x 100 ppm = 10 x 40 ppm
V1 = 4 mL

Konsentrasi 50 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 50 ppm
V1 = 5 mL

Pembuatan larutan stok sediaan basis serum (Kontrol -)

Pembuatan larutan stok sediaan basis serum dilakukan dengan menimbang ekstrak sebanyak 10 mg dan dimasukkan dalam labu tentukur 100 ml selanjutnya dilarutkan dengan etanol *p.a* sampai tanda batas sehingga diperoleh konsentrasi 100 ppm.

Konsentrasi (K-) = 10 mg/ 100 mL
= 10 mg/ 1000 ml
= 100 ppm

Larutan ekstrak 100 ppm diencerkan menjadi 5 seri pengenceran yakni 20 ppm, 40 ppm, 60 ppm, 80 ppm, dan 100 ppm sebanyak 10 mL.

Konsentrasi 20 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 20 ppm
V1 = 2 mL

Konsentrasi 40 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 40 ppm
V1 = 4 mL

Konsentrasi 60 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 60 ppm
V1 = 6 mL

Konsentrasi 80 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 80 ppm
V1 = 8 mL

Konsentrasi 100 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 100 ppm
V1 = 10 mL

Pembuatan larutan stok serum ekstrak etanol daun matoa

Pembuatan larutan serum ekstrak etanol daun matoa dilakukan dengan menimbang sediaan sebanyak 1.000 mg dan dimasukkan dalam labu tentukur 100 ml selanjutnya dilarutkan dengan etanol *p.a* sampai tanda batas sehingga diperoleh konsentrasi 10.000 ppm.

$$\text{Penimbangan larutan stok serum} = \frac{\text{Bobot ekstrak x Bobot serum}}{\text{Bobot ekstrak dalam serum}}$$

$$= \frac{10 \text{ mg x } 100.000 \text{ mg}}{1.000 \text{ mg}}$$

$$= 1.000 \text{ mg}$$

Konsentrasi serum daun matoa = 1.000 mg/ 100 mL

= 1.000 mg/ 1.000 ml

= 10.000 ppm

Larutan stok sediaan 10.000 ppm diencerkan menjadi 1.000 ppm dengan cara dipipet 1 mL larutan 10.000 ppm kemudian dimasukkan dalam labu tentukur 10 mL tambah etanol *p.a* sampai tanda batas diperoleh larutan dengan konsentrasi 1.000 ppm, selanjutnya dari larutan 1.000 ppm diencerkan menjadi 100 ppm dengan cara dipipet 1 mL larutan 1.000 ppm lalu dimasukkan dalam labu tentukur 10 mL tambah etanol *p.a* sampai tanda batas dan diperoleh larutan konsentrasi 100 ppm. Kemudian dibuat 5 seri pengenceran yakni 10 ppm, 20 ppm, 30 ppm, 40 ppm, dan 50 ppm sebanyak 10 mL.

Konsentrasi 10 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 10 ppm
V1 = 1 mL

Konsentrasi 20 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 20 ppm
V1 = 2 mL

Konsentrasi 30 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 30 ppm
V1 = 3 mL

Konsentrasi 40 ppm

V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 40 ppm
V1 = 4 mL

Konsentrasi 50 ppm

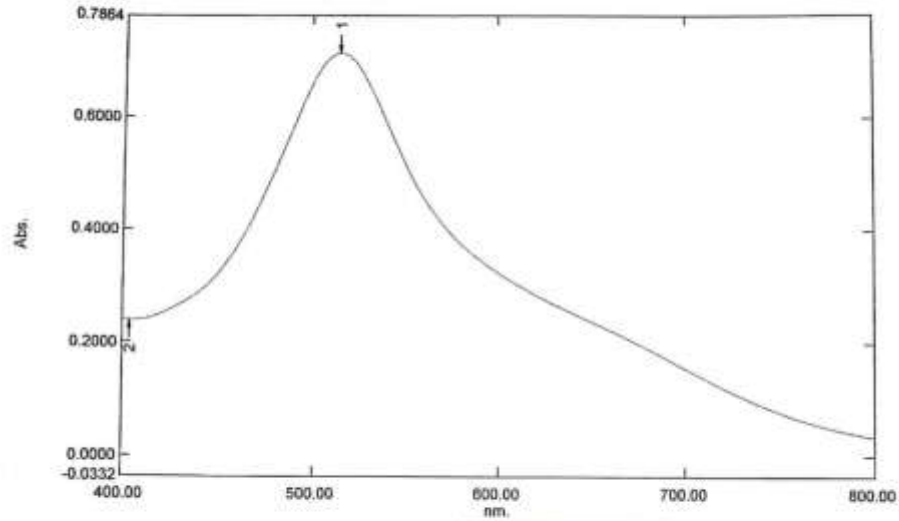
V1 x C1 = V2 x C2
V1 x 100 ppm = 10 x 50 ppm
V1 = 5 mL

Lampiran 13. Penentuan panjang gelombang maksimum

Spectrum Peak Pick Report

03/30/2022 10:13:37 AM

Data Set: File_220330_100600 - RawData



No.	P/V	Wavelength	Abs.	Description
1	P	515.00	0.7181	
2	V	404.00	0.2360	

[Measurement Properties]
Wavelength Range (nm.): 400.00 to 800.00
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

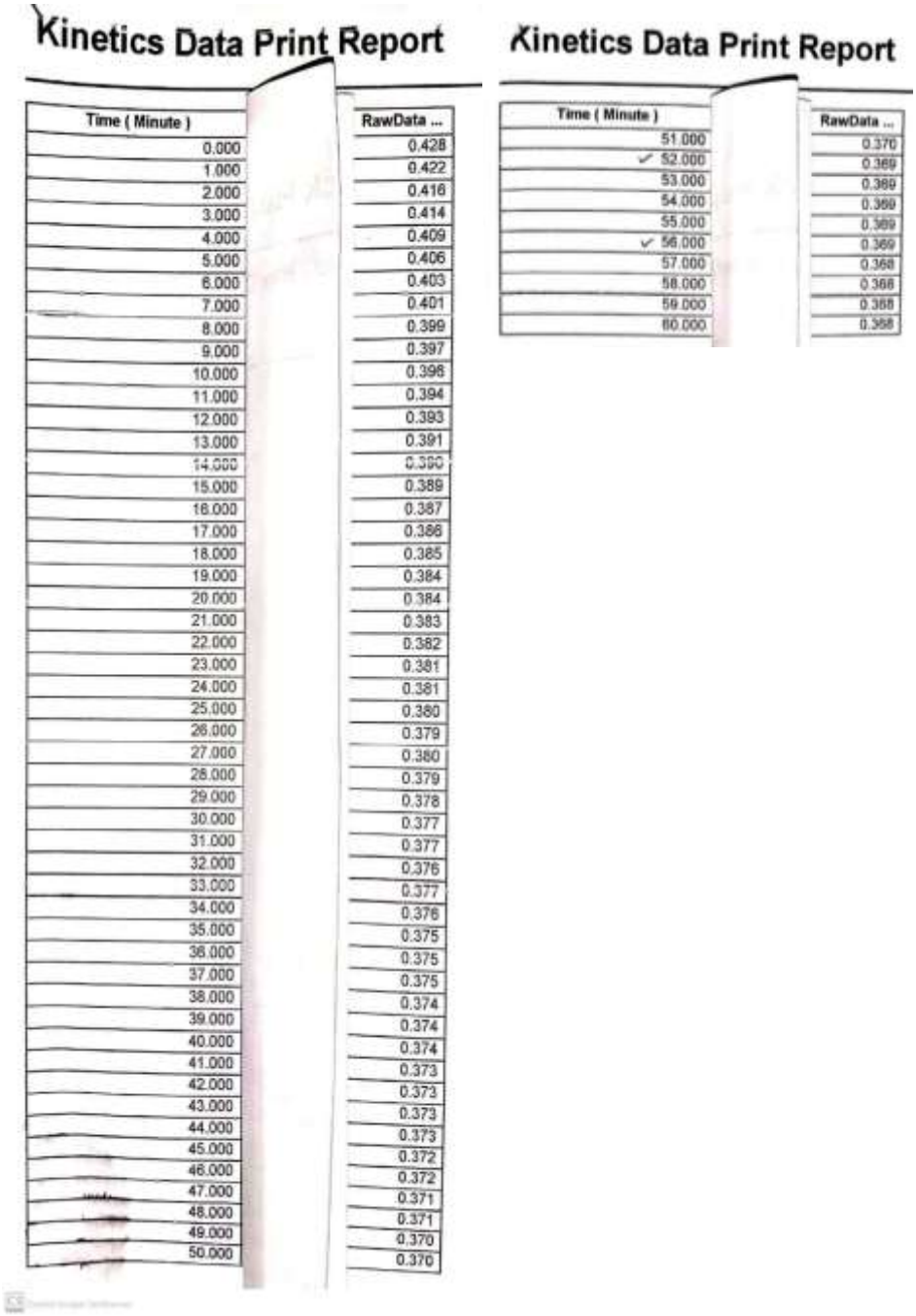
[Attachment Properties]
Attachment: None

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

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

Lampiran 14. Penentuan operating time

a) *Operating time* ekstrak



Kinetics Data Print Report

Time (Minute)	RawData ...
0.000	0.428
1.000	0.422
2.000	0.416
3.000	0.414
4.000	0.409
5.000	0.406
6.000	0.403
7.000	0.401
8.000	0.399
9.000	0.397
10.000	0.396
11.000	0.394
12.000	0.393
13.000	0.391
14.000	0.390
15.000	0.389
16.000	0.387
17.000	0.386
18.000	0.385
19.000	0.384
20.000	0.384
21.000	0.383
22.000	0.382
23.000	0.381
24.000	0.381
25.000	0.380
26.000	0.379
27.000	0.380
28.000	0.379
29.000	0.378
30.000	0.377
31.000	0.377
32.000	0.376
33.000	0.377
34.000	0.376
35.000	0.375
36.000	0.375
37.000	0.375
38.000	0.374
39.000	0.374
40.000	0.374
41.000	0.373
42.000	0.373
43.000	0.373
44.000	0.373
45.000	0.372
46.000	0.372
47.000	0.371
48.000	0.371
49.000	0.370
50.000	0.370

Kinetics Data Print Report

Time (Minute)	RawData ...
51.000	0.370
52.000	0.369
53.000	0.369
54.000	0.369
55.000	0.369
56.000	0.369
57.000	0.368
58.000	0.368
59.000	0.368
60.000	0.368

b) *Operating time* sediaan serum daun matoa

Kinetics Data Print Report

Time (Minute)	RawData ...
0.000	0.659
1.000	0.658
2.000	0.657
3.000	0.656
4.000	0.656
5.000	0.655
6.000	0.654
7.000	0.655
8.000	0.653
9.000	0.653
10.000	0.652
11.000	0.653
12.000	0.652
13.000	0.651
14.000	0.650
15.000	0.650
16.000	0.649
17.000	0.649
18.000	0.648
19.000	0.648
20.000	0.648
21.000	0.647
22.000	0.647
23.000	0.646
24.000	0.646
25.000	0.645
26.000	0.645
27.000	0.645
28.000	0.645
29.000	0.644
30.000	0.644
31.000	0.644
32.000	0.643
33.000	0.643
34.000	0.643
35.000	0.643
36.000	0.642
37.000	0.642
38.000	0.642
39.000	0.642
✓ 40.000	0.641
✗ 41.000	0.641
42.000	0.641
43.000	0.641
44.000	0.641
45.000	0.641
✓ 46.000	0.641
47.000	0.640
48.000	0.640
49.000	0.640
50.000	0.639

Kinetics Data Print Report

Time (Minute)	RawData ...
51.000	0.639
52.000	0.639
53.000	0.639
54.000	0.639
55.000	0.639
56.000	0.639
57.000	0.638
58.000	0.638
59.000	0.638
60.000	0.638

Lampiran 15. Perhitungan aktivitas antioksidan dan IC_{50}

Perhitungan aktivitas antioksidan dan IC_{50} Ekstrak Etanol Daun Matoa (abs kontrol = 0,909)

Replikasi I				
Kons (ppm)	Abs	% Peredaman	a	23,608
10	0,589	35,2035	b	0,9483
20	0,534	41,2541	r	0,9926
30	0,457	49,7250	IC_{50}	27,83
40	0,348	61,7162		
50	0,251	72,3872		

Replikasi II				
Kons (ppm)	Abs	% Peredaman	a	23,344
10	0,585	35,6436	b	0,9395
20	0,538	40,8141	r	0,9831
30	0.477	47,5248	IC_{50}	28,37
40	0,352	61,2761		
50	0,251	72,3872		

Replikasi III				
Kons (ppm)	Abs	% peredaman	A	22,233
10	0,613	32,5633	B	1,0374
20	0,539	40,7041	R	0,9917
30	0,397	56,3256	IC_{50}	26,77
40	0,320	64,7956		
50	0,251	72,3872		

Rata-rata IC_{50} Ekstrak Etanol Daun Matoa = 27,66 ± 0,817

Perhitungan aktivitas antioksidan dan IC_{50} Sediaan Serum Daun Matoa Formula I (abs kontrol = 0,894)

Replikasi I				
Kons (ppm)	Abs	% Peredaman	a	10,94
10	0,743	16,8904	b	0,566
20	0,703	21,3647	r	0,9929
30	0,632	29,3065	IC_{50}	69,01
40	0,605	32,3266		
50	0,539	39,7092		

Replikasi II				
Kons (ppm)	Abs	% Peredaman	a	13,87
10	0,722	19,2394	b	0,519
20	0,681	23,8255	r	0,9955
30	0,634	29,0828	IC_{50}	69,61
40	0,573	35,9060		
50	0,544	39,1499		

Replikasi III				
Kons (ppm)	Abs	% peredaman	a	10,28
10	0,750	16,1074	b	0,5626
20	0,703	21,3647	r	0,9984
30	0,656	26,6219	IC_{50}	70,60
40	0,594	33,5570		
50	0,553	38,1432		

Rata-rata IC_{50} Formula I = 69,74 ± 0,800

Perhitungan aktivitas antioksidan dan IC_{50} Sediaan Serum Daun Matoa Formula II (abs kontrol = 0,894)

Replikasi I				
Kons (ppm)	Abs	% peredaman	a	9,0045
10	0,762	14,7651	b	0,5157
20	0,722	19,2394	r	0,9933
30	0,689	22,9306	IC_{50}	79,50
40	0,621	30,5369		
50	0,582	34,8993		

Replikasi II				
Kons (ppm)	Abs	% peredaman	a	5,8837
10	0,778	12,9754	b	0,5705
20	0,757	15,3244	r	0,9865
30	0,694	22,3714	IC_{50}	77,33
40	0,623	30,3132		
50	0,590	34,0045		

Replikasi III				
Kons (ppm)	Abs	% peredaman	a	9,7092
10	0,768	14,0940	b	0,519
20	0,705	21,1409	r	0,9813
30	0,678	24,1611	IC_{50}	77,63
40	0,601	32,7740		
50	0,588	34,2282		

Rata-rata IC_{50} = 78,15 ± 1,175

Perhitungan aktivitas antioksidan dan IC_{50} Sediaan Serum Daun Matoa Formula III (abs kontrol = 0,894)

Replikasi I				
Kons (ppm)	Abs	% peredaman	a	1,8233
10	0,841	5,9284	b	0,5089
20	0,776	13,1991	r	0,9924
30	0,735	17,7852	IC_{50}	94,66
40	0,705	21,1409		
50	0,649	27,4049		

Replikasi II				
Kons (ppm)	Abs	% peredaman	a	1,3199
10	0,832	6,9351	b	0,528
20	0,773	13,5347	r	0,9737
30	0,761	14,8770	IC_{50}	92,20
40	0,709	20,6935		
50	0,628	29,7539		

Replikasi III				
Kons (ppm)	Abs	% peredaman	a	-0,492
10	0,836	6,4877	b	0,5302
20	0,810	9,3960	r	0,9812
30	0,772	13,6465	IC_{50}	95,23
40	0,718	19,6868		
50	0,645	27,8532		

Rata-rata IC_{50} Formula III = 94,03 ± 1,609

Perhitungan aktivitas antioksidan dan IC_{50} Formula Basis Serum (abs kontrol = 0,879)

Replikasi I				
Kons (ppm)	Abs	% peredaman	a	-2,2
20	0,869	1,1377	b	0,1828
40	0,825	6,1433	r	0,9918
60	0,807	8,1911	IC_{50}	285,53
80	0,776	11,7634		
100	0,733	16,6098		

Replikasi II				
Kons (ppm)	Abs	% peredaman	a	-2,503
20	0,867	1,3652	b	0,1854
40	0,834	5,1195	r	0,9982
60	0,808	8,0774	IC_{50}	283,13
80	0,772	12,1729		
100	0,735	16,3823		

Replikasi III				
Kons (ppm)	Abs	% peredaman	a	-1,775
20	0,864	1,7065	b	0,1786
40	0,828	5,8020	r	0,9981
60	0,803	8,6462	IC_{50}	289,87
80	0,772	12,1729		
100	0,735	16,3823		

Rata-rata IC_{50} = 289,87 ± 3,418

Lampiran 16. Uji statistik mutu fisik serum

1. Uji pH serum ekstrak etanol daun matoa

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Uji_pH	Statistic	df	Sig.	Statistic	df	Sig.
Uji_pH_Serum_eks	F1_Carbopol0,4	,253	3	.	,964	3	,637
	F2_Carbpol0,5	,253	3	.	,964	3	,637
	F3_Carbopol0,6	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

Descriptives

Uji_pH_Serum_eks

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
F1_Carbopol0,4	3	5,8733	,01528	,00882	5,8354	5,9113	5,86	5,89
F2_Carbpol0,5	3	5,6333	,01528	,00882	5,5954	5,6713	5,62	5,65
F3_Carbopol0,6	3	5,5400	,01000	,00577	5,5152	5,5648	5,53	5,55
Total	9	5,6822	,14940	,04980	5,5674	5,7971	5,53	5,89

Test of Homogeneity of Variances

Uji_pH_Serum_eks

Levene Statistic	df1	df2	Sig.
,457	2	6	,653

ANOVA

Uji_pH_Serum_eks

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,177	2	,089	469,647	,000
Within Groups	,001	6	,000		
Total	,179	8			

2. Uji pH basis serum

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Uji_pH	Statistic	df	Sig.	Statistic	df	Sig.
Uji_pH_Serumbasis	F1_Carbopol0,4	,175	3	.	1,000	3	1,000
	F2_Carbopol0,5	,175	3	.	1,000	3	1,000
	F3_Carbopol0,6	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Uji_pH_Serumbasis	,667	2	6	,548

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Uji_pH_Serumbasis	F1_Carbopol0,4	3	6,7900	,01000	,00577	6,7652	6,8148	6,78	6,80
	F2_Carbopol0,5	3	6,5600	,02000	,01155	6,5103	6,6097	6,54	6,58
	F3_Carbopol0,6	3	6,3900	,01000	,00577	6,3652	6,4148	6,38	6,40
	Total	9	6,5800	,17428	,05809	6,4460	6,7140	6,38	6,80

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Uji_pH_Serumbasis	Between Groups	,242	2	,121	604,500	,000
	Within Groups	,001	6	,000		
	Total	,243	8			

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Uji_viskositas	Statistic	df	Sig.	Statistic	df	Sig.
Uji_viskositas_serum_eks	F1_Carbopol0,4	,175	3	.	1,000	3	1,000
	F2_Carbopol0,5	,260	3	.	,958	3	,605
	F3_Carbopol0,6	,267	3	.	,951	3	,576

a. Lilliefors Significance Correction

3. Uji viskositas serum ekstrak etanol daun matoa

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Uji_viskositas_serum_eks	F1_Carbopol0,4	3	740,00	10,000	5,774	715,16	764,84	730	750
	F2_Carbopol0,5	3	1112,33	11,240	6,489	1084,41	1140,25	1100	1122
	F3_Carbopol0,6	3	1763,00	11,790	6,807	1733,71	1792,29	1750	1773
	Total	9	1205,11	448,506	149,502	860,36	1549,86	730	1773

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Uji_viskositas_serum_eks	,117	2	6	,891

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Uji_viskositas_serum_eks	Between Groups	1608528,222	2	804264,111	6604,359	,000
	Within Groups	730,667	6	121,778		
	Total	1609258,889	8			

4. Uji Viskositas basis serum

Tests of Normality

	Uji_viskositas	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Uji_viskositas_serum_basis	F1_carbopol0,4	,229	3	.	,981	3	,739
	F2_carbopol0,5	,246	3	.	,970	3	,668
	F3_carbopol0,6	,219	3	.	,987	3	,780

a. Lilliefors Significance Correction

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Uji_viskositas_serum_basis	F1_carbopol0,4	3	761,33	10,599	6,119	735,00	787,66	750	771
	F2_carbopol0,5	3	1512,67	11,676	6,741	1483,66	1541,67	1500	1523
	F3_carbopol0,6	3	2911,67	12,583	7,265	2880,41	2942,92	2900	2925
	Total	9	1728,56	945,149	315,050	1002,05	2455,06	750	2925

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Uji_viskositas_serum_basis	,043	2	6	,958

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Uji_viskositas_serum_basis	Between Groups	7145636,222	2	3572818,111	26335,269	,000
	Within Groups	814,000	6	135,667		
	Total	7146450,222	8			

5. Uji daya sebar serum ekstrak etanol daun matoa

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Uji_dayasebar	Statistic	df	Sig.	Statistic	df	Sig.
Uji_dayasebar_Serum_eks	1	,385	3	.	,750	3	,000
	2	,253	3	.	,964	3	,637
	3	,253	3	.	,964	3	,637
	4	,253	3	.	,964	3	,637
	5	,253	3	.	,964	3	,637
	6	,175	3	.	1,000	3	1,000
	7	,253	3	.	,964	3	,637
	8	,175	3	.	1,000	3	1,000
	9	,253	3	.	,964	3	,637
	10	,385	3	.	,750	3	,000
	11	,175	3	.	1,000	3	1,000
	12	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Uji_dayasebar	36	6,50	3,501	1	12
F1_beban_0	3	7,100	,1732	7,0	7,3
F1_beban_50	3	7,433	,1528	7,3	7,6
F1_beban_100	3	7,667	,1528	7,5	7,8
F1_beban_150	3	8,033	,1528	7,9	8,2
F2_beban_0	3	6,133	,1528	6,0	6,3
F2_beban_50	3	6,400	,1000	6,3	6,5
F2_beban_100	3	6,633	,1528	6,5	6,8
F2_beban_150	3	6,900	,1000	6,8	7,0
F3_beban_0	3	5,167	,1528	5,0	5,3
F3_beban_50	3	5,467	,1155	5,4	5,6
F3_beban_100	3	5,800	,1000	5,7	5,9
F3_beban_150	3	5,900	,1000	5,8	6,0

One-Sample Kolmogorov-Smirnov Test

		Uji_dayasebar	F1_beban_0	F1_beban_50	F1_beban_100	F1_beban_150	F2_beban_0
N		36	3	3	3	3	3
Normal Parameters[a,b]	Mean	6,50	7,100	7,433	7,667	8,033	6,133
	Std. Deviation	3,501	,1732	,1528	,1528	,1528	,1528
Most Extreme Differences	Absolute	,096	,385	,253	,253	,253	,253
	Positive	,096	,385	,253	,196	,253	,253
	Negative	-,096	-,282	-,196	-,253	-,196	-,196
Test Statistic		,096	,385	,253	,253	,253	,253
Asymp. Sig. (2-tailed)		,200[c,d]	.[e]	.[e]	.[e]	.[e]	.[e]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Significance can not be computed because sum of case weights is less than 5.

F2_beban_50	F2_beban_100	F2_beban_150	F3_beban_0	F3_beban_50	F3_beban_100	F3_beban_150
3	3	3	3	3	3	3
6,400	6,633	6,900	5,167	5,467	5,800	5,900
,1000	,1528	,1000	,1528	,1155	,1000	,1000
,175	,253	,175	,253	,385	,175	,175
,175	,253	,175	,196	,385	,175	,175
-,175	-,196	-,175	-,253	-,282	-,175	-,175
,175	,253	,175	,253	,385	,175	,175
.c,e	.c,e	.c,e	.c,e	.c,e	.c,e	.c,e

Ranks

	Uji_dayasebar	N	Mean Rank
Uji_dayasebar_Serum_eks	1	3	25,83
	2	3	29,17
	3	3	31,67
	4	3	35,00
	5	3	14,00
	6	3	17,00
	7	3	20,00
	8	3	23,17
	9	3	2,00
	10	3	5,00
	11	3	8,67
	12	3	10,50
	Total	36	
F1_beban_0	1	3	2,00
	Total	3[a]	
F1_beban_50	1	3	2,00
	Total	3[a]	
F1_beban_100	1	3	2,00
	Total	3[a]	
F1_beban_150	1	3	2,00
	Total	3[a]	
F2_beban_0	1	3	2,00
	Total	3[a]	
F2_beban_50	1	3	2,00
	Total	3[a]	
F2_beban_100	1	3	2,00
	Total	3[a]	
F2_beban_150	1	3	2,00
	Total	3[a]	
F3_beban_0	1	3	2,00
	Total	3[a]	
F3_beban_50	1	3	2,00
	Total	3[a]	
F3_beban_100	1	3	2,00
	Total	3[a]	
F3_beban_150	1	3	2,00
	Total	3[a]	

a. There is only one non-empty group. Kruskal-Wallis Test cannot be performed.

Test Statistics[a,b]

	Uji_dayasebar_Serum_eks
Chi-Square	34,510
df	11
Asymp. Sig.	,000

a. Kruskal Wallis Test

b. Grouping Variable: Uji_dayasebar

6. Uji daya sebar basis serum

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Uji_dayasebar	Statistic	df	Sig.	Statistic	df	Sig.
Uji_dayasebar_serum_basis	1	,253	3	.	,964	3	,637
	2	,253	3	.	,964	3	,637
	3	,253	3	.	,964	3	,637
	4	,253	3	.	,964	3	,637
	5	,292	3	.	,923	3	,463
	6	,292	3	.	,923	3	,463
	7	,175	3	.	1,000	3	1,000
	8	,175	3	.	1,000	3	1,000
	9	,253	3	.	,964	3	,637
	10	,253	3	.	,964	3	,637
	11	,175	3	.	1,000	3	1,000
	12	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Uji_dayasebar_serum_basis	1	3	6,167	,1528	,0882	5,787	6,546	6,0	6,3
	2	3	6,533	,1528	,0882	6,154	6,913	6,4	6,7
	3	3	6,767	,1528	,0882	6,387	7,146	6,6	6,9
	4	3	7,167	,1528	,0882	6,787	7,546	7,0	7,3
	5	3	5,233	,2082	,1202	4,716	5,750	5,0	5,4
	6	3	5,533	,2082	,1202	5,016	6,050	5,3	5,7
	7	3	5,800	,1000	,0577	5,552	6,048	5,7	5,9
	8	3	6,100	,1000	,0577	5,852	6,348	6,0	6,2
	9	3	4,167	,1528	,0882	3,787	4,546	4,0	4,3
	10	3	4,533	,1528	,0882	4,154	4,913	4,4	4,7
	11	3	4,800	,1000	,0577	4,552	5,048	4,7	4,9
	12	3	5,200	,2000	,1155	4,703	5,697	5,0	5,4
	Total	36	5,667	,9059	,1510	5,360	5,973	4,0	7,3

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Uji_dayasebar_serum_basis	,510	11	24	,878

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Uji_dayasebar_serum_basis	Between Groups	28,127	11	2,557	103,428	,000
	Within Groups	,593	24	,025		
	Total	28,720	35			

Lampiran 17. Uji statistik stabilitas serum

1. Uji stabilitas *p*H serum ekstrak etanol daun matoa F1

Tests of Normality

	stabilitas_pH_serum_eks	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
hasil_stabilitas	1	,253	3	.	,964	3	,637
	2	,204	3	.	,993	3	,843

a. Lilliefors Significance Correction

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
hasil_stabilitas	1	3	5,8733	,01528	,00882	5,8354	5,9113	5,86	5,89
	2	3	5,8033	,03512	,02028	5,7161	5,8906	5,77	5,84
	Total	6	5,8383	,04535	,01851	5,7907	5,8859	5,77	5,89

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
hasil_stabilitas	1,385	1	4	,305

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
hasil_stabilitas	Between Groups	,007	1	,007	10,023	,034
	Within Groups	,003	4	,001		
	Total	,010	5			

Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	F1_seberum - F1_sesudah	,07000	,04359	,02517	-,03828	,17828	2,782	2	,109

2. Uji stabilitas pH serum ekstrak etanol daun matoa F2

Tests of Normality

	Uji_stabilitas_pH_serum_eks	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
Hasil_stabilitas	1	,253	3	.	,964	3	,637
	2	,276	3	.	,942	3	,537

a. Lilliefors Significance Correction

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Hasil_stabilitas	1	3	5,6333	,01528	,00882	5,5954	5,6713	5,62	5,65
	2	3	5,5800	,03606	,02082	5,4904	5,6696	5,54	5,61
	Total	6	5,6067	,03830	,01563	5,5665	5,6469	5,54	5,65

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_stabilitas	2,579	1	4	,184

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_stabilitas	Between Groups	31828,167	1	31828,167	14,655	,019
	Within Groups	8687,333	4	2171,833		
	Total	40515,500	5			

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	F2_sebelum - F2_sesudah	,05333	,03055	,01764	-,02256	,12922	3,024	2	,094

3. Uji pH serum ekstrak etanol daun matoa F3

Tests of Normality

	stabilitas_pH_serum_eks	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
hasil_stabilitas	1	,175	3	.	1,000	3	1,000
	2	,175	3	.	1,000	3	1,000

a. Lilliefors Significance Correction

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
hasil_stabilitas	1	3	5,5400	,01000	,00577	5,5152	5,5648	5,53	5,55
	2	3	5,4100	,02000	,01155	5,3603	5,4597	5,39	5,43
	Total	6	5,4750	,07259	,02964	5,3988	5,5512	5,39	5,55

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
hasil_stabilitas	1	3	5,5400	,01000	,00577	5,5152	5,5648	5,53	5,55
	2	3	5,4100	,02000	,01155	5,3603	5,4597	5,39	5,43
	Total	6	5,4750	,07259	,02964	5,3988	5,5512	5,39	5,55

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
hasil_stabilitas	,800	1	4	,422

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
hasil_stabilitas	Between Groups	,025	1	,025	101,400	,001
	Within Groups	,001	4	,000		
	Total	,026	5			

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	F3_sebelum - F3_sesudah	,13000	,01732	,01000	,08697	,17303	13,000	2	,006

4. Uji stabilitas viskositas serum ekstrak etanol daun matoa F1

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Hasil_stabilitas	1	3	740,00	10,000	5,774	715,16	764,84	730	750
	2	3	723,33	20,817	12,019	671,62	775,04	700	740
	Total	6	731,67	17,224	7,032	713,59	749,74	700	750

Tests of Normality

	Stabilitas_viskositas_serum_eks	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
Hasil_stabilitas	1	,175	3	.	1,000	3	1,000
	2	,292	3	.	,923	3	,463

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_stabilitas	2,286	1	4	,205

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_stabilitas	Between Groups	416,667	1	416,667	1,563	,279
	Within Groups	1066,667	4	266,667		
	Total	1483,333	5			

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	F1_sebelum - F1_sesudah	16,667	11,547	6,667	-12,018	45,351	2,500	2	,130

5. Uji stabilitas viskositas serum ekstrak etanol daun matoa F2

Tests of Normality

	Stabilitas_viskositas_serum_eks	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
Hasil_stabilitas	1	,260	3	.	,958	3	,605
	2	,352	3	.	,825	3	,177

a. Lilliefors Significance Correction

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Hasil_stabilitas	1	3	1112,33	11,240	6,489	1084,41	1140,25	1100	1122
	2	3	966,67	64,941	37,494	805,34	1127,99	892	1010
	Total	6	1039,50	90,017	36,749	945,03	1133,97	892	1122

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_stabilitas	9,858	1	4	,035

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_stabilitas	Between Groups	31828,167	1	31828,167	14,655	,019
	Within Groups	8687,333	4	2171,833		
	Total	40515,500	5			

Paired Samples Test

		Paired Differences Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	F2_sebelum - F2_sesudah	145,667	74,272	42,881	-38,835	330,169	3,397	2	,077

6. Uji stabilitas viskositas serum ekstrak etanol daun matoa F3

Tests of Normality

	Stabilitas_viskositas_serum_eks	Kolmogorov-Smirnov[a] Statistic	df	Sig.	Shapiro-Wilk Statistic	df	Sig.
Hasil_stabilitas	1	,267	3	.	,951	3	,576
	2	,219	3	.	,987	3	,780

a. Lilliefors Significance Correction

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	Upper Bound	Minimum	Maximum
Hasil_stabilitas	1	3	1763,00	11,790	6,807	1733,71	1792,29	1750	1773
	2	3	1653,33	50,332	29,059	1528,30	1778,37	1600	1700
	Total	6	1708,17	68,388	27,919	1636,40	1779,94	1600	1773

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Hasil_stabilitas	3,270	1	4	,145

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Hasil_stabilitas	Between Groups	18040,167	1	18040,167	13,501	,021
	Within Groups	5344,667	4	1336,167		
	Total	23384,833	5			

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	F3_sebelum - F3_sesudah	109,667	61,582	35,554	-43,311	262,645	3,084	2	,091

7. Uji stabilitas daya sebar serum ekstrak etanol daun matoa F1

Tests of Normality

	Stabilitas_dayasebar_serum_eks	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_stabilitas	1	,385	3	.	,750	3	,000
	2	,253	3	.	,964	3	,637
	3	,253	3	.	,964	3	,637
	4	,253	3	.	,964	3	,637
	5	,253	3	.	,964	3	,637
	6	,175	3	.	1,000	3	1,000
	7	,253	3	.	,964	3	,637
	8	,253	3	.	,964	3	,637

a. Lilliefors Significance Correction

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Hasil_stabilitas	24	7,671	,3593	7,0	8,3
F1_sebelum_0	3	7,100	,1732	7,0	7,3
F1_sesudah_0	3	7,433	,1528	7,3	7,6
F1_sebelum_50	3	7,433	,1528	7,3	7,6
F1_sesudah_50	3	7,633	,1528	7,5	7,8
F1_sebelum_100	3	7,667	,1528	7,5	7,8
F1_sesudah_100	3	7,900	,1000	7,8	8,0
F1_sebelum_150	3	8,033	,1528	7,9	8,2
F1_sesudah_150	3	8,167	,1528	8,0	8,3

One-Sample Kolmogorov-Smirnov Test

		Hasil_stabilitas	F1_sebelum_0	F1_sesudah_0	F1_sebelum_50	F1_sesudah_50
N		24	3	3	3	3
Normal Parameters[a,b]	Mean	7,671	7,100	7,433	7,433	7,633
	Std. Deviation	,3593	,1732	,1528	,1528	,1528
Most Extreme Differences	Absolute	,099	,385	,253	,253	,253
	Positive	,078	,385	,253	,253	,253
	Negative	-,099	-,282	-,196	-,196	-,196
Test Statistic		,099	,385	,253	,253	,253
Asymp. Sig. (2-tailed)		,200[c,d]	.[c,e]	.[c,e]	.[c,e]	.[c,e]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

e. Significance can not be computed because sum of case weights is less than 5.

F1_sebelum_100	F1_sesudah_100	F1_sebelum_150	F1_sesudah_150
3	3	3	3
7,667	7,900	8,033	8,167
,1528	,1000	,1528	,1528
,253	,175	,253	,253
,196	,175	,253	,196
-,253	-,175	-,196	-,253
,253	,175	,253	,253
.[c,e]	.[c,e]	.[c,e]	.[c,e]

Ranks

	Stabilitas_dayasebar_serum_eks	N	Mean Rank	Sum of Ranks
Hasil_stabilitas	1	3	2,00	6,00
	8	3	5,00	15,00
	Total	6		
F1_sebelum_0	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sesudah_0	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sebelum_50	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sesudah_50	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sebelum_100	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sesudah_100	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sebelum_150	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F1_sesudah_150	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		

a. Mann-Whitney Test cannot be performed on empty groups.

Test Statistics[a]

	Hasil_stabilitas
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: Stabilitas_dayasebar_serum_eks

b. Not corrected for ties.

Test Statistics[a]

	F1_sesudah_0 - F1_sebelum_0	F1_sesudah_50 - F1_sebelum_50	F1_sesudah_100 - F1_sebelum_100	F1_sesudah_150 - F1_sebelum_150
Z	-1,633[b]	-1,732[b]	-1,633[b]	-1,633[b]
Asymp. Sig. (2-tailed)	,102	,083	,102	,102

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

8. Uji stabilitas daya sebar serum ekstrak etanol daun matoa F2

Tests of Normality

	Stabilitas_dayasebar_serum_eks	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_stabilitas	1	,253	3	.	,964	3	,637
	2	,175	3	.	1,000	3	1,000
	3	,175	3	.	1,000	3	1,000
	4	,253	3	.	,964	3	,637
	5	,253	3	.	,964	3	,637
	6	,385	3	.	,750	3	,000
	7	,175	3	.	1,000	3	1,000
	8	,253	3	.	,964	3	,637

a. Lilliefors Significance Correction

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Hasil_stabilitas	24	6,679	,3776	6,0	7,4
F2_sebelum_0	3	6,133	,1528	6,0	6,3
F2_sesudah_0	3	6,400	,1000	6,3	6,5
F2_sebelum_50	3	6,400	,1000	6,3	6,5
F2_sesudah_50	3	6,633	,1528	6,5	6,8
F2_sebelum_100	3	6,633	,1528	6,5	6,8
F2_sesudah_100	3	7,067	,1155	7,0	7,2
F2_sebelum_150	3	6,900	,1000	6,8	7,0
F2_sesudah_150	3	7,267	,1528	7,1	7,4

One-Sample Kolmogorov-Smirnov Test

		Hasil_stabilitas	F2_sebelum_0	F2_sesudah_0	F2_sebelum_50	F2_sesudah_50	F2_sebelum_100	F2_sesudah_100	F2_sebelum_150	F2_sesudah_150
N		24	3	3	3	3	3	3	3	3
Normal Parameters[a,b]	Mean	6,679	6,133	6,400	6,400	6,633	6,633	7,067	6,900	7,267
	Std. Deviation	,3776	,1528	,1000	,1000	,1528	,1528	,1155	,1000	,1528
Most Extreme Differences	Absolute	,141	,253	,175	,175	,253	,253	,385	,175	,253
	Positive	,141	,253	,175	,175	,253	,253	,385	,175	,196
	Negative	-,094	-,138	-,175	-,175	-,196	-,196	-,282	-,175	-,253
Test Statistic		,141	,253	,175	,175	,253	,253	,385	,175	,253
Asymp. Sig. (2-tailed)		,200[c,d]	.[e]	.[e]	.[e]	.[e]	.[e]	.[e]	.[e]	.[e]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Significance can not be computed because sum of case weights is less than 2.

Ranks

	Stabilitas_dayasebar_serum_eks	N	Mean Rank	Sum of Ranks
Hasil_stabilitas	1	3	2,00	6,00
	8	3	5,00	15,00
	Total	6		
F2_sebelum_0	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sesudah_0	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sebelum_50	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sesudah_50	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sebelum_100	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sesudah_100	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sebelum_150	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F2_sesudah_150	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		

a. Mann-Whitney Test cannot be performed on empty groups.

Test Statistics[a]

	Hasil_stabilitas
Mann-Whitney U	,000
Wilcoxon W	6,000
Z	-1,964
Asymp. Sig. (2-tailed)	,050
Exact Sig. [2*(1-tailed Sig.)]	,100[b]

a. Grouping Variable: Stabilitas_dayasebar_serum_eks

b. Not corrected for ties.

Test Statistics[a]

	F2_sesudah_0 - F2_sebelum_0	F2_sesudah_50 - F2_sebelum_50	F2_sesudah_100 - F2_sebelum_100	F2_sesudah_150 - F2_sebelum_150
Z	-1,633[b]	-1,633[b]	-1,633[b]	-1,604[b]
Asymp. Sig. (2-tailed)	,102	,102	,102	,109

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

9. Uji stabilitas daya sebar serum ekstrak etanol daun matoa F3

Tests of Normality

	Stabilitas_dayasebar_serum_eks	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil_stabilitas	1	,253	3	.	,964	3	,637
	2	,253	3	.	,964	3	,637
	3	,385	3	.	,750	3	,000
	4	,253	3	.	,964	3	,637
	5	,175	3	.	1,000	3	1,000
	6	,175	3	.	1,000	3	1,000
	7	,175	3	.	1,000	3	1,000
	8	,385	3	.	,750	3	,000

a. Lilliefors Significance Correction

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Hasil_stabilitas	24	5,871	,4563	5,0	6,7
F3_sebelum_0	3	5,167	,1528	5,0	5,3
F3_sesudah_0	3	5,633	,1528	5,5	5,8
F3_sebelum_50	3	5,467	,1155	5,4	5,6
F3_sesudah_50	3	6,033	,1528	5,9	6,2
F3_sebelum_100	3	5,800	,1000	5,7	5,9
F3_sesudah_100	3	6,400	,1000	6,3	6,5
F3_sebelum_150	3	5,900	,1000	5,8	6,0
F3_sesudah_150	3	6,567	,1155	6,5	6,7

One-Sample Kolmogorov-Smirnov Test

		Hasil_stabilitas	F3_sebelum_0	F3_sesudah_0	F3_sebelum_50	F3_sesudah_50	F3_sebelum_100	F3_sesudah_100	F3_sebelum_150	F3_sesudah_150
N		24	3	3	3	3	3	3	3	3
Normal Parameters[a,b]	Mean	5,871	5,167	5,633	5,467	6,033	5,800	6,400	5,900	6,567
	Std. Deviation	,4563	,1528	,1528	,1155	,1528	,1000	,1000	,1000	,1155
Most Extreme Differences	Absolute	,100	,253	,253	,385	,253	,175	,175	,175	,385
	Positive	,100	,196	,253	,385	,253	,175	,175	,175	,385
	Negative	-,885	-,253	-,196	-,282	-,196	-,175	-,175	-,175	-,282
Test Statistic		,100	,253	,253	,385	,253	,175	,175	,175	,385
Asymp. Sig. (2-tailed)		,200[c,d]	.[e]	.[e]	.[e]	.[e]	.[e]	.[e]	.[e]	.[e]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Significance can not be computed because sum of case weights is less than 0.

Ranks

	Stabilitas_dayasebar_serum_eks	N	Mean Rank	Sum of Ranks
Hasil_stabilitas	1	3	2,00	6,00
	8	3	5,00	15,00
	Total	6		
F3_sebelum_0	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sesudah_0	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sebelum_50	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sesudah_50	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sebelum_100	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sesudah_100	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sebelum_150	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		
F3_sesudah_150	1	3	2,00	6,00
	8	0[a]	,00	,00
	Total	3		

a. Mann-Whitney Test cannot be performed on empty groups.

Test Statistics[a]

	Hasil_stabilitas
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: Stabilitas_dayasebar_serum_eks

b. Not corrected for ties.

Test Statistics[a]

	F3_sesudah_0 - F3_sebelum_0	F3_sesudah_50 - F3_sebelum_50	F3_sesudah_100 - F3_sebelum_100	F3_sesudah_150 - F3_sebelum_150
Z	-1,633[b]	-1,604[b]	-1,732[b]	-1,633[b]
Asymp. Sig. (2-tailed)	,102	,109	,083	,102

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Lampiran 18. Uji statistik antioksidan

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	perlakuan	Statistic	df	Sig.	Statistic	df	Sig.
replikasi	F1_serum	,178	3	.	1,000	3	,959
	F2_serum	,244	3	.	,972	3	,677
	F3_serum	,333	3	.	,861	3	,271
	F4_k.negatif	,242	3	.	,973	3	,685
	Ekstrak_100mg	,251	3	.	,966	3	,646

a. Lilliefors Significance Correction

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
replikasi	F1_serum	3	72,2900	,80019	,46199	70,3022	74,2778	71,48	73,08
	F2_serum	3	86,3233	1,51150	,87267	82,5686	90,0781	84,98	87,96
	F3_serum	3	96,7100	1,62714	,93943	92,6679	100,7521	94,85	97,87
	F4_k.negatif	3	286,1767	3,41622	1,97235	277,6903	294,6630	283,13	289,87
	Ekstrak_100mg	3	27,6567	,81396	,46994	25,6347	29,6787	26,77	28,37
	Total	15	113,8313	92,48525	23,87959	62,6147	165,0480	26,77	289,87

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
replikasi	2,407	4	10	,119

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
replikasi	Between Groups	119713,499	4	29928,375	8357,267	,000
	Within Groups	35,811	10	3,581		
	Total	119749,310	14			