L A M P I R A N

Lampiran 1. Surat keterangan hewan uji

"ABIMANYU FARM"

√ Mencit putih jantan √ Tikus Wistar √ Swis Webster √ Cacing
√ Mencit Balb/C √ Kelinci New Zealand

Ngampon RT 04 / RW 04. Mojosongo Kec. Jebres Surakarta. Phone 0897-8729-933/ Lab USB Ska

Yang bertanda tangan di bawah ini:
Nama : Sigit Pramono

Selaku pengelola Abimanyu Farm, menerangkan bahwa hewan uji yang digunakan untuk penelitian, oleh:

Nama : Wahdhatul Hanifah
NIM : 27216382A
Institusi : Universitas Setia Budi

Merupakan hewan uji dengan spesifikasi sebagai berikut:

Jenis hewan : Kelinci New Zealand
Umur : 2-3 bulan
Jumlah : 5 ekor
Keterangan : Sehat
Asal-usul : Unit Pengembangan Hewan Percobaan Boyolali

Yang pengembangan dan pengelolaannya disesuaikan standar baku penelitian. Demikian surat keterangan ini dibuat untuk digunakan sebagaimana mestinya.

Surakarta, 05 Desember 2024
Hormat kami

Sigit Pramono
"ABIMANYU FARM"

Lampiran 2. Surat keterangan layak etik

8/8/24, 1:08 PM KEPK-RSDM

HEALTH RESEARCH ETHICS COMITTE
KOMISI ETIK PENELITIAN KESEHATAN

Dr. Moewardi General Hospital
RSUD Dr. Moewardi

ETHICAL CLEARANCE
KELAIKAN ETIK

Nomor : 1.982 / VIII / HREC / 2024

The Health Research Ethics Committee Dr. Moewardi
Komisi Etik Penelitian Kesehatan RSUD Dr. Moewardi

after reviewing the proposal design, herewith to certify
setelah menilai rancangan penelitian yang diusulkan, dengan ini menyatakan

That the research proposal with topic :
Bahwa usulan penelitian dengan judul

FORMULASI DAN UJI AKTIVITAS SEDIAAN EMULGEL KOLAGEN CEKER AYAM BROILER TERHADAP PENYEMBUHAN LUKA BAKAR PADA KELINCI PUTIH (Oryctolagus cuniculus)

Principal investigator Peneliti Utama	: Wahdhatul Hanifah 27216382A
Location of research Lokasi Tempat Penelitian	: Universitas Setia Budi Surakarta

Is ethically approved
Dinyatakan layak etik

Issued on : 08 Agustus 2024

Chairman
Ketua

Dr. Wahyu Dwi Atmoko., Sp.F
19770224 201001 1 005

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Lampiran 3. Proses pembuatan simplisia serbuk ceker ayam broiler



Lampiran 4. Perhitungan rendemen berat basah menjadi berat kering dan serbuk ceker ayam broiler

- Rendemen berat basah menjadi berat kering

Berat basah (g)	Berat kering (g)	Rendemen (%)
3.500	1.200	34,28

$$\% \text{ Rendeman} = \frac{bobot\ kering}{bobot\ basah}\ x\ 100\%$$
$$= \frac{1.200\ gram}{3.500\ gram}\ x\ 100\%$$
$$= 34{,}28\ \%$$

- Rendemen berat kering menjadi serbuk ceker ayam broiler

Berat kering (g)	Berat serbuk (g)	Rendemen (%)
1.200	1.200	100

$$\% \text{ Rendeman} = \frac{bobot\ serbuk}{bobot\ kering}\ x\ 100\%$$
$$= \frac{1.200\ gram}{1.200\ \ gram}\ x\ 100\%$$
$$= 100\ \%$$

Lampiran 5. Proses dan hasil pembuatan kolagen

Oven ceker 	Serbuk ceker 	Perendaman n-heksan 
Penyaringan 	Perendaman asam 	Penyaringan pertama 
Penyaringan kedua 	Pengendapan kolagen 	Pengecekan pH 
Penyaringan kolagen 	Kolagen basah 	Kolagen kering 

Lampiran 6. Perhitungan rendemen kolagen ceker ayam broiler

Berat sebuk (g)	Berat kolagen (g)	Rendemen (%)
900	114,71	12,74

% Rendeman $= \frac{bobot\ kolagen}{bobot\ serbuk}\ x\ 100\%$

$= \frac{114{,}71\ gram}{900\ gram}\ x\ 100\%$

= 12,74%

Lampiran 7. Susut pengeringan serbuk ceker ayam broiler (*Moisture Ballance*)

Replikasi 1	Replikasi 2	Replikasi 3
		

Lampiran 8. Perhitungan susut pengeringan serbuk ceker ayam broiler

Replikasi	Bobot awal (g)	Susut kering (%)
1	2,00	1,5%
2	2,00	1,7%
3	2,00	1,7%
Rata-rata		1,63

Rata-rata susut pengeringan serbuk ceker ayam broiler $= \frac{1{,}5\% + 1{,}7\% + 1{,}7\%}{3}$

$= \frac{4{,}9\ \%}{3} = 1{,}63\%$

Lampiran 9. Kadar air kolagen ceker ayam broiler (*Moisture Ballance*)

Replikasi 1	Replikasi 2	Replikasi 3
		

Lampiran 10. Perhitungan kadar air kolagen ceker ayam broiler

Replikasi	Bobot awal (g)	Susut kering (%)
1	2,00	7,1%
2	2,00	6,9%
3	2,00	7,2%
Rata-rata		7,06

Rata-rata kadar air kolagen ceker ayam broiler $= \frac{1{,}5\% + 1{,}7\% + 1{,}7\%}{3}$

$= \frac{21{,}2\ \%}{3} = 7{,}06\%$

Lampiran 11. Hasil pH kolagen ceker ayam broiler

Replikasi 1	Replikasi 2	Replikasi 3
		

Lampiran 12. Perhitungan pH kolagen ceker ayam broiler

Replikasi	pH
1	6,87
2	6,92
3	6,89
Rata-rata	6,89

Rata-rata pH kolagen ceker ayam broiler $= \frac{6{,}87\% + 6{,}92\% + 6{,}89\%}{3}$

$= \frac{20{,}68\ \%}{3} = 6{,}89$

Lampiran 13. Kadar abu kolagen ceker ayam broiler

Kurs + serbuk kolagen	Alat kadar abu Muffle Furnace 1200 FL	Kurs + abu
		

Lampiran 14. Perhitungan kadar abu kolagen ceker ayam broiler

$$\% \text{ kadar abu} = \frac{\textbf{bobot abu}}{\textbf{bobot ekstrak}} \text{ x } 100\%$$

- Replikasi 1 :

  Cawan kosong = 42,6820 g
  Cawan + serbuk = 43,6820 g
  Cawan + abu = 42,6873 g
  Abu = 0,0053 g
  % kadar abu = $\frac{0{,}0053\ g}{1000\ g}$ x 100%
  = 0,00053 %

- Replikasi 2 :

  Cawan kosong = 42,3663 g
  Cawan + serbuk = 43,3663 g
  Cawan + abu = 42,3698 g
  Abu = 0,0035 g
  % kadar abu = $\frac{0{,}0035\ g}{1000\ g}$ x 100%
  = 0,00035 %

- Replikasi 3 :

  Cawan kosong = 41,6262 g
  Cawan + serbuk = 42,6262 g
  Cawan + abu = 41,6284 g
  Abu = 0,0022 g
  % kadar abu = $\frac{0{,}0022\ g}{1000\ g}$ x 100%
  = 0,00022 %

Rata-rata kadar abu kolagen ceker ayam broiler $= \frac{0{,}00053\% + 0{,}00035\% + 0{,}00022\%}{3}$

$= \frac{0{,}0011\ \%}{3} = 0{,}00036\%$

Lampiran 15. Perhitungan formula emulgel kolagen ceker ayam broiler

Formula I:

Kolagen 5% $= \frac{5\ gram}{100}\ x\ 100\ gram = 5\ gram$

HPMC 2% $= \frac{2\ gram}{100}\ x\ 100\ gram = 2\ gram$

Gliserin 10% $= \frac{10\ gram}{100}\ x\ 100\ gram = 10\ gram$

Parafin cair 6,5% $= \frac{6{,}5\ gram}{100}\ x\ 100\ gram = 6{,}5\ gram$

Tween 80 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Span 80 1% $= \frac{1\ gram}{100}\ x\ 100\ gram = 1\ gram$

Phenoxyethanol 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Aquadest ad 100 = 100 mL – 25,5 gram = 74,5 mL

Formula II :

Kolagen 5% $= \frac{5\ gram}{100}\ x\ 100\ gram = 5\ gram$

HPMC 2,5% $= \frac{2{,}5\ gram}{100}\ x\ 100\ gram = 2{,}5\ gram$

Gliserin 10% $= \frac{10\ gram}{100}\ x\ 100\ gram = 10\ gram$

Parafin cair 6,5% $= \frac{6{,}5\ gram}{100}\ x\ 100\ gram = 6{,}5\ gram$

Tween 80 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Span 80 1% $= \frac{1\ gram}{100}\ x\ 100\ gram = 1\ gram$

Phenoxyethanol 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Aquadest ad 100 = 100 mL – 26 gram = 74 mL

Formula III :

Kolagen 5% $= \frac{5\ gram}{100}\ x\ 100\ gram = 5\ gram$

HPMC 3% $= \frac{3\ gram}{100}\ x\ 100\ gram = 3\ gram$

Gliserin 10% $= \frac{10\ gram}{100}\ x\ 100\ gram = 10\ gram$

Parafin cair 6,5% $= \frac{6{,}5\ gram}{100}\ x\ 100\ gram = 6{,}5\ gram$

Tween 80 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Span 80 1% $= \frac{1\ gram}{100}\ x\ 100\ gram = 1\ gram$

Phenoxyethanol 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Aquadest ad 100 = 100 mL – 26,5 gram = 73,5 mL

Formula IV (kontrol -) :

HPMC 3% $= \frac{3\ gram}{100}\ x\ 100\ gram = 3\ gram$

Gliserin 10% $= \frac{10\ gram}{100}\ x\ 100\ gram = 10\ gram$

Parafin cair 6,5% $= \frac{6{,}5\ gram}{100}\ x\ 100\ gram = 6{,}5\ gram$

Tween 80 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Span 80 1% $= \frac{1\ gram}{100}\ x\ 100\ gram = 1\ gram$

Phenoxyethanol 0,5% $= \frac{0{,}5\ gram}{100}\ x\ 100\ gram = 0{,}5\ gram$

Aquadest ad 100 = 100 mL – 21,5 gram = 78,5 mL

Lampiran 16. Sediaan emulgel kolagen ceker ayam broiler

<table>
<tr><td>Formula 1 (konsentrasi HPMC 2%)
  </td><td>Formula 2 (konsentrasi HPMC 2,5%)
  </td></tr>
<tr><td>Formula 3 (konsentrasi HPMC 3%)
  </td><td>Formula 4 (konsentrasi HPMC 3%)
  </td></tr>
<tr><td colspan="2">Kontrol positif
  </td></tr>
</table>

Lampiran 17. Identifikasi pengujian mutu fisik dan stabilitas sediaaan emulgel kolagen ceker ayam broiler

- Uji homogenitas

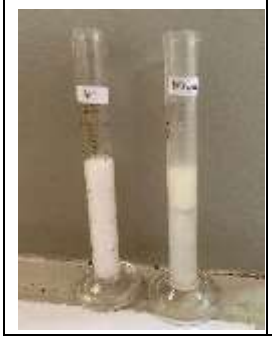
- Uji pH emulgel

- Uji viskositas emulgel

- Uji daya lekat emulgel


- Uji daya sebar emulgel

- Determinasi tipe emulsi

Pengenceran emulsi	Pewarnaan emulsi	Konduktibilitas elektrik
		

- Uji stabilitas emulgel metode *freeze and thaw*

Oven suhu 40℃	Kulkas suhu 4℃
	

Siklus 1 	Siklus 2 
Siklus 3 	Siklus 4 
Siklus 5 	Siklus 6 

Lampiran 18. Data hasil pengujian mutu fisik emulgel kolagen ceker ayam broiler

a. Hasil uji organoleptis

Organoleptis	Formula 1	Formula 2	Formula 3	Kontrol negatif
Warna	Putih	Putih	Putih	Putih
Bau	Khas ekstrak	Khas ekstrak	Khas ekstrak	Tidak berbau
Konsistensi	Agak kental	Kental	Kental	Kental

b. Hasil uji homogenitas

Homogenitas	Formula 1	Formula 2	Formula 3	Kontrol negatif
H1	Homogen	Homogen	Homogen	Homogen
H21	Homogen	Homogen	Homogen	Homogen

c. Hasil uji pH dengan alat pH meter

Waktu	Replikasi	F1	F2	F3	F4
Hari ke-0	1	4,88	5,31	5,73	6,22
	2	4,86	5,29	5,75	6,18
	3	4,89	5,30	5,72	6,25
	Rata-rata	**4,88 ± 0,02**	**5,30 ± 0,01**	**5,73 ± 0,02**	**6,22 ± 0,04**
Hari ke-21	1	4,91	5,34	5,79	6,35
	2	4,90	5,35	5,77	6,21
	3	4,89	5,33	5,76	6,27
	Rata-rata	**4,90 ± 0,01**	**5,34 ± 0,01**	**5,77 ± 0,02**	**6,28 ± 0,07**

d. Hasil uji viskositas (dPas) dengan spindel 7

Waktu	Replikasi	F1	F2	F3	F4
Hari ke-0	1	6.343	6.714	7.811	8.487
	2	6.171	6.829	7.832	8.400
	3	6.000	6.757	7.758	8.569
	Rata-rata ± SD	**6.171,33 ± 171,50**	**6.766,67 ± 58,11**	**7.800,33 ± 38,14**	**8.485,33 ± 84,51**
Hari ke-21	1	6.163	7.043	7.939	8.521
	2	6.284	6.974	7.987	8.517
	3	6.186	7.016	7.895	8.680
	Rata-rata ± SD	**6.211,00 ± 64,26**	**7.011,00 ± 34,77**	**7.940,33 ± 46,01**	**8.572,67 ± 92,97**

e. Hasil uji daya lekat emulgel

Waktu	Replikasi	F1	F2	F3	F4
Hari ke-0	1	5,07	5,12	5,17	5,20
	2	5,05	5,09	5,19	5,21
	3	5,01	5,10	5,16	5,19
	Rata-rata	**5,04 ± 0,33**	**5,10 ± 0,02**	**5,17 ± 0,02**	**5,20 ± 0,01**
Hari ke-21	1	5,08	5,14	5,19	5,21
	2	5,07	5,10	5,21	5,22
	3	5,03	5,13	5,19	5,23
	Rata-rata	**5,06 ± 0,03**	**5,12 ± 0,02**	**5,20 ± 0,01**	**5,22 ± 0,01**

f. Hasil uji determinasi tipe emulsi

Metode	Hasil			
	Formula 1	**Formula 2**	**Formula 3**	**Formula 4**
Metode pengenceran (M/A)	Larut dalam air M/A	Larut dalam air M/A	Larut dalam air M/A	Larut dalam air M/A
Metode pewarnaan (*Metylen Blue*)	Homogen dalam metilen blue M/A	Homogen dalam metilen blue M/A	Homogen dalam metilen blue M/A	Homogen dalam metilen blue M/A
Konduktibilitas elektrik (Voltmeter)	Jarum bergerak M/A	Jarum bergerak M/A	Jarum bergerak M/A	Jarum bergerak M/A

g. Hasil uji daya sebar emulgel

Hari ke-0

Formula 1

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.94	4.98	5.01	4.96	4.97	5,69 ± 0,62	5,68 ± 0,54
	50	5.39	5.43	5.47	5.45	5.44		
	100	5.95	5.92	5.92	5.9	5.92		
	150	6.41	6.44	6.44	6.4	6.42		
2	0	4.97	4.92	4.94	4.93	4.94	5,67 ± 0,62	
	50	5.48	5.45	5.49	5.46	5.47		
	100	5.86	5.91	5.9	5.85	5.88		
	150	6.39	6.38	6.42	6.4	6.40		
3	0	4.89	4.97	4.98	4.99	4.96	5,68 ± 0,62	
	50	5.47	5.44	5.42	5.47	5.45		
	100	5.95	5.93	5.88	5.85	5.90		
	150	6.44	6.43	6.4	6.37	6.41		

Formula 2

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.69	4.74	4.78	4.79	4.75	5,49 ± 0,64	5,50 ± 0,55
	50	5.21	5.24	5.25	5.22	5.23		
	100	5.74	5.79	5.75	5.78	5.77		
	150	6.19	6.24	6.22	6.24	6.22		
2	0	4.76	4.76	4.79	4.76	4.76	5,50 ± 0,62	
	50	5.27	5.25	5.27	5.21	5.27		
	100	5.78	5.76	5.75	5.76	5.78		
	150	6.23	6.2	6.21	6.18	6.23		
3	0	4.81	4.79	4.79	4.77	4.81	5,51 ± 0,62	
	50	5.19	5.24	5.27	5.29	5.19		
	100	5.78	5.77	5.82	5.76	5.78		
	150	6.19	6.19	6.22	6.21	6.19		

Formula 3

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.38	4.43	4.48	4.49	4.45	5,21 ± 0,65	5,21 ± 0,58
	50	5.01	4.99	4.98	4.94	4.98		
	100	5.44	5.49	5.5	5.47	5.48		
	150	5.88	5.97	5.98	5.98	5.95		
2	0	4.43	4.44	4.4	4.41	4.42	5,22 ± 0,67	
	50	4.97	4.99	4.93	4.94	4.96		
	100	5.54	5.53	5.48	5.5	5.51		
	150	5.96	6	5.95	5.99	5.98		
3	0	4.44	4.42	4.45	4.46	4.44	5,20 ± 0,66	
	50	4.88	4.91	4.97	4.94	4.93		
	100	5.47	5.46	5.47	5.48	5.47		
	150	6.01	5.98	5.94	5.96	5.97		

Formula 4

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.41	4.39	4.37	4.36	4.38	5,13 ± 0,65	5,12 ± 0,58
	50	4.84	4.83	4.89	4.88	4.86		
	100	5.37	5.38	5.41	5.39	5.39		
	150	5.91	5.89	5.86	5.88	5.89		
2	0	4.32	4.36	4.37	4.35	4.35	5,12 ± 0,67	
	50	4.88	4.86	4.87	4.83	4.86		
	100	5.37	5.37	5.39	5.38	5.38		
	150	5.89	5.88	5.94	5.88	5.90		
3	0	4.36	4.34	4.29	4.38	4.34	5,11 ± 0,65	
	50	4.92	4.88	4.87	4.84	4.88		
	100	5.36	5.33	5.37	5.38	5.36		
	150	5.9	5.85	5.87	5.87	5.87		

Hari ke-21

Formula 1

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.86	4.89	4.93	4.92	4.90	5,60 ± 0,61	5,62 ± 0,56
	50	5.33	5.4	5.36	5.35	5.36		
	100	5.85	5.8	5.82	5.82	5.82		
	150	6.3	6.37	6.34	6.31	6.33		
2	0	4.85	4.86	4.91	4.89	4.88	5,64 ± 0,66	
	50	5.37	5.38	5.41	5.39	5.39		
	100	5.86	5.87	5.83	5.82	5.85		
	150	6.39	6.4	6.45	6.5	6.44		
3	0	4.82	4.85	4.9	4.88	4.86	5,61 ± 0,62	
	50	5.39	5.4	5.43	5.41	5.41		
	100	5.87	5.88	5.85	5.88	5.87		
	150	6.34	6.3	6.32	6.31	6.32		

Formula 2

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.64	4.69	4.73	4.74	4.70	5,43 ± 0,63	5,43 ± 0,54
	50	5.16	5.17	5.15	5.16	5.16		
	100	5.68	5.71	5.69	5.71	5.70		
	150	6.14	6.16	6.17	6.14	6.15		
2	0	4.66	4.71	4.75	4.76	4.72	5,44 ± 0,61	
	50	5.17	5.2	5.21	5.18	5.19		
	100	5.71	5.73	5.75	5.73	5.73		
	150	6.11	6.13	6.14	6.11	6.12		
3	0	4.63	4.66	4.73	4.75	4.69	5,42 ± 0,61	
	50	5.18	5.21	5.22	5.19	5.20		
	100	5.69	5.65	5.6	5.65	5.65		
	150	6.12	6.14	6.1	6.12	6.12		

Formula 3

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.39	4.37	4.35	4.34	4.36	5,14 ± 0,65	5,13 ± 0,57
	50	4.89	4.92	4.96	4.95	4.93		
	100	5.35	5.4	5.37	5.35	5.37		
	150	5.9	5.88	5.89	5.87	5.89		
2	0	4.36	4.34	4.32	4.31	4.33	5,12 ± 0,67	
	50	4.86	4.89	4.93	4.92	4.90		
	100	5.33	5.36	5.36	5.35	5.35		
	150	5.93	5.87	5.89	5.91	5.90		
3	0	4.39	4.37	4.36	4.41	4.38	5,13 ± 0,66	
	50	4.8	4.83	4.87	4.86	4.84		
	100	5.45	5.41	5.5	5.39	5.44		
	150	5.9	5.86	5.85	5.88	5.87		

Formula 4

Replikasi	Beban (g)	R1	R2	R3	R4	Rata-rata	Rata-rata	Rata-rata
1	0	4.31	4.29	4.25	4.24	**4.27**	**5,04 ± 0,65**	**5,06 ± 0,58**
	50	4.83	4.81	4.82	4.78	**4.81**		
	100	5.25	5.28	5.29	5.26	**5.27**		
	150	5.81	5.8	5.85	5.76	**5.81**		
2	0	4.29	4.29	4.27	4.26	**4.28**	**5,08 ± 0,68**	
	50	4.86	4.84	4.85	4.81	**4.84**		
	100	5.36	5.32	5.33	5.3	**5.33**		
	150	5.9	5.85	5.81	5.9	**5.87**		
3	0	4.34	4.31	4.29	4.26	**4.30**	**5,06 ± 0,65**	
	50	4.84	4.82	4.83	4.8	**4.82**		
	100	5.26	5.29	5.3	5.27	**5.28**		
	150	5.84	5.79	5.85	5.83	**5.83**		

h. Hasil uji stabilitas emulgel

Organoleptis

Formula	Sebelum	Sesudah	Kesimpulan
Formula 1	Putih Khas ekstrak Agak kental	Putih Khas ekstrak Agak kental	Stabil
Formula 2	Putih Khas ekstrak Kental	Putih Khas ekstrak Kental	Stabil
Formula 3	Putih Khas ekstrak Kental	Putih Khas ekstrak Kental	Stabil
Formula 4 (-)	Putih Tidak berbau Kental	Putih Tidak berbau Kental	Stabil

Pemisahan fase

Formula	Sebelum	Sesudah	Kesimpulan
Formula 1	Tidak Memisah	Tidak Memisah	Stabil
Formula 2	Tidak Memisah	Tidak Memisah	Stabil
Formula 3	Tidak Memisah	Tidak Memisah	Stabil
Formula 4 (-)	Tidak Memisah	Tidak Memisah	Stabil

Homogenitas

Formula	Sebelum	Sesudah	Kesimpulan
Formula 1	Homogen	Homogen	Stabil
Formula 2	Homogen	Homogen	Stabil
Formula 3	Homogen	Homogen	Stabil
Formula 4 (-)	Homogen	Homogen	Stabil

Tipe emulgel

Formula	Sebelum	Sesudah	Kesimpulan
Formula 1	M/A	M/A	Stabil
Formula 2	M/A	M/A	Stabil
Formula 3	M/A	M/A	Stabil
Formula 4 (-)	M/A	M/A	Stabil

pH

Waktu	Replikasi	F1	F2	F3	F4
Sebelum stabilitas	1	4,77	5,28	5,69	6,37
	2	4,79	5,26	5,66	6,36
	3	4,76	5,27	5,65	6,33
	Rata-rata	**4,77 ± 0,02**	**5,27 ± 0,01**	**5,67 ± 0,02**	**6,35 ± 0,02**
Setelah stabilitas	1	4,75	5,24	5,63	6,32
	2	4,72	5,26	5,65	6,34
	3	4,71	5,25	5,61	6,27
	Rata-rata	**4,73 ± 0,02**	**5,25 ± 0,01**	**5,63 ± 0,02**	**6,31 ± 0,04**

Formula	**Sebelum**	**Sesudah**	**Paired t-Test**	**Kesimpulan**
Formula 1	4,77 ± 0,02	4,73 ± 0,02	>0,05	Stabil
Formula 2	5,27 ± 0,01	5,25 ± 0,01	>0,05	Stabil
Formula 3	5,67 ± 0,02	5,63 ± 0,02	>0,05	Stabil
Formula 4 (-)	6,35 ± 0,02	6,31 ± 0,04	>0,05	Stabil

Viskositas

Waktu	Replikasi	F1	F2	F3	F4
Sebelum stabilitas	1	6.235	6.657	7.975	8.564
	2	6.156	6.743	7.857	8.317
	3	6.094	6.951	7.992	8.404
	Rata-rata	**6.161,67 ± 70,67**	**6.783,67 ± 151,16**	**7.941,33 ± 73,53**	**8.428,33 ± 125,29**
Setelah stabilitas	1	5.967	6.496	7.814	8.216
	2	5.987	6.603	7.715	8.187
	3	5.999	6.694	7.836	8.298
	Rata-rata	**5.984,33 ± 16,17**	**6.597,67 ± 99,11**	**7.788,33 ± 64,45**	**8.233,67 ± 57,57**

Formula	**Sebelum**	**Sesudah**	**Paired t-Test**	**Kesimpulan**
Formula 1	6.161,67 ± 70,67	5.984,33 ± 16,17	>0,05	Stabil
Formula 2	6.783,67 ± 151,16	6.597,67 ± 99,11*	<0,05	Tidak Stabil
Formula 3	7.941,33 ± 73,53	7.788,33 ± 64,45*	<0,05	Tidak Stabil
Formula 4 (-)	8.428,33 ± 125,29	8.233,67 ± 57,57	>0,05	Stabil

Lampiran 19. Uji penyembuhan luka bakar pada kelinci *new zealand*

Hari pertama 	Hari ke-7 
Hari ke-14 	Hari ke-21 

Lampiran 20. Hasil diameter luka bakar

Hari	Formula 1					Formula 2					Formula 3					Kontrol Negatif					Kontrol Positif				
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	1,97	1,95	1,97	1,95	1,95	1,97	1,96	1,96	1,96	1,96	1,97	1,96	1,97	1,97	1,97	2	2	2	2	2	1,96	1,94	1,95	1,95	1,94
3	1,83	1,78	1,79	1,79	1,78	1,48	1,81	1,82	1,82	1,81	1,84	1,82	1,84	1,83	1,83	1,90	1,85	1,88	1,88	1,87	1,79	1,78	1,79	1,78	1,78
4	1,69	1,62	1,64	1,64	1,62	1,70	1,65	1,67	1,67	1,65	1,71	1,68	1,70	1,69	1,69	1,79	1,74	1,77	1,76	1,75	1,63	1,61	1,62	1,61	1,61
5	1,54	1,45	1,49	1,49	1,62	1,57	1,50	1,53	1,53	1,50	1,58	1,53	1,57	1,56	1,54	1,68	1,63	1,64	1,65	1,63	1,46	1,44	1,45	1,45	1,44
6	1,40	1,29	1,33	1,33	1,33	1,44	1,35	1,39	1,39	1,35	1,45	1,39	1,44	1,43	1,40	1,58	1,50	1,53	1,52	1,51	1,29	1,28	1,29	1,28	1,28
7	1,26	1,12	1,18	1,18	1,26	1,31	1,20	1,24	1,24	1,20	1,32	1,25	1,31	1,30	1,12	1,46	1,39	1,40	1,40	1,39	1,13	1,11	1,12	1,11	1,11
8	1,12	0,95	1,02	1,02	1,12	1,17	1,05	1,10	1,10	1,05	1,19	1,11	1,17	1,16	0,95	1,35	1,26	1,28	1,28	1,27	0,96	0,94	0,95	0,95	0,94
9	0,98	0,79	0,87	0,87	0,79	1,04	0,89	0,96	0,96	0,89	1,06	0,97	1,04	1,03	0,98	1,25	1,14	1,16	1,15	1,13	0,79	0,78	0,79	0,78	0,78
10	0,83	0,62	0,72	0,72	0,62	0,91	0,74	0,82	0,82	0,74	0,93	0,82	0,91	0,90	0,83	1,14	1,01	1,05	1,06	1,03	0,63	0,61	0,62	0,61	0,61
11	0,69	0,68	0,77	0,56	0,46	0,77	0,59	0,67	0,67	0,59	0,80	0,46	0,56	0,76	0,69	1,02	0,91	0,94	0,93	0,92	0,46	0,44	0,45	0,45	0,46
12	0,55	0,29	0,41	0,41	0,55	0,64	0,44	0,53	0,53	0,44	0,67	0,54	0,64	0,63	0,29	0,92	0,82	0,82	0,82	0,80	0,29	0,28	0,29	0,28	0,28
13	0,41	0,12	0,25	0,25	0,12	0,51	0,29	0,39	0,39	0,29	0,54	0,40	0,51	0,50	0,41	0,81	0,71	0,72	0,73	0,70	0,16	0,11	0,12	0,13	0,12
14	0,27	0	0,10	0,10	0	0,37	0,13	0,24	0,24	0,13	0,41	0,26	0,37	0,36	0,27	0,68	0,57	0,58	0,57	0,56	0,08	0	0	0,05	0
15	0,12	0	0	0	0	0,24	0	0,10	0,10	0	0,34	0,11	0,24	0,23	0,12	0,54	0,44	0,45	0,46	0,45	0	0	0	0	0
16	0	0	0	0	0	0,11	0	0	0	0	0,28	0	0,11	0,14	0	0,44	0,31	0,34	0,33	0,32	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0,15	0	0	0	0	0,33	0,22	0,23	0,23	0,21	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,24	0,12	0,14	0,12	0,13	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0,14	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Lampiran 21. Hasil perhitungan rata-rata persen penyembuhan luka bakar

Hari	Penyembuhan Luka (%)				
	F1	F2	F3	K-	K+
1	0	0	0	0	0
2	2,05	1,85	1,65	0	2,575
3	10,35	12,735	8,6	6,225	10,905
4	17,975	16,7	15,4	11,925	19,235
5	24,175	23,8	22,3	17,875	27,565
6	33,3	30,9	29	23,725	35,895
7	40,125	38,15	37,05	29,6	44,225
8	47,775	45,4	44,25	35,625	52,555
9	57,075	52,7	49,3	41,725	60,885
10	64,975	59,8	56,2	47,125	69,215
11	68,5	67,2	67,375	52,85	77,426
12	78,025	74,3	72,35	58,225	85,875
13	88,525	81,4	76,5	63,375	93,6465
14	95,35	89	83,4	70,525	98,725
15	98,775	95,675	89,725	76,75	100
16	100	98,875	94,7	82,625	100
17	100	100	98,475	87,825	100
18	100	100	100	92,6	100
19	100	100	100	98,65	100
20	100	100	100	100	100
21	100	100	100	100	100

Lampiran 22. Hasil statistik pengujian mutu fisik dan stabilitas sediaan

1. Uji Normalitas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Viskositas	Formula 1	.175	3	.	1.000	3	**.997**
	Formula 2	.233	3	.	.979	3	**.724**
	Formula 3	.277	3	.	.941	3	**.533**
	Formula 4	.177	3	.	1.000	3	**.967**
pH	Formula 1	.253	3	.	.964	3	**.637**
	Formula 2	.175	3	.	1.000	3	**1.000**
	Formula 3	.253	3	.	.964	3	**.637**
	Formula 4	.204	3	.	.993	3	**.843**
Daya Lekat	Formula 1	.253	3	.	.964	3	**.637**
	Formula 2	.253	3	.	.964	3	**.637**
	Formula 3	.253	3	.	.964	3	**.637**
	Formula 4	.175	3	.	1.000	3	**1.000**
Daya Sebar	Formula 1	.175	3	.	1.000	3	**1.000**
	Formula 2	.175	3	.	1.000	3	**1.000**
	Formula 3	.175	3	.	1.000	3	**1.000**
	Formula 4	.175	3	.	1.000	3	**1.000**

a. Lilliefors Significance Correction

2. Uji Homogenitas

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Viskositas	Based on Mean	1.320	3	8	**.334**
	Based on Median	1.315	3	8	.335
	Based on Median and with adjusted df	1.315	3	3.884	.389
	Based on trimmed mean	1.321	3	8	.333
pH	Based on Mean	1.524	3	8	**.281**
	Based on Median	.983	3	8	.448
	Based on Median and with adjusted df	.983	3	4.255	.481
	Based on trimmed mean	1.489	3	8	.290
Daya Lekat	Based on Mean	1.640	3	8	**.256**
	Based on Median	.632	3	8	.615
	Based on Median and with adjusted df	.632	3	4.429	.629
	Based on trimmed mean	1.555	3	8	.274
Daya Sebar	Based on Mean	.000	3	8	**1.000**
	Based on Median	.000	3	8	1.000
	Based on Median and with adjusted df	.000	3	8.000	1.000
	Based on trimmed mean	.000	3	8	1.000

3. ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Viskositas	Between Groups	9640624.250	3	3213541.417	310.597	.000
	Within Groups	82770.667	8	10346.333		
	Total	9723394.917	11			
pH	Between Groups	2.978	3	.993	2205.753	.000
	Within Groups	.004	8	.000		
	Total	2.981	11			
Daya Lekat	Between Groups	.045	3	.015	40.000	.000
	Within Groups	.003	8	.000		
	Total	.048	11			
Daya Sebar	Between Groups	.603	3	.201	2008.750	.000
	Within Groups	.001	8	.000		
	Total	.603	11			

4. Uji Post Hoc

a. Viskositas

Viskositas

Student-Newman-Keuls[a]

		Subset for alpha = 0.05			
Formula	N	1	2	3	4
Formula 1	3	6171.33			
Formula 2	3		6766.67		
Formula 3	3			7800.33	
Formula 4	3				8485.33
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 3.000.

b. pH

pH

Student-Newman-Keuls[a]

Formula	N	Subset for alpha = 0.05			
		1	2	3	4
Formula 1	3	4.8767			
Formula 2	3		5.3000		
Formula 3	3			5.7333	
Formula 4	3				6.2167
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 3.000.

c. Daya Lekat

Daya Lekat

Student-Newman-Keuls[a]

Formula	N	Subset for alpha = 0.05		
		1	2	3
Formula 1	3	5.0433		
Formula 2	3		5.1033	
Formula 3	3			5.1733
Formula 4	3			5.2000
Sig.		1.000	1.000	**.130**

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 3.000.

d. Daya Sebar

Daya Sebar

Student-Newman-Keuls[a]

Formula	N	Subset for alpha = 0.05			
		1	2	3	4
Formula 4	3	5.1200			
Formula 3	3		5.2100		
Formula 2	3			5.5000	
Formula 1	3				5.6800
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.
a. Uses Harmonic Mean Sample Size = 3.000.

1. Uji stabilitas Viskositas

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	Viskositas F1 sebelum - Viskositas F1 sesudah	177.333	86.801	50.114	-38.291	392.958	3.539	2	**.071**
Pair 2	Viskositas F2 sebelum - Viskositas F2 sesudah	186.000	62.378	36.014	31.045	340.955	5.165	2	**.036**
Pair 3	Viskositas F3 sebelum - Viskositas F3 sesudah	153.000	9.849	5.686	128.534	177.466	26.907	2	**.001**
Pair 4	Viskositas F4 sebelum - Viskositas F4 sesudah	194.667	133.332	76.979	-136.548	525.881	2.529	2	**.127**

2. Uji stabilitas pH

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	pH F1 sebelum - pH F1 sesudah	.04667	.02517	.01453	-.01585	.10918	3.212	2	**.085**
Pair 2	pH F2 sebelum - pH F2 sesudah	.02000	.02000	.01155	-.02968	.06968	1.732	2	**.225**
Pair 3	pH F3 sebelum - pH F3 sesudah	.03667	.02517	.01453	-.02585	.09918	2.524	2	**.128**
Pair 4	pH F4 sebelum - pH F4 sesudah	.04333	.02082	.01202	-.00838	.09504	3.606	2	**.069**

Lampiran 23. Hasil statistik diameter penyembuhan luka bakar

1. Uji Normalitas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Kelompok	Statistic	df	Sig.	Statistic	df	Sig.
Persentase Kesembuhan Hari 2	Formula 1	.367	5	.026	.684	5	**.006**
	Formula 2	.473	5	.001	.552	5	**.000**
	Formula 3	.473	5	.001	.552	5	**.000**
	Kontrol negatif	.	5	.	.	5	.
	Kontrol positif	.231	5	.200*	.881	5	**.314**
Persentase Kesembuhan Hari 3	Formula 1	.376	5	.020	.739	5	**.023**
	Formula 2	.460	5	.001	.580	5	**.000**
	Formula 3	.231	5	.200*	.881	5	**.314**
	Kontrol negatif	.213	5	.200*	.963	5	**.826**
	Kontrol positif	.367	5	.026	.684	5	**.006**
Persentase Kesembuhan Hari 4	Formula 1	.328	5	.084	.804	5	**.087**
	Formula 2	.261	5	.200*	.862	5	**.236**
	Formula 3	.237	5	.200*	.961	5	**.814**
	Kontrol negatif	.141	5	.200*	.979	5	**.928**
	Kontrol positif	.349	5	.046	.771	5	**.046**
Persentase Kesembuhan Hari 5	Formula 1	.266	5	.200*	.916	5	**.502**
	Formula 2	.245	5	.200*	.871	5	**.269**
	Formula 3	.180	5	.200*	.952	5	**.754**
	Kontrol negatif	.224	5	.200*	.842	5	**.171**
	Kontrol positif	.231	5	.200*	.881	5	**.314**
Persentase Kesembuhan Hari 6	Formula 1	.360	5	.033	.846	5	**.181**
	Formula 2	.236	5	.200*	.874	5	**.284**
	Formula 3	.221	5	.200*	.915	5	**.501**
	Kontrol negatif	.274	5	.200*	.867	5	**.254**
	Kontrol positif	.367	5	.026	.684	5	**.006**
Persentase Kesembuhan Hari 7	Formula 1	.241	5	.200*	.877	5	**.295**
	Formula 2	.282	5	.200*	.848	5	**.188**
	Formula 3	.286	5	.200*	.793	5	**.071**
	Kontrol negatif	.407	5	.007	.688	5	**.007**
	Kontrol positif	.349	5	.046	.771	5	**.046**

Persentase Kesembuhan Hari 8	Formula 1	.243	5	.200*	.874	5	**.282**
	Formula 2	.252	5	.200*	.867	5	**.256**
	Formula 3	.275	5	.200*	.798	5	**.079**
	Kontrol negatif	.389	5	.013	.762	5	**.039**
	Kontrol positif	.231	5	.200*	.881	5	**.314**
Persentase Kesembuhan Hari 9	Formula 1	.249	5	.200*	.869	5	**.261**
	Formula 2	.224	5	.200*	.878	5	**.301**
	Formula 3	.240	5	.200*	.902	5	**.421**
	Kontrol negatif	.349	5	.045	.768	5	**.043**
	Kontrol positif	.367	5	.026	.684	5	**.006**
Persentase Kesembuhan Hari 10	Formula 1	.226	5	.200*	.879	5	**.306**
	Formula 2	.225	5	.200*	.879	5	**.303**
	Formula 3	.271	5	.200*	.865	5	**.245**
	Kontrol negatif	.284	5	.200*	.888	5	**.345**
	Kontrol positif	.349	5	.046	.771	5	**.046**
Persentase Kesembuhan Hari 11	Formula 1	.253	5	.200*	.948	5	**.720**
	Formula 2	.236	5	.200*	.874	5	**.284**
	Formula 3	.200	5	.200*	.936	5	**.641**
	Kontrol negatif	.336	5	.067	.787	5	**.063**
	Kontrol positif	.231	5	.200*	.881	5	**.314**
Persentase Kesembuhan Hari 12	Formula 1	.237	5	.200*	.880	5	**.311**
	Formula 2	.233	5	.200*	.875	5	**.289**
	Formula 3	.288	5	.200*	.793	5	**.071**
	Kontrol negatif	.431	5	.003	.697	5	**.009**
	Kontrol positif	.367	5	.026	.684	5	**.006**
Persentase Kesembuhan Hari 13	Formula 1	.234	5	.200*	.875	5	**.288**
	Formula 2	.230	5	.200*	.876	5	**.293**
	Formula 3	.272	5	.200*	.865	5	**.246**
	Kontrol negatif	.336	5	.067	.787	5	**.063**
	Kontrol positif	.261	5	.200*	.859	5	**.223**

Persentase Kesembuhan Hari 14	Formula 1	.278	5	.200*	.851	5	**.197**
	Formula 2	.228	5	.200*	.877	5	**.295**
	Formula 3	.254	5	.200*	.885	5	**.334**
	Kontrol negatif	.395	5	.010	.683	5	**.006**
	Kontrol positif	.358	5	.035	.771	5	**.046**
Persentase Kesembuhan Hari 15	Formula 1	.473	5	.001	.552	5	**.000**
	Formula 2	.252	5	.200*	.867	5	**.256**
	Formula 3	.222	5	.200*	.911	5	**.475**
	Kontrol negatif	.378	5	.019	.710	5	**.012**
	Kontrol positif	.	5	.	.	5	**.**
Persentase Kesembuhan Hari 16	Formula 1	.	5	.	.	5	**.**
	Formula 2	.473	5	.001	.552	5	**.000**
	Formula 3	.219	5	.200*	.897	5	**.392**
	Kontrol negatif	.360	5	.033	.751	5	**.031**
	Kontrol positif	.	5	.	.	5	**.**

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Keterangan:

. : Nilai Signifikansi tidak dapat dimunculkan, sebab diameter luka masih sama seperti saat sebelum diberi formula

. : Nilai Signifikansi lebih kecil dari 0,05 (p<0,05) sehingga distribusi data tidak normal.

2. Uji Homogenitas

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Persentase Kesembuhan Hari 2	Based on Mean	8.758	4	20	**.000**
	Based on Median	1.421	4	20	.263
	Based on Median and with adjusted df	1.421	4	8.969	.303
	Based on trimmed mean	8.070	4	20	.000
Persentase Kesembuhan Hari 3	Based on Mean	5.705	4	20	**.003**
	Based on Median	.888	4	20	.489
	Based on Median and with adjusted df	.888	4	4.190	.542
	Based on trimmed mean	4.080	4	20	.014
Persentase Kesembuhan Hari 4	Based on Mean	.860	4	20	**.505**
	Based on Median	.682	4	20	.613
	Based on Median and with adjusted df	.682	4	13.070	.617
	Based on trimmed mean	.730	4	20	.582
Persentase Kesembuhan Hari 5	Based on Mean	3.920	4	20	**.017**
	Based on Median	1.443	4	20	.257
	Based on Median and with adjusted df	1.443	4	6.215	.324
	Based on trimmed mean	3.738	4	20	.020
Persentase Kesembuhan Hari 6	Based on Mean	1.180	4	20	**.350**
	Based on Median	.728	4	20	.583
	Based on Median and with adjusted df	.728	4	13.553	.588
	Based on trimmed mean	1.140	4	20	.366
Persentase Kesembuhan Hari 7	Based on Mean	2.592	4	20	**.068**
	Based on Median	1.035	4	20	.414
	Based on Median and with adjusted df	1.035	4	9.039	.440
	Based on trimmed mean	2.481	4	20	.077
Persentase Kesembuhan Hari 8	Based on Mean	2.699	4	20	**.060**
	Based on Median	1.079	4	20	.393
	Based on Median and with adjusted df	1.079	4	8.948	.422
	Based on trimmed mean	2.580	4	20	.069

Persentase Kesembuhan Hari 9	Based on Mean	2.085	4	20	**.121**
	Based on Median	1.364	4	20	.282
	Based on Median and with adjusted df	1.364	4	13.743	.297
	Based on trimmed mean	2.126	4	20	.115
Persentase Kesembuhan Hari 10	Based on Mean	2.411	4	20	**.083**
	Based on Median	1.401	4	20	.270
	Based on Median and with adjusted df	1.401	4	14.001	.284
	Based on trimmed mean	2.510	4	20	.074
Persentase Kesembuhan Hari 11	Based on Mean	5.678	4	20	**.003**
	Based on Median	2.366	4	20	.087
	Based on Median and with adjusted df	2.366	4	11.582	.113
	Based on trimmed mean	5.484	4	20	.004
Persentase Kesembuhan Hari 12	Based on Mean	3.035	4	20	**.042**
	Based on Median	1.217	4	20	.335
	Based on Median and with adjusted df	1.217	4	8.297	.373
	Based on trimmed mean	2.911	4	20	.048
Persentase Kesembuhan Hari 13	Based on Mean	2.515	4	20	**.074**
	Based on Median	1.577	4	20	.219
	Based on Median and with adjusted df	1.577	4	12.727	.240
	Based on trimmed mean	2.659	4	20	.063
Persentase Kesembuhan Hari 14	Based on Mean	1.088	4	20	**.389**
	Based on Median	.874	4	20	.497
	Based on Median and with adjusted df	.874	4	16.122	.501
	Based on trimmed mean	1.191	4	20	.345
Persentase Kesembuhan Hari 15	Based on Mean	3.239	4	20	**.033**
	Based on Median	1.983	4	20	.136
	Based on Median and with adjusted df	1.983	4	14.436	.151
	Based on trimmed mean	3.271	4	20	.032
Persentase Kesembuhan Hari 16	Based on Mean	4.724	4	20	**.008**
	Based on Median	3.238	4	20	.033
	Based on Median and with adjusted df	3.238	4	10.478	.057
	Based on trimmed mean	4.606	4	20	.008

HASIL UJI KRUSKAL-WALLIS (UJI NON PARAMETRIK)

Test Statistics[a,b]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Kruskal-Wallis H	18.268	18.675	20.707	19.128	21.136	18.359	18.039	21.076	20.718	17.890	18.762	20.375	20.332	19.659	18.845
df	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	**.001**	**.001**	**.000**	**.001**	**.000**	**.001**	**.001**	**.000**	**.000**	**.001**	**.001**	**.000**	**.000**	**.001**	**.001**

a. Kruskal Wallis Test
b. Grouping Variable: Formula

HASIL UJI MANN-WHITNEY

a. Formula 1 – Formula 2

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	9.000	9.000	4.000	9.000	4.000	8.000	8.000	4.000	4.000	12.500	8.000	4.000	4.000	8.000	10.000
Wilcoxon W	24.000	24.000	19.000	24.000	19.000	23.000	23.000	19.000	19.000	27.500	23.000	19.000	19.000	23.000	25.000
Z	-.775	-.740	-1.798	-.738	-1.809	-.952	-.952	-1.798	-1.798	.000	-.952	-1.798	-1.798	-1.063	-1.000
Asymp. Sig. (2-tailed)	**.439**	**.459**	**.072**	**.461**	**.070**	**.341**	**.341**	**.072**	**.072**	**1.000**	**.341**	**.072**	**.072**	**.288**	**.317**
Exact Sig. [2*(1-tailed Sig.)]	**.548[b]**	**.548[b]**	**.095[b]**	**.548[b]**	**.095[b]**	**.421[b]**	**.421[b]**	**.095[b]**	**.095[b]**	**1.000[b]**	**.421[b]**	**.095[b]**	**.095[b]**	**.421[b]**	**.690[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

b. Formula 1 – Formula 3

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	6.000	2.000	2.000	6.500	1.500	6.500	6.500	1.500	1.500	10.500	6.500	1.500	1.500	1.500	5.000
Wilcoxon W	21.000	17.000	17.000	21.500	16.500	21.500	21.500	16.500	16.500	25.500	21.500	16.500	16.500	16.500	20.000
Z	-1.554	-2.241	-2.234	-1.261	-2.333	-1.265	-1.265	-2.319	-2.319	-.422	-1.265	-2.319	-2.319	-2.378	-1.928
Asymp. Sig. (2-tailed)	**.120**	**.025**	**.025**	**.207**	**.020**	**.206**	**.206**	**.020**	**.020**	**.673**	**.206**	**.020**	**.020**	**.017**	**.054**
Exact Sig. [2*(1-tailed Sig.)]	**.222[b]**	**.032[b]**	**.032[b]**	**.222[b]**	**.016[b]**	**.222[b]**	**.222[b]**	**.016[b]**	**.016[b]**	**.690[b]**	**.222[b]**	**.016[b]**	**.016[b]**	**.016[b]**	**.151[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

c. Formula 1 – Kontrol Negatif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Wilcoxon W	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
Z	-2.835	-2.635	-2.627	-2.627	-2.643	-2.643	-2.635	-2.627	-2.627	-2.611	-2.660	-2.627	-2.635	-2.703	-2.785
Asymp. Sig. (2-tailed)	**.005**	**.008**	**.009**	**.009**	**.008**	**.008**	**.008**	**.009**	**.009**	**.009**	**.008**	**.009**	**.008**	**.007**	**.005**
Exact Sig. [2*(1-tailed Sig.)]	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

d. Formula 1 – Kontrol Positif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	6.000	9.000	3.000	2.000	1.000	1.500	2.000	2.000	3.000	1.000	1.000	6.000	7.000	10.000	12.500
Wilcoxon W	21.000	24.000	18.000	17.000	16.000	16.500	17.000	17.000	18.000	16.000	16.000	21.000	22.000	25.000	27.500
Z	-1.459	-.808	-2.041	-2.234	-2.495	-2.348	-2.241	-2.300	-2.041	-2.440	-2.479	-1.405	-1.230	-1.000	.000
Asymp. Sig. (2-tailed)	**.145**	**.419**	**.041**	**.025**	**.013**	**.019**	**.025**	**.021**	**.041**	**.015**	**.013**	**.160**	**.219**	**.317**	**1.000**
Exact Sig. [2*(1-tailed Sig.)]	**.222[b]**	**.548[b]**	**.056[b]**	**.032[b]**	**.016[b]**	**.016[b]**	**.032[b]**	**.032[b]**	**.056[b]**	**.016[b]**	**.016[b]**	**.222[b]**	**.310[b]**	**.690[b]**	**1.000[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

e. Formula 2 – Formula 3

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	5.000	1.000	3.500	4.500	4.500	7.500	7.500	3.500	4.500	12.000	7.500	3.500	3.500	3.500	6.500
Wilcoxon W	20.000	16.000	18.500	19.500	19.500	22.500	22.500	18.500	19.500	27.000	22.500	18.500	18.500	18.500	21.500
Z	-1.800	-2.455	-1.903	-1.702	-1.702	-1.054	-1.054	-1.897	-1.702	-.105	-1.054	-1.897	-1.897	-1.897	-1.417
Asymp. Sig. (2-tailed)	**.072**	**.014**	**.057**	**.089**	**.089**	**.292**	**.292**	**.058**	**.089**	**.916**	**.292**	**.058**	**.058**	**.058**	**.156**
Exact Sig. [2*(1-tailed Sig.)]	**.151[b]**	**.016[b]**	**.056[b]**	**.095[b]**	**.095[b]**	**.310[b]**	**.310[b]**	**.056[b]**	**.095[b]**	**1.000[b]**	**.310[b]**	**.056[b]**	**.056[b]**	**.056[b]**	**.222[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

f. Formula 2 – Kontrol Negatif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Wilcoxon W	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
Z	-2.887	-2.635	-2.627	-2.635	-2.627	-2.643	-2.635	-2.627	-2.627	-2.627	-2.660	-2.627	-2.635	-2.635	-2.694
Asymp. Sig. (2-tailed)	**.004**	**.008**	**.009**	**.008**	**.009**	**.008**	**.008**	**.009**	**.009**	**.009**	**.008**	**.009**	**.008**	**.008**	**.007**
Exact Sig. [2*(1-tailed Sig.)]	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

g. Formula 2 – Kontrol Positif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	2.000	5.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	5.000	10.000
Wilcoxon W	17.000	20.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	20.000	25.000
Z	-2.356	-1.601	-2.660	-2.643	-2.668	-2.660	-2.643	-2.668	-2.660	-2.643	-2.668	-2.635	-2.660	-1.936	-1.000
Asymp. Sig. (2-tailed)	**.018**	**.109**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.053**	**.317**
Exact Sig. [2*(1-tailed Sig.)]	**.032[b]**	**.151[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.151[b]**	**.690[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

h. Formula 3 – Kontrol Negatif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Wilcoxon W	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
Z	-2.887	-2.635	-2.619	-2.619	-2.611	-2.627	-2.619	-2.611	-2.611	-2.611	-2.643	-2.611	-2.619	-2.619	-2.619
Asymp. Sig. (2-tailed)	**.004**	**.008**	**.009**	**.009**	**.009**	**.009**	**.009**	**.009**	**.009**	**.009**	**.008**	**.009**	**.009**	**.009**	**.009**
Exact Sig. [2*(1-tailed Sig.)]	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

i. Formula 3 – Kontrol Positif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	.500	.000	.000	.000	.000	1.500	2.000	.000	.000	1.000	1.000	.000	.000	.000	5.000
Wilcoxon W	15.500	15.000	15.000	15.000	15.000	16.500	17.000	15.000	15.000	16.000	16.000	15.000	15.000	15.000	20.000
Z	-2.612	-2.668	-2.652	-2.627	-2.652	-2.333	-2.227	-2.652	-2.643	-2.440	-2.463	-2.619	-2.643	-2.785	-1.928
Asymp. Sig. (2-tailed)	**.009**	**.008**	**.008**	**.009**	**.008**	**.020**	**.026**	**.008**	**.008**	**.015**	**.014**	**.009**	**.008**	**.005**	.054
Exact Sig. [2*(1-tailed Sig.)]	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.016[b]**	**.032[b]**	**.008[b]**	**.008[b]**	**.016[b]**	**.016[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.151[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.

j. Kontrol Negatif – Kontrol Positif

Test Statistics[a]

	Hari 2	Hari 3	Hari 4	Hari 5	Hari 6	Hari 7	Hari 8	Hari 9	Hari 10	Hari 11	Hari 12	Hari 13	Hari 14	Hari 15	Hari 16
Mann-Whitney U	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Wilcoxon W	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000	15.000
Z	-2.805	-2.660	-2.643	-2.635	-2.652	-2.660	-2.635	-2.652	-2.643	-2.627	-2.685	-2.619	-2.652	-2.795	-2.785
Asymp. Sig. (2-tailed)	**.005**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.008**	**.009**	**.007**	**.009**	**.008**	**.005**	**.005**
Exact Sig. [2*(1-tailed Sig.)]	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**	**.008[b]**

a. Grouping Variable: Formula
b. Not corrected for ties.