L A M P I R A N

Lampiran 1. Hasil determinasi tanaman nanas

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA
BADAN PENELITIAN DAN PENGEMBANGAN KESEHATAN
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
TANAMAN OBAT DAN OBAT TRADISIONAL
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Nomor : KM.04.02/2/2250/2021 05 Oktober 2021
Lampiran : -
Hal : Keterangan Determinasi

Yth. Dekan Fakultas Farmasi Universitas Setia Budi
Jalan Letjend. Sutoyo Solo 57127

Merujuk surat Saudara nomor: 401/H6 – 04/23.08.2021 tanggal 23 Agustus 2021 hal permohonan determinasi, dengan ini kami sampaikan bahwa hasil determinasi sampel tanaman sebagai berikut:

Nama Pemohon : Lilis Puji Hastuti
Nama Sampel : Nanas
Sampel : Segar
Spesies : *Ananas comosus* (L.) Merr.
Sinonim : *Ananas comosus* f. *lucidus* (Mill.) Mez;
Ananas comosus f. *sativus* (Schult. & Schult.f.) Mez
Familia : Bromeliaceae
Penanggung Jawab : Isna Jati Asiyah, M.Sc.

Hasil determinasi tersebut hanya mencakup sampel tanaman yang telah dikirimkan ke B2P2TOOT.

Atas perhatian Saudara, kami sampaikan terima kasih.

Kepala Balai Besar Penelitian
dan Pengembangan Tanaman Obat
dan Obat Tradisional
Tawangmangu,

Akhmad Saikhu, S.K.M., M.Sc.PH.
NIP 196805251992031004

Tembusan :
-

Dokumen ini ditandatangani secara elektronik melalui Aplikasi TNDE menggunakan sertifikat elektronik yang diterbitkan oleh BSrE. (1/1)

Lampiran 2. Penyiapan simplisia kulit nanas

Sampel buah nanas segar

Kulit nanas segar

Pencucian dan sortasi

Perajangan

Pengeringan

Simplisia kulit nanas

Proses penyerbukan

Proses pengayakan

Serbuk halus

Lampiran 3. Penetapan kadar air serbuk dan susut pengeringan serbuk kulit nanas (*Ananas comosus* (L) Merr)

Serbuk halus Kulit nanas (*Ananas comosus* (L) Merr)

Penetapan kadar air serbuk (*Sterling bidwell*)

Penetapan susut pengeringan serbuk (*Moisture balance*)

Lampiran 4. Proses ekstraksi (maserasi) kulit nanas (*Ananas comosus* (L) Merr)

Proses maserasi dan penyaringan

Proses evaporasi

Oven

Lampiran 5. Pemeriksaan identifikasi ekstrak kulit nanas

Ekstrak kental kulit nanas (*Ananas comosus* (L) Merr)

Oven

Desikator

Lampiran 6 Pengujian bebas etanol ekstrak kulit nanas

Uji bebas etanol	Pustaka	Hasil pemeriksaan
Ekstrak kulit nanas + H_2SO_4 pekat + CH_3COOH dipanaskan	Tidak tercium bau khas ester (Depkes RI, 1995)	Bau khas ester tidak tercium 

Lampiran 7. Hasil Identifikasi Senyawa Kimia Ekstrak Kulit Nanas

No	Kandungan senyawa	Pustaka	Hasil Uji	Gambar
1.	Flavonid	Terbentuk larutan warna kuning atau orange, merah pada lapisan amil alkohol	+ Terbentuk warna jingga di lapisan amil	
2.	Saponin	Terbentuk busa stabil ± 1-5 cm tidak hilang HCL 2N	+ Terbentuk busa stabil 1 cm, tidak hilang ditambah HCL 2N	
3.	Tannin	Terbentuk warna hijau/ biru kehitaman	+ Terbentuk warna hijau kehitaman	

4.	Alkaloid (Dragendorff)	Endapan jingga kemerahan	+	
	Alkaloid (Mayer)	Endapan putih	+	
	Alkaloid (Wagner)	Endapan jingga sampai coklat	+	

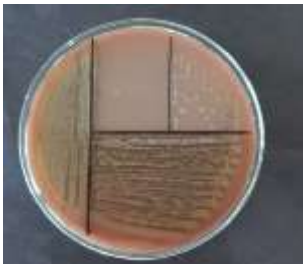
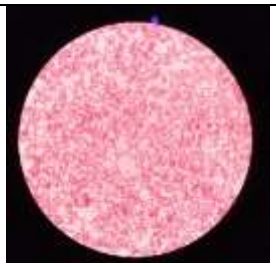
Lampiran 8. Bakteri dan Hasil Identifikasi *Streptococcus mutans* ATCC 25175

Biakan murni bakteri
Streptococcus mutans ATCC 25175

Peremajaan bakteri
Streptococcus mutans ATCC 25175

Suspensi bakteri
Streptococcus mutans ATCC 25175

Lampiran 9. Hasil identifikasi bakteri *Streptococcus mutans* ATCC 25175

No	Identifikasi	Pustaka	Hasil Uji	Gambar
1.	Gores pada media agar darah	Terbentuk sel koloni berwarna putih tepian hijau, terjadi hemolisis alfa	Terbentuk koloni berwarna putih tepian hijau, terjadi hemolisis alfa	 +
2.	Pewarnaan Gram	Gram positif menunjukkan koloni berderet berbentuk bulat sampai bulat telur.	Bakteri *S. mutans* Gram positif, terbentuk warna ungu berbentuk bulat telur dan berderet.	 +
3.	Pewarnaan Spora	Terbentuk sel spora berwarna hijau (genus Bacillus dan Clostridium), bakteri berwarna merah	Tidak terbentuk spora, adanya bakteri *S. mutans* ditandai terbentuk bakteri berwarna merah	 -
4.	Uji Katalase	Bakteri *S. mutans* tidak terbentuk gas berupa gelembung-gelembung udara	Bakteri *S. mutans* tidak terbentuk gas gelembung udara	 -
5.	Uji Koagulase	Bakteri *S. mutans* terbentuk gumpalan	+ bakteri *S. mutans* terbentuk gumpalan	 +

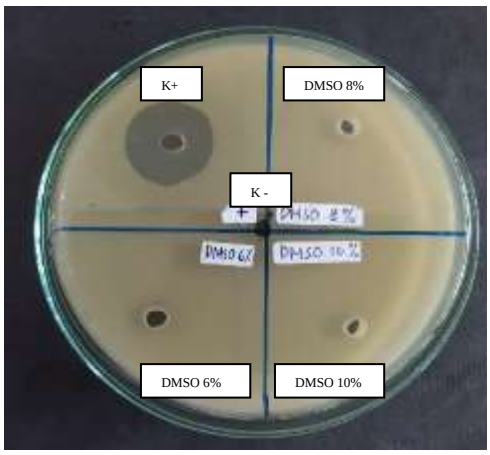
Lampiran 10. Alat pengujian antibakteri ekstrak kulit nanas (*Ananas comosus* (L) Merr)

Autoclave

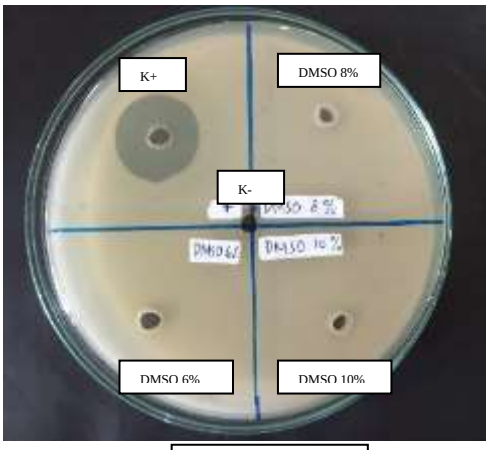
Inkubator

Laminar Air Flow (LAF)

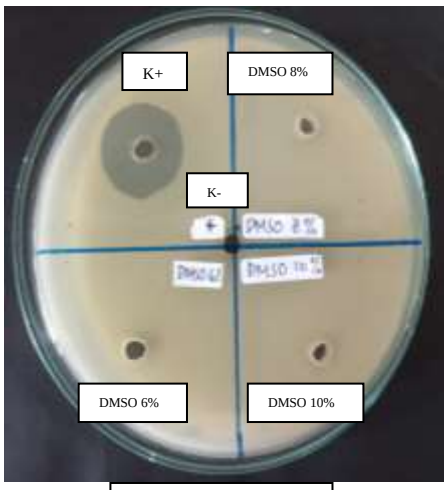
Lampiran 11. Hasil pengujian antibakteri pelarut DMSO sebagai pengencer ekstrak kulit nanas (*Ananas comosus* (L) Merr)



Replikasi 1



Replikasi 2

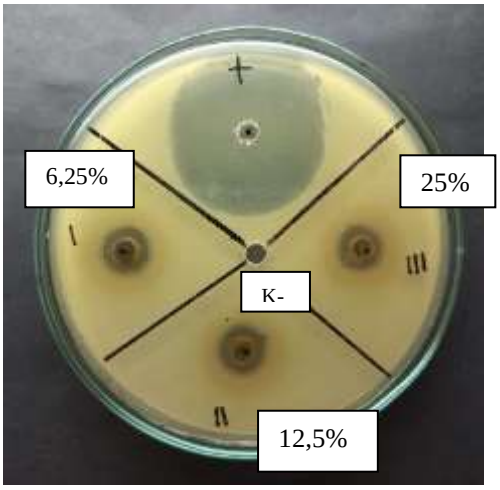


Replikasi 3

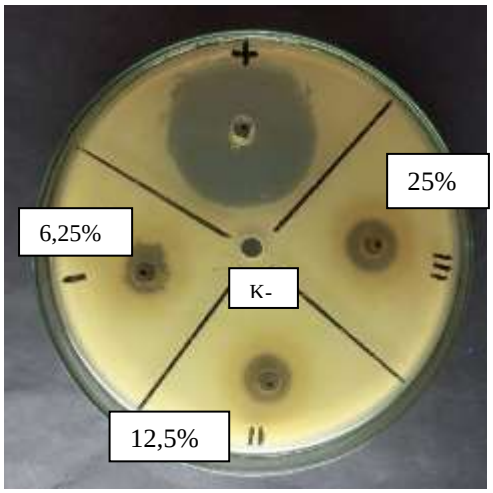
KONSENTRASI DMSO (%)	REPLIKASI			RATA-RATA (mm)	SD
	1	2	3		
6	0	0	0	0.00	0.00
8	0	0	0	0.00	0.00
10	0	0	0	0.00	0.00
K+	25	26	25	25.33	0.47
K-	0	0	0	0.00	0.00

Lampiran 12. Pengujian antibakteri ekstrak kulit nanas (*Ananas comosus* (L) Merr)

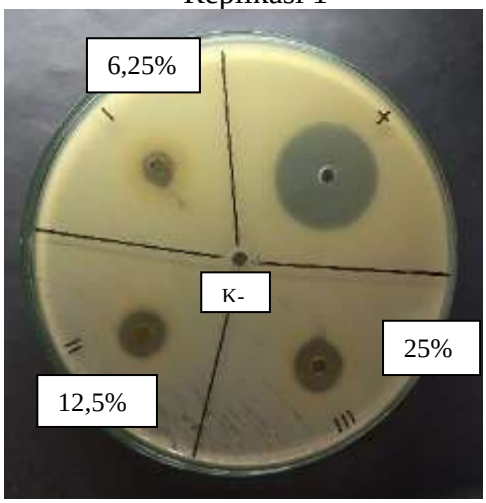
Pengenceran ekstrak



Replikasi 1



Replikasi 2

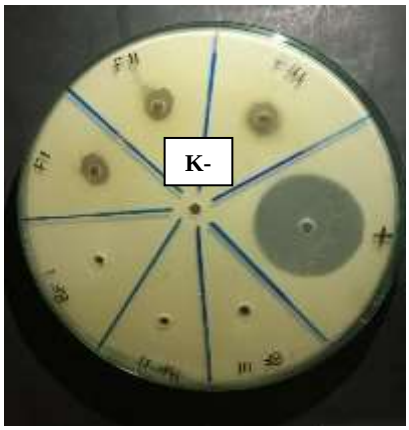


Replikasi 3

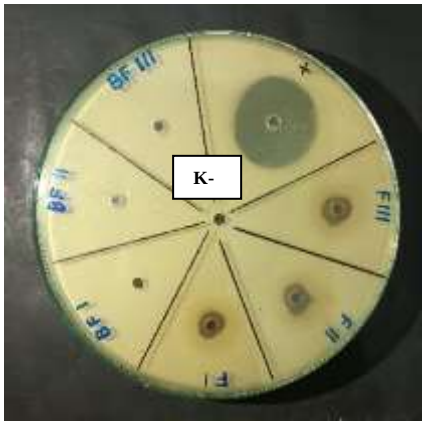
KONSENTRASI EKSTRAK (%)	REPLIKASI			RATA-RATA (mm)	SD
	1	2	3		
6.25	11.67	11.68	11.67	11.67	0.00
12.5	14.34	14.33	14.33	14.33	0.00
25	16	16.1	16	16.03	0.05
K+	25	26	25	25.33	0.47
K-	0	0	0	0.00	0.00

Keterangan:
1 : Konsentrasi ekstrak kulit nanas 6,25%
2 : Konsentrasi ekstrak kulit nanas 12,5%
3 : Konsentrasi ekstrak kulit nanas 25%
Kontrol + : Kloramfenikol 0,45%
Kontrol - : *Dimetil sufoxide* (DMSO) 6%

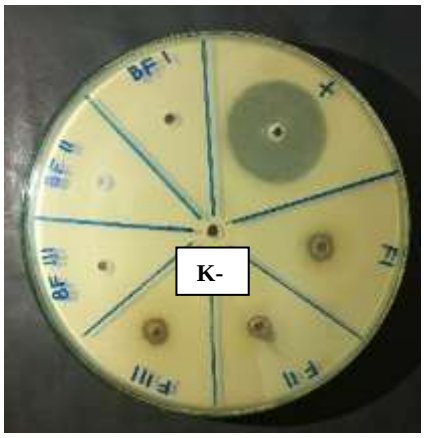
Lampiran 13. Pengujian antibakteri sediaan gel mulut ekstrak kulit nanas (*Ananas comosus* (L) Merr)



Replikasi 1



Replikasi 2



Replikasi 3

FORMULA	REPLIKASI			RATA-RATA (mm)	SD
	1	2	3		
F1	11.33	11.67	11.66	11.55	0.16
F2	11.33	11.33	11.33	11.33	0.00
F3	10.66	10	10.33	10.33	0.27
BF1	0	0	0	0.00	0.00
BF2	0	0	0	0.00	0.00
BF3	0	0	0	0.00	0.00
K+	25	26	27	26.00	0.82

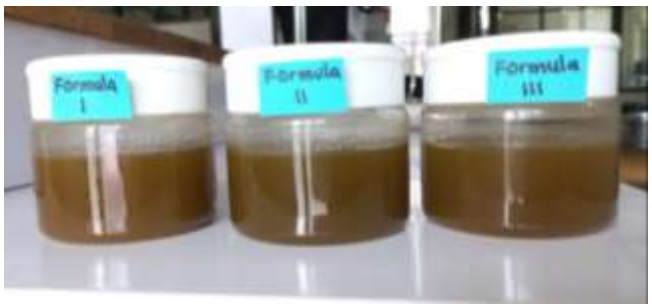
Keterangan:

Formula 1 : Gel ekstrak kulit nanas HEC 2,5%
Formula 2 : Gel ekstrak kulit nanas HEC 3%
Formula 3 : Gel ekstrak kulit nanas HEC 3,5%
Basis Formula 1 : Gel tanpa ekstrak kulit nanas HEC 2,5%
Basis Formula 2 : Gel tanpa ekstrak kulit nanas HEC 3%
Basis Formula 3 : Gel tanpa ekstrak kulit nanas HEC 3,5%
Kontrol (+) : Kloramfenikol 0,45%
Kontol (-) : *Aquadest* steril

Lampiran 14. Hasil Formula Sediaan Gel Mulut dan Pengujian Mutu Fisik

Pembuatan sediaan gel mulut ekstrak kulit nanas (*Ananas comosus* (L) Merr)

Basis formula gel mulut



Formula sediaan gel mulut ekstrak kulit nanas

Lampiran 15. Uji Mutu Fisik Sediaan Gel Mulut

Alat uji daya sebar

Alat uji daya lekat

pH meter

Neraca analitik

Viskometer

Lemari pendingin

Magnetic stirrer

inkubator

Pengujian homogenitas
basis formula

Pengujian homogenitas
formula sediaan

Lampiran 16. Perhitungan presentase rendemen serbuk

Perhitungan prosentase randemen bobot kering terhadap bobot basah kulit nanas

Sampel	Bobot Basah (g)	Bobot Kering (g)	Randemen (%b/b)
Kulit nanas	1600	1300	**81,25**

% randemen kering simplisia kulit nanas $= \frac{Berat\ kering}{Berat\ basah}$ **x 100%**

$= \frac{1300}{1600}$ x 100%

= 81,25%

Perhitungan prosentase randemen serbuk halus terhadap bobot kering serbuk kulit nanas

Sampel	Berat Kering (g)	Berat Serbuk (g)	Randemen (%b/b)
Kulit nanas	1300	1000	**76,92**

% randemen serbuk terhadap bobot kering $= \frac{Berat\ serbuk}{Berat\ kering}$ **x 100%**

$= \frac{1000}{1300}$ x 100%

= 76,92%

Lampiran 17. Susut Pengeringan Serbuk

Hasil susut pengeringan serbuk kulit nanas (*Moisture balance*)

Replikasi	Bobot serbuk (g)	Susut pengeringan (%v/b)
1	2,0118	5,1
2	2,0113	5,6
3	2,0022	5,6
	Rata – rata	**5,4**

Lampiran 18. Perhitungan Kadar Air Serbuk

Perhitungan kadar air serbuk kulit nanas (*Sterling bidwell*)

Replikasi	Bobot serbuk (g)	Volume air (mL)	Kadar air (%v/b)
1	20,0164	0,9	4,5
2	20,0224	1,1	5,5
3	20,0325	1,1	5,5
	Rata – rata±SD		**5,16 ±0,47**

Kadar air serbuk = $\frac{\text{Volume air (ml)}}{\text{Berat serbuk (g)}}$ **x 100%**

1. **Kadar air serbuk 1** $= \frac{0{,}9\ mL}{20\ g}$ **x 100%**

   = 4,5%
2. **Kadar air serbuk 2** $= \frac{1{,}1\ mL}{20\ g}$ **x 100%**

   = 5,5 %
3. **Kadar air serbuk 3** $= \frac{1{,}1\ mL}{20\ g}$ **x 100%**

   = 5,5 %

Rata – rata kadar air serbuk kulit nanas $= \frac{4{,}5\%+5{,}5\%+5{,}5\%}{3}$

= 5,16%

Lampiran 19. Perhitungan Rendemen Ekstrak Kulit Nanas

Perhitungan dan hasil randemen ekstrak kulit nanas

Sampel	Bobot serbuk (g)	Bobot ekstrak (g)	Randemen (%b/b)
Kulit nanas	**1000**	**475,025**	**47,502**

% Randemen ekstrak $= \frac{\text{Bobot ekstrak}}{\text{Bobot serbuk}}$ x 100%

$= \frac{475,025}{1000} x100\%$

= 47,502%

Lampiran 20. Perhitungan Kadar Air Ekstrak Kulit Nanas

Perhitungan penetapan kadar air ekstrak kulit nanas (Gravimetri)
07.00-12.00

Replikasi	Berat kurs kosong (g)	Bobot kurs+ ekstrak sebelum di oven (g)	Bobot awal (g)	Bobot kurs+ ekstrak setelah di oven (g)	Bobot akhir (g)	Kadar air (%b/b)
1	**23,277**	**33,297**	**10,020**	**31,647**	**8,370**	**9,185**
2	**23,182**	**33,197**	**10,015**	**31,581**	**8,399**	**9,176**
3	**23,215**	**33,242**	**10,027**	**31,609**	**8,394**	**9,190**
Rata – rata						**9,184**

Kadar air $= \frac{\textit{Bobot sebelum pengeringan (g)} - \textit{Bobot setelah pengeringan (g)}}{\textit{Bobot sebelum pengeringan (g)}} x\ 100\%$

1. **Kadar air ekstrak replikasi 1**

Kadar air $= \frac{\textit{Bobot sebelum pengeringan (g)} - \textit{Bobot setelah pengeringan}}{\textit{Bobot sebelum pengeringan}} x100\%$

$= \frac{10,020 - 8,370}{10,020} x100\%$

= **9,185**%

2. **Kadar air ekstrak replikasi 2**

Kadar air $= \frac{\textit{Bobot sebelum pengeringan (g)} - \textit{Bobot setelah pengeringan}}{\textit{Bobot sebelum pengeringan}} x100\%$

$= \frac{10,015 - 8,399}{10,015} x100\%$

= **9,176**%

3. **Kadar air ekstrak replikasi 3**

Kadar air $= \frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

$= \frac{10{,}027 - 8{,}394}{10{,}027} x100\%$

= **9,190**%

Rata – rata kadar air ekstrak kulit nanas $= \frac{9{,}185 + 9{,}176 + 9{,}190}{3}$

= 9,184%

12.30-13.30

Replikasi	Berat kurs kosong (g)	Bobot kurs+ ekstrak sebelum di oven (g)	Bobot awal (g)	Bobot kurs+ ekstrak setelah di oven (g)	Bobot akhir (g)	Kadar air (%b/b)
1	**23,277**	**33,297**	**10,020**	**31,515**	**8,238**	**9,198**
2	**23,182**	**33,197**	**10,015**	**31,450**	**8,268**	**9,189**
3	**23,215**	**33,242**	**10,027**	**31,486**	**8,271**	**9,202**
Rata – rata						**9,196**

Kadar air $= \frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan\ (g)}{Bobot\ sebelum\ pengeringan\ (g)} x\ 100\%$

1. **Kadar air ekstrak replikasi 1**

Kadar air $= \frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

$= \frac{10{,}020 - 8{,}238}{10{,}020} x100\%$

= **9,198**%

2. **Kadar air ekstrak replikasi 2**

Kadar air $= \frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

$= \frac{10{,}015 - 8{,}268}{10{,}015} x100\%$

= **9,189**%

3. **Kadar air ekstrak replikasi 3**

Kadar air $= \frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

$= \frac{10{,}027 - 8{,}271}{10{,}027} x100\%$

= **9,202**%

Rata – rata kadar air ekstrak kulit nanas $= \frac{9{,}198 + 9{,}189 + 9{,}202}{3}$

= 9,196%

13.40-14.40

Replikasi	Berat kurs kosong (g)	Bobot kurs+ ekstrak sebelum di oven (g)	Bobot awal (g)	Bobot kurs+ ekstrak setelah di oven (g)	Bobot akhir (g)	Kadar air (%b/b)
1	**23,277**	**33,297**	**10,020**	**31,429**	**8,152**	**9,206**
2	**23,182**	**33,197**	**10,015**	**31,319**	**8,137**	**9,203**
3	**23,215**	**33,242**	**10,027**	**31,354**	**8,139**	**9,215**
Rata – rata						**9,208**

Kadar air = $\frac{\textbf{Bobot sebelum pengeringan (g)} - \textbf{Bobot setelah pengeringan (g)}}{\textbf{Bobot sebelum pengeringan (g)}} x\ 100\%$

1. **Kadar air ekstrak replikasi 1**

Kadar air = $\frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

= $\frac{10{,}020 - 8{,}152}{10{,}020} x100\%$

= **9,206**%

2. **Kadar air ekstrak replikasi 2**

Kadar air = $\frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

= $\frac{10{,}015 - 8{,}137}{10{,}015} x100\%$

= **9,203**%

3. **Kadar air ekstrak replikasi 3**

Kadar air = $\frac{Bobot\ sebelum\ pengeringan\ (g) - Bobot\ setelah\ pengeringan}{Bobot\ sebelum\ pengeringan} x100\%$

= $\frac{10{,}027 - 8{,}139}{10{,}027} x100\%$

= **9,215**%

Rata – rata kadar air ekstrak kulit nanas = $\frac{9{,}206 + 9{,}203 + 9{,}215}{3}$

= 9,208%

Lampiran 21. Penetapan Bobot Jenis Ekstrak Kulit Nanas

Perhitungan dan hasil penetapan bobot jenis ekstrak kulit nanas

Replikasi	Berat piknometer kosong (50 mL)	Bobot piknometer + air (mL)	Bobot air (mL)	Bobot piknometer + ekstrak (mL)	Bobot ekstrak (mL)	Berat jenis (g/mL)
1	28,492	78,453	49,961	79,088	50,596	1,012
2	28,492	78,398	49,906	78,787	50,295	1,007
3	28,492	78,842	50,350	79,347	50,855	1,010
		Rata – rata				1,009

Bobot jenis = $\frac{W2-W0}{W1-W0} = \frac{(\text{Bobot pikno+ekstrak})-\text{Bobot pikno kosong}}{(\text{Bobot pikno+air})-\text{Bobot pikno kosong}}$xBJ Air

1. **Bobot jenis 1**

$$\frac{W2-W0}{W1-W0} = \frac{(Bobot\ pikno+ekstrak)-Bobot\ pikno\ kosong}{(Bobot\ pikno+air)-Bobot\ pikno\ kosong}\ \text{xBJ Air}$$

$$= \frac{50{,}596\ g}{49{,}961\ g}\text{x1}$$

= 1,012 g/mL

2. **Bobot jenis 2**

$$\frac{W2-W0}{W1-W0} = \frac{(Bobot\ pikno+ekstrak)-Bobot\ pikno\ kosong}{(Bobot\ pikno+air)-Bobot\ pikno\ kosong}\ \text{xBJ Air}$$

$$= \frac{50{,}295\ g}{49{,}906\ g}\text{x1}$$

= 1,007 g/mL

3. **Bobot jenis 3**

$$\frac{W2-W0}{W1-W0} = \frac{(Bobot\ pikno+ekstrak)-Bobot\ pikno\ kosong}{(Bobot\ pikno+air)-Bobot\ pikno\ kosong}\ \text{xBJ Air}$$

$$= \frac{50{,}855\ g}{50{,}350\ g}\text{x1}$$

= 1,010 g/mL

Rata – rata bobot jenis = $\frac{1{,}012+1{,}007+1{,}010}{3}$

= 1,009 g/mL

Lampiran 22. Perhitungan pembuatan konsentrasi kontrol positif

Kontrol positif kloramfenikol 0,45%

Merk dagang Hufamycetin kloramfenikol 250 mg

Berat 1 kapsul Hufamycetin kloramfenikol 250 mg = 279 mg

0,5% = 0,05 g/100 mL

= 50 mg/100 mL

Perhitungan kontrol positif kloramfenikol konsentrasi 0,45%

$$= \frac{50\ mg}{279\ mg} x250\ mg = 44{,}80\ mg\ atau\ 45\ mg$$

= 45 mg/10 ml

= 0,45%

Lampiran 23. Hasil uji Viskositas gel mulut ekstrak kulit nanas

Formula	**Replikasi**	**Viskositas (dPa's)**	
		Sebelum *cycling test*	**Sesudah *cycling test***
F1	1	240	220
	2	250	230
	3	230	210
	Rata-rata	240	220
	SD	8.16	8.16
F2	1	260	250
	2	280	260
	3	270	240
	Rata-rata	270	250
	SD	8.16	8.16
F3	1	320	300
	2	340	310
	3	320	300
	Rata-rata	327	303
	SD	9.43	4.71
BF1	1	250	240
	2	270	250
	3	260	240
	Rata-rata	260	243
	SD	8.16	4.71
BF2	1	280	250
	2	290	270
	3	290	260
	Rata-rata	287	260
	SD	4.71	8.16
BF3	1	320	300
	2	340	320
	3	330	310
	Rata-rata	330	310
	SD	8.16	8.16

Lampiran 24. Hasil uji Daya sebar gel mulut ekstrak kulit nanas

Formula	**Beban**	**Diameter daya sebar (cm)**			**Rata-rata**	**SD**
		Replikasi 1	Replikasi 2	Replikasi 3		
F1	50	6.2	6.3	6.3	6.3	0.05
	100	6.5	6.7	6.7	6.6	0.09
	150	7.2	7.4	7.3	7.3	0.08
F2	50	5.4	5.3	5.3	5.3	0.05
	100	6	5.9	5.8	5.9	0.08
	150	6.3	6.3	6.2	6.3	0.05
F3	50	4.2	4.1	4.1	4.1	0.05
	100	5	4.8	4.9	4.9	0.08
	150	5.3	5.3	5.2	5.3	0.05
BF1	50	6.5	6.5	6.5	6.5	0.00
	100	7	7	7	7.0	0.00
	150	7.5	7.6	7.5	7.5	0.05
BF2	50	5.7	5.5	5.5	5.6	0.09
	100	6.2	6	6	6.1	0.09
	150	6.6	6.5	6.5	6.5	0.05
BF3	50	4.5	4.5	4.5	4.5	0.00
	100	5.2	5	5	5.1	0.09
	150	5.6	5.5	5.5	5.5	0.05

Lampiran 25. Hasil uji Daya lekat gel mulut ekstrak kulit nanas

Formula	Replikasi	Daya lekat (detik)
F1	1	1.33
	2	1.35
	3	1.38
	Rata-rata	1.35
	SD	0.03
F2	1	1.54
	2	1.56
	3	1.57
	Rata-rata	1.56
	SD	0.02
F3	1	1.63
	2	1.65
	3	1.66
	Rata-rata	1.65
	SD	0.02
BF1	1	1.32
	2	1.33
	3	1.35
	Rata-rata	1.33
	SD	0.02
BF2	1	1.55
	2	1.57
	3	1.56
	Rata-rata	1.56
	SD	0.01
BF3	1	1.66
	2	1.68
	3	1.67
	Rata-rata	1.67
	SD	0.01

Lampiran 26. Hasil uji stabilitas viskositas gel mulut ekstrak kulit nanas

Formula	Replikasi	Viskositas	
		Sebelum Cycling Test	Sesudah Cycling Test
F1	1	240.00	220.00
	2	240.00	230.00
	3	230.00	210.00
	Rata-rata	236.67	220.00
	SD	4.71	8.16
F2	1	260.00	250.00
	2	280.00	260.00
	3	270.00	240.00
	Rata-rata	270.00	250.00
	SD	8.16	8.16
F3	1	320.00	300.00
	2	340.00	310.00
	3	320.00	300.00
	Rata-rata	326.67	303.33
	SD	9.43	4.71
BF1	1	250.00	240.00
	2	270.00	250.00
	3	260.00	240.00
	Rata-rata	260.00	243.33
	SD	8.16	4.71
BF2	1	280.00	250.00
	2	290.00	270.00
	3	290.00	260.00
	Rata-rata	286.67	260.00
	SD	4.71	8.16
BF3	1	320.00	300.00
	2	340.00	320.00
	3	330.00	310.00
	Rata-rata	330.00	310.00
	SD	8.16	8.16

Lampiran 27. Hasil uji stabilitas pH gel mulut ekstrak kulit nanas

Formula	Replikasi	pH	
		Sebelum *cycling test*	Sesudah *cycling test*
F1	1	6.71	6.46
	2	6.68	6.45
	3	6.68	6.48
	Rata-rata	6.69	6.46
	SD	0.01	0.01
F2	1	6.46	6.29
	2	6.47	6.28
	3	6.47	6.26
	Rata-rata	6.47	6.28
	SD	0.00	0.01
F3	1	6.26	5.96
	2	6.28	5.98
	3	6.28	5.96
	Rata-rata	6.27	5.97
	SD	0.01	0.01
BF1	1	6.86	6.76
	2	6.88	6.78
	3	6.86	6.76
	Rata-rata	6.87	6.77
	SD	0.01	0.01
BF2	1	6.68	6.54
	2	6.64	6.52
	3	6.72	6.52
	Rata-rata	6.68	6.53
	SD	0.03	0.01
BF3	1	6.42	6.32
	2	6.44	6.33
	3	6.44	6.32
	Rata-rata	6.43	6.32
	SD	0.01	0.00

Lampiran 28. Uji statistik Shapiro-wilk, Oneway Anova, Pos Hoc dan paired samples t-test

pH

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
pH_sebelum	.186	18	.100	.922	18	.141
pH_setelah	.141	18	.200*	.927	18	.169

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

a. Lilliefors Significance Correction

Nilai sig>0,05 = data terdistribusi normal

ANOVA

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
pH_sebelum	1.773	5	12	.193
pH_setelah	.738	5	12	.609

Nilai sig>0,05 = data homogen

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
pH_sebelum	Between Groups	.696	5	.139	357.729	.000
	Within Groups	.005	12	.000		
	Total	.700	17			
pH_setelah	Between Groups	1.087	5	.217	1449.548	.000
	Within Groups	.002	12	.000		
	Total	1.089	17			

Nilai sig <0,000 = terdapat perbedaan antara formula

Post Hoc Test

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
pH_sebelum	F1	F2	.22333*	.01610	.000	.1692	.2774
		F3	.41667*	.01610	.000	.3626	.4708
		BF1	-.17667*	.01610	.000	-.2308	-.1226
		BF2	.01000	.01610	.987	-.0441	.0641
		BF3	.25667*	.01610	.000	.2026	.3108
	F2	F1	-.22333*	.01610	.000	-.2774	-.1692
		F3	.19333*	.01610	.000	.1392	.2474
		BF1	-.40000*	.01610	.000	-.4541	-.3459
		BF2	-.21333*	.01610	.000	-.2674	-.1592
		BF3	.03333	.01610	.362	-.0208	.0874
	F3	F1	-.41667*	.01610	.000	-.4708	-.3626
		F2	-.19333*	.01610	.000	-.2474	-.1392
		BF1	-.59333*	.01610	.000	-.6474	-.5392
		BF2	-.40667*	.01610	.000	-.4608	-.3526
		BF3	-.16000*	.01610	.000	-.2141	-.1059
	BF1	F1	.17667*	.01610	.000	.1226	.2308
		F2	.40000*	.01610	.000	.3459	.4541
		F3	.59333*	.01610	.000	.5392	.6474
		BF2	.18667*	.01610	.000	.1326	.2408
		BF3	.43333*	.01610	.000	.3792	.4874
	BF2	F1	-.01000	.01610	.987	-.0641	.0441
		F2	.21333*	.01610	.000	.1592	.2674
		F3	.40667*	.01610	.000	.3526	.4608
		BF1	-.18667*	.01610	.000	-.2408	-.1326
		BF3	.24667*	.01610	.000	.1926	.3008
	BF3	F1	-.25667*	.01610	.000	-.3108	-.2026
		F2	-.03333	.01610	.362	-.0874	.0208
		F3	.16000*	.01610	.000	.1059	.2141
		BF1	-.43333*	.01610	.000	-.4874	-.3792
		BF2	-.24667*	.01610	.000	-.3008	-.1926
pH_setelah	F1	F2	.18667*	.01000	.000	.1531	.2203

	F3	.49667*	.01000	.000	.4631	.5303
	BF1	-.30333*	.01000	.000	-.3369	-.2697
	BF2	-.06333*	.01000	.000	-.0969	-.0297
	BF3	.14000*	.01000	.000	.1064	.1736
F2	F1	-.18667*	.01000	.000	-.2203	-.1531
	F3	.31000*	.01000	.000	.2764	.3436
	BF1	-.49000*	.01000	.000	-.5236	-.4564
	BF2	-.25000*	.01000	.000	-.2836	-.2164
	BF3	-.04667*	.01000	.006	-.0803	-.0131
F3	F1	-.49667*	.01000	.000	-.5303	-.4631
	F2	-.31000*	.01000	.000	-.3436	-.2764
	BF1	-.80000*	.01000	.000	-.8336	-.7664
	BF2	-.56000*	.01000	.000	-.5936	-.5264
	BF3	-.35667*	.01000	.000	-.3903	-.3231
BF1	F1	.30333*	.01000	.000	.2697	.3369
	F2	.49000*	.01000	.000	.4564	.5236
	F3	.80000*	.01000	.000	.7664	.8336
	BF2	.24000*	.01000	.000	.2064	.2736
	BF3	.44333*	.01000	.000	.4097	.4769
BF2	F1	.06333*	.01000	.000	.0297	.0969
	F2	.25000*	.01000	.000	.2164	.2836
	F3	.56000*	.01000	.000	.5264	.5936
	BF1	-.24000*	.01000	.000	-.2736	-.2064
	BF3	.20333*	.01000	.000	.1697	.2369
BF3	F1	-.14000*	.01000	.000	-.1736	-.1064
	F2	.04667*	.01000	.006	.0131	.0803
	F3	.35667*	.01000	.000	.3231	.3903
	BF1	-.44333*	.01000	.000	-.4769	-.4097
	BF2	-.20333*	.01000	.000	-.2369	-.1697

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

Pos Hoc Tukey: Adanya tanda bintang (*) pada Mean Difference menunjukkan adanya perbedaan yang signifikan antar formula.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pH_sebelum	6.5683	18	.20296	.04784
	pH_setelah	6.3872	18	.25309	.05965

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pH_sebelum dan pH_setelah	18	.969	.900

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_sebelum - pH_setelah	.1811	.07553	.01780	.14355	.21867	10.173	17	.102

nilai sig > 0,05 menunjukkan tidak ada perbedaan signifikan (stabil)

VISKOSITAS

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Visko_sebelum	.169	18	.188	.933	18	.222
Visko_sesudah	.186	18	.102	.923	18	.145

a. Lilliefors Significance Correction

Nilai sig>0,05 = data terdistribusi normal

ANOVA

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Visko_sebelum	.412	5	12	.831
Visko_sesudah	.168	5	12	.969

Nilai sig>0,05 = data homogen

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Visko_sebelum	Between Groups	20850.000	5	4170.000	50.040	.000
	Within Groups	1000.000	12	83.333		
	Total	21850.000	17			
Visko_sesudah	Between Groups	18711.111	5	3742.222	48.114	.000
	Within Groups	933.333	12	77.778		
	Total	19644.444	17			

Post Hoc Test

Multiple Comparisons

Tukey HSD

Dependent Variable	(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Visko_sebelum	F1	F2	-33.3333*	7.4536	.008	-58.369	-8.297
		F3	-90.0000*	7.4536	.000	-115.036	-64.964
		BF1	-23.3333	7.4536	.073	-48.369	1.703
		BF2	-50.0000*	7.4536	.000	-75.036	-24.964
		BF3	-93.3333*	7.4536	.000	-118.369	-68.297
	F2	F1	33.3333*	7.4536	.008	8.297	58.369
		F3	-56.6667*	7.4536	.000	-81.703	-31.631
		BF1	10.0000	7.4536	.758	-15.036	35.036
		BF2	-16.6667	7.4536	.290	-41.703	8.369
		BF3	-60.0000*	7.4536	.000	-85.036	-34.964
	F3	F1	90.0000*	7.4536	.000	64.964	115.036
		F2	56.6667*	7.4536	.000	31.631	81.703
		BF1	66.6667*	7.4536	.000	41.631	91.703
		BF2	40.0000*	7.4536	.002	14.964	65.036
		BF3	-3.3333	7.4536	.997	-28.369	21.703
	BF1	F1	23.3333	7.4536	.073	-1.703	48.369
		F2	-10.0000	7.4536	.758	-35.036	15.036
		F3	-66.6667*	7.4536	.000	-91.703	-41.631
		BF2	-26.6667*	7.4536	.035	-51.703	-1.631

		BF3	-70.0000*	7.4536	.000	-95.036	-44.964
	BF2	F1	50.0000*	7.4536	.000	24.964	75.036
		F2	16.6667	7.4536	.290	-8.369	41.703
		F3	-40.0000*	7.4536	.002	-65.036	-14.964
		BF1	26.6667*	7.4536	.035	1.631	51.703
		BF3	-43.3333*	7.4536	.001	-68.369	-18.297
	BF3	F1	93.3333*	7.4536	.000	68.297	118.369
		F2	60.0000*	7.4536	.000	34.964	85.036
		F3	3.3333	7.4536	.997	-21.703	28.369
		BF1	70.0000*	7.4536	.000	44.964	95.036
		BF2	43.3333*	7.4536	.001	18.297	68.369
Visko_sesudah	F1	F2	-30.0000*	7.2008	.013	-54.187	-5.813
		F3	-83.3333*	7.2008	.000	-107.520	-59.146
		BF1	-23.3333	7.2008	.061	-47.520	.854
		BF2	-40.0000*	7.2008	.001	-64.187	-15.813
		BF3	-90.0000*	7.2008	.000	-114.187	-65.813
	F2	F1	30.0000*	7.2008	.013	5.813	54.187
		F3	-53.3333*	7.2008	.000	-77.520	-29.146
		BF1	6.6667	7.2008	.932	-17.520	30.854
		BF2	-10.0000	7.2008	.733	-34.187	14.187
		BF3	-60.0000*	7.2008	.000	-84.187	-35.813
	F3	F1	83.3333*	7.2008	.000	59.146	107.520
		F2	53.3333*	7.2008	.000	29.146	77.520
		BF1	60.0000*	7.2008	.000	35.813	84.187
		BF2	43.3333*	7.2008	.001	19.146	67.520
		BF3	-6.6667	7.2008	.932	-30.854	17.520
	BF1	F1	23.3333	7.2008	.061	-.854	47.520
		F2	-6.6667	7.2008	.932	-30.854	17.520
		F3	-60.0000*	7.2008	.000	-84.187	-35.813
		BF2	-16.6667	7.2008	.260	-40.854	7.520
		BF3	-66.6667*	7.2008	.000	-90.854	-42.480
	BF2	F1	40.0000*	7.2008	.001	15.813	64.187
		F2	10.0000	7.2008	.733	-14.187	34.187
		F3	-43.3333*	7.2008	.001	-67.520	-19.146
		BF1	16.6667	7.2008	.260	-7.520	40.854
		BF3	-50.0000*	7.2008	.000	-74.187	-25.813
	BF3	F1	90.0000*	7.2008	.000	65.813	114.187

	F2	60.0000*	7.2008	.000	35.813	84.187
	F3	6.6667	7.2008	.932	-17.520	30.854
	BF1	66.6667*	7.2008	.000	42.480	90.854
	BF2	50.0000*	7.2008	.000	25.813	74.187

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

Pos Hoc Tukey: Adanya tanda bintang (*) pada Mean Difference menunjukkan adanya perbedaan yang signifikan antar formula.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Visko_sebelum	285.000	18	35.8510	8.4502
	Visko_sesudah	264.444	18	33.9935	8.0123

Paired Samples Correlations

			N	Correlation	Sig.
Pair 1	Visko_sebelum & Visko_sesudah	dan	18	.985	.808

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	Visko_sebelum - Visko_sesudah	20.5556	6.3914	1.5065	17.3772	23.7339	13.645	17	.303

nilai sig > 0,05 menunjukkan tidak ada perbedaan signifikan (stabil)

DAYA SEBAR

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DayaSebar	.159	18	.200*	.899	18	.055

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

a. Lilliefors Significance Correction

Nilai sig>0,05 = data terdistribusi normal

Test of Homogeneity of Variances

DayaSebar

Levene Statistic	df1	df2	Sig.
.286	5	12	.912

Nilai sig>0,05 = data homogen

ANOVA

DayaSebar

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.496	5	2.499	562.325	.000
Within Groups	.053	12	.004		
Total	12.549	17			

Nilai sig<0,05 = terdapat perbedaan antara masing-masing formula

DAYA LEKAT

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DayaLekat	.159	18	.200*	.930	18	.191

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

a. Lilliefors Significance Correction

Nilai sig>0,05 = data terdistribusi normal

Test of Homogeneity of Variances

DayaLekat

Levene Statistic	df1	df2	Sig.
.808	5	12	.566

Nilai sig>0,05 = data homogen

ANOVA

DayaLekat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.359	5	.072	281.217	.000
Within Groups	.003	12	.000		
Total	.362	17			

Nilai sig<0,05 = terdapat perbedaan antara masing-masing formula

DAYA HAMBAT

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DayaHambat	.248	12	.040	.904	12	.176

a. Lilliefors Significance Correction

Nilai sig>0,05 = data terdistribusi normal

Test of Homogeneity of Variances

DayaHambat

Levene Statistic	df1	df2	Sig.
1.318	3	8	.334

Nilai sig>0,05 = data homogen

ANOVA

DayaHambat

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.676	3	5.559	50.398	.000
Within Groups	.882	8	.110		
Total	17.558	11			

Nilai sig<0,05 = terdapat perbedaan antara masing-masing formula

Multiple Comparisons

Dependent Variable: DayaHambat

Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
R1	R2	.33333	.27116	.627	-.5350	1.2017
	R3	1.22333*	.27116	.009	.3550	2.0917
	kontrol positif	-2.00000*	.27116	.000	-2.8683	-1.1317
R2	R1	-.33333	.27116	.627	-1.2017	.5350

	R3	.89000*	.27116	.045	.0217	1.7583
	kontrol positif	-2.33333*	.27116	.000	-3.2017	-1.4650
R3	R1	-1.22333*	.27116	.009	-2.0917	-.3550
	R2	-.89000*	.27116	.045	-1.7583	-.0217
	kontrol positif	-3.22333*	.27116	.000	-4.0917	-2.3550
kontrol positif	R1	2.00000*	.27116	.000	1.1317	2.8683
	R2	2.33333*	.27116	.000	1.4650	3.2017
	R3	3.22333*	.27116	.000	2.3550	4.0917

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

Pos Hoc Tukey: Adanya tanda bintang (*) pada Mean Difference menunjukkan adanya perbedaan yang signifikan antar formula.

Homogeneous subsets

DayaHambat

Tukey HSD[a]

		Subset for alpha = 0.05		
Formula	N	1	2	3
R3	3	10.3300		
R2	3		11.2200	
R1	3		11.5533	
kontrol positif	3			13.5533
Sig.		1.000	.627	1.000

Means for groups in homogeneous subsets are displayed.

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