L A M P I R A N

Lampiran 1. Surat izin praktikum di USB

UNIVERSITAS SETIA BUDI

UPT- LABORATORIUM

Nomor : 0122/UPT-lab/28.01.2022
Lamp. : -
Hal : Ijin Penelitian di Laboratorium

Kepada Yth. Bapak,Ibu Laboran dan PU

Di Tempat

Dengan hormat,

Sehubungan dengan penyelesaian penelitian mahasiswa, maka kami UPT laboratorium menyetujui untuk praktikum kepada :

Nama/NIM	: Zhicizha Estara Suyit/ 24185391A
Fakultas	: Farmasi
Nomor Lab & Masa Berlaku	: 9 selama 14 hari (tgl 31 Januari – 18 Februari 2022)
Nomor Lab & Masa Berlaku	: 13 selama 23 hari (tgl 21 Februari – 25 Maret 2022)
Nomor Lab & Masa Berlaku	: 7&8 selama 24 hari (tgl 14 Maret – 14 April 2022)

***Note : jam mengikuti jadwal lab apabila ada praktikum reguler penelitian dilarang masuk**

Atas perhatian dan kerjasamanya, kami ucapkan terimakasih.

Catatan : Membawa bukti transfer yang sudah difotokopi dan diperbesar sebanyak 4 lembar dan Selama praktikum mahasiswa yang bersangkutan harus memakai APD lengkap (jas praktek, masker, sepatu)

Surakarta, 28 Januari 2022
Ka UPT Laboratorium

Asik Gunawan

Lampiran 2. Hasil determinasi tanaman apel manalagi

UNIVERSITAS SETIA BUDI

UPT-LABORATORIUM

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

Nomor : 329/DET/UPT-LAB/23.02.2022
Hal : Hasil determinasi tumbuhan
Lamp. : -

Nama Pemesan : Zhicizha Estara Suyit
NIM : 24185491A
Alamat : Program studi S1 Farmasi,
Universitas Setia Budi, Surakarta
Nama sampel : *Pyrus malus* var. *sylvestris* L/Apel manalagi

HASIL DETERMINASI TUMBUHAN

Klasifikasi

Kingdom : Plantae
Super Divisi : Spermatophyta
Divisi : Magnoliophyta
Kelas : Magnoliopsida
Ordo : Rosales
Famili : Rosaceae
Genus : Malus
Species : *Pyrus malus* var. *sylvestris* L

Hasil Determinasi menurut C.A. Backer & R.C. Bakhuizen van den Brink Jr. (1963) dan She *et al.* (2005) :

1b – 2b – 3b – 4b – 12b – 13b – 14b – 17b – 18b – 19b – 20b – 21b – 22b – 23b – 24b – 25b – 26b – 27a – 28b – 29b – 30b – 31a – 32b – 74a – 75b – 76a – 77b – 104b – 106b – 107b – 186b – 287b – 288b – 289a – 290b – 291a – 292b – 293b – 294b – 295b – 296b – 297b. familia 104. Rosaceae. 1b – 2b – 3b – 13b – 15b.3. *Pyrus malus* var. *sylvestris* L.

Deskripsi:

Habitus : Perdu, tinggi 3-5 meter.
Batang : Batang berkayu, berwarna coklat, bulat.

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

Daun	:	Daun tunggal, bangun bulat telur, ujung runcing, pangkal ada yang rompang dan ada yang runcing, tepi bergerigi, di ujung batang, panjang 5 – 8 cm, lebar 2 - 4 cm, tulang daun menyirip, permukaan atas hijau tua, permukaan bawah hijau muda. Tangkai daun bulat, berwarna hijau, berbulu, panjang 3 – 4 cm.
Bunga	:	Bunga majemuk, bentuk malai, di ujung batang, aktinomorf; kelopak berwarna hijau, daun kelopak 5 berlekatan; mahkota bunga 5, berwarna putih, benangsari banyak, putih, kepalasari kuning kecoklatan, putik 1, putih kekuningan.
Buah	:	Buah buni, bulat, diameter 4,5 – 5 cm, ujung dan pangkal berlekuk, berwarna hijau. Kulit buah hijau kekuningan. Daging buah berwarna putih kekuningan, berasa manis meski belum matang. Aroma wangi. Diameter buah 4-7 cm.
Biji	:	Biji kecil, pipih, berwarna coklat kehitaman.
Akar	:	Akar tunggang, warna putih kecoklatan.

Surakarta, 23 Februari 2022

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

Lampiran 3. Hasil perhitungan rendemen simplisia buah apel manalagi

Sampel	Bobot simplisia		
	Basah(g)	Kering (g)	Rendemen (%)
Apel manalagi	8.000	1.300	16,25

Persen rendemen simplisia $= \frac{\textbf{Simplisia kering (g)}}{\textbf{Simplisia basah (g)}} \textbf{ X 100 } \%$

$= \frac{\textbf{1.300 g}}{\textbf{8.000 g}} \textbf{ X 100 } \%$

$= 16,25\ \%$

Lampiran 4. Hasil perhitungan rendemen serbuk apel manalagi

Sampel	Bobot simplisia		
	Kering (g)	Serbuk (g)	Rendemen (%)
Apel manalagi	1.300	1.200	92,30

Persen rendemen simplisia $= \frac{\textbf{Simplisia serbuk (g)}}{\textbf{Simplisia kering (g)}} \textbf{ X 100 } \%$

$= \frac{\textbf{1.200 g}}{\textbf{1.300 g}} \textbf{ X 100 } \%$

$= 92,30\ \%$

Lampiran 5. Hasil perhitungan rendemen ekstrak buah apel manalagi

Sampel	Bobot		
	Serbuk (g)	Ekstrak (g)	Rendemen (%)
Apel manalagi	1000	319	31,9

Persen rendemen simplisia $= \frac{\textbf{Ekstrak kental (g)}}{\textbf{Simplisia serbuk (g)}} \textbf{ X 100 } \%$

$= \frac{\textbf{319 g}}{\textbf{1000 g}} \textbf{ X 100 } \%$

$= 31,9\%$

Replikasi	Berat serbuk (g)	Susut pengeringan (%)
I	2,0	2,00
II	2,0	2,10
III	2,0	2,14
Rata-rata ± SD		2,08 ± 0,07

Lampiran 6. Hasil penetapan susut pengeringan serbuk

Lampiran 7. Hasil perhitungan kadar air serbuk apel manalagi

Replikasi	Berat serbuk (g)	Volume terbaca (ml)	Kadar air (%)
1	20	1,7	8,5
2	20	1,8	9
3	20	1,7	8,5
Rata –rata ± SD			8,6 ± 0,26

Perhitungan kadar air:

Replikasi I

Volume terbaca = 1,7 ml

Berat serbuk = 20 g

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

$= \frac{1,7 \text{ ml}}{20 \text{ g}}$ x 100%

=8,5 %

Replikasi II

Volume terbaca = 1,8 ml

Berat serbuk = 20 g

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

$= \frac{1,8 \text{ ml}}{20 \text{ g}}$ x 100%

= 9 %

Replikasi III

Volume terbaca = 1,7 ml

Berat serbuk = 20 g

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

$= \frac{1,7 \text{ ml}}{20 \text{ g}}$ x 100%

= 8,5 %

Rata-rata $= \frac{\text{kadar air I} + \text{kadar air II} + \text{kadar air III}}{3}$

$= \frac{8,5\ \% + 9\% + 8,5\ \%}{3}$

= 8,6 %

Lampiran 8. Proses ekstraksi maserasi

Buah apel manalagi

Pemotongan buah apel

Pengeringan buah apel

Serbuk simplisia kering apel manalagi

Serbuk dimasukkan maserator

Ekstrak difiltrasi dengan kain flannel

Ekstrak difiltrasi dengan kertas saring

Filtrat cair

Evaporasi

Ekstrak kental

Lampiran 9. Hasil karakteristik serbuk

Serbuk simplisia apel manalagi

Susut pengeringan serbuk apel manalagi

Destilasi uji kadar air serbuk

Lampiran 10. Perhitungan formula

1. Formula I

Formula I	Komposisi (%)	Perhitungan	Penimbangan (g)
Zat aktif	15	$= \frac{10}{100}$ x 100g	15
Na CMC	1,5	$= \frac{1,5}{100}$ x 100g	1,5
Kalsium	20	$= \frac{20}{100}$ x 100g	20
Gliserin	5	$= \frac{5}{100}$ x 100g	5
Sorbitol (70%)	20	$= \frac{20}{100}$ x 120g	20
Natrium sakarin	0,25	$= \frac{0,25}{100}$ x 120g	0,25
Metil paraben	0,5	$= \frac{0,5}{100}$ x 120g	0,5
Propil paraben	0,25	$= \frac{0,25}{100}$ x 120g	0,25
Natrium lauril	1	$= \frac{1}{100}$ x 120g	1
Akuades	Ad 100	= 100 g - (15 + 1,5 + 20 + 5 + 20+0,25 +0 ,5 + 0,25 + 1) g = 100 g – 63,5 g = 36,5 g	36,5

2. Formula II

Formula II	Komposisi (%)	Perhitungan	Penimbangan (g)
Zat aktif	15	$= \frac{10}{100}$ x 100g	15
Na CMC	2	$= \frac{2,5}{100}$ x 100g	2
Kalsium	20	$= \frac{20}{100}$ x 100g	20
Gliserin	5	$= \frac{5}{100}$ x 100g	5
Sorbitol (70%)	20	$= \frac{20}{100}$ x 120g	20
Natrium sakarin	0,25	$= \frac{0,25}{100}$ x 120g	0,25
Metil paraben	0,5	$= \frac{0,5}{100}$ x 120g	0,5
Propil paraben	0,25	$= \frac{0,25}{100}$ x 120g	0,25
Natrium lauril	1	$= \frac{1}{100}$ x 120g	1
Akuades	Ad 100	= 100 g - (15 + 2 + 20 + 5 + 20+0,25 +0 ,5 + 0,25 + 1) g = 100 g – 63,95 g = 36,05 g	36,05

3. Formula III

Formula III	Komposisi (%)	Perhitungan	Penimbangan (g)
Zat aktif	15	$= \frac{10}{100}$ x 100g	15
Na CMC	2,5	$= \frac{2}{100}$ x 100g	2
Kalsium	20	$= \frac{20}{100}$ x 100g	20
Gliserin	5	$= \frac{5}{100}$ x 100g	5
Sorbitol (70%)	20	$= \frac{20}{100}$ x 100g	20
Natrium sakarin	0,25	$= \frac{0,25}{100}$ x 100g	0,25
Metil paraben	0,5	$= \frac{0,5}{100}$ x 100g	0,5
Propil paraben	0,25	$= \frac{0,25}{100}$ x 100g	0,25
Natrium lauril	1	$= \frac{1}{100}$ x 100g	1
Akuades	Ad 100	= 100 g - (15 + 2,5 + 20 + 5 + 20+0,25 +0 ,5 + 0,25 + 1 g = 100 g – 64,5) g = 35,5 g	35,5

Lampiran 11. Hasil uji fitokimia dan bebas etanol ekstrak buah apel manalagi

Hasil uji kadar air ekstrak menggunakan gravimetri

Hasil uji flavonoid

Hasil uji polifenol

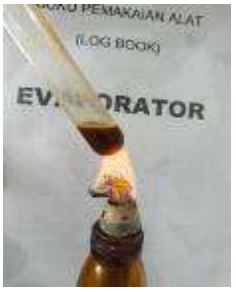
Hasil uji saponin

Hasil uji tannin

Hasil uji alkaloid mayer

Hasil uji alkaloid wagner

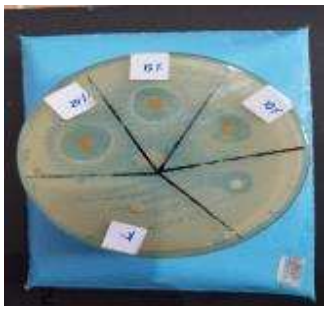
Hasil uji alkaloid dregendroff



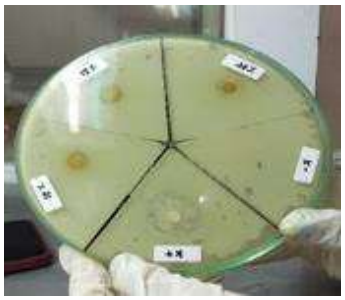
Hasil uji bebas etanol ekstrak buah apel manalagi

Hasil uji polifenol

Lampiran 12. Hasil orientasi ekstrak buah apel manalagi



Replikasi I



Replikasi II

Replikasi III

Lampiran 13. Hasil perhitungan uji kadar air ekstrak apel manalagi

Replikasi	Berat krus kosong (gram)	Berat krus + ekstrak (gram)	Berat ekstrak awal (gram)	Berat krus + ekstrak setelah di oven 5 jam (gram)	Berat krus+ ekstrak setelah di oven 1 jam (gram)	Kadar air (%)
1	13,428	23,446	10,018	22,605	22,603	3,58
2	13,813	23,821	10,008	23,038	23,036	3,28
3	13,305	23,366	10,055	22,494	22,492	3,73
Rata-rata±SD						3,53±0,229

Replikasi I

Kadar air ekstrak = $\frac{Berat\ sebelum\ pengeringan - Berat\ setelah\ pengeringan}{Berat\ sebelum\ pengeringan}$ x 100%

$= \frac{23,446 - 22,605}{23,446}$ x 100%

= 3,58%

Replikasi II

Kadar air ekstrak = $\frac{Berat\ sebelum\ pengeringan - Berat\ setelah\ pengeringan}{Berat\ sebelum\ pengeringan}$ x 100%

$= \frac{23,821 - 23,038}{23,821}$ x 100%

= 3,28%

Replikasi III

Kadar air ekstrak = $\frac{Berat\ sebelum\ pengeringan - Berat\ setelah\ pengeringan}{Berat\ sebelum\ pengeringan}$ x 100%

$= \frac{23,366 - 22,494}{23,366}$ x 100%

= 3,73%

Rata-rata $= \frac{3,58+3,28+3,73}{3}$

= 3,53 %

Lampiran 14. Hasil uji mutu fisik sediaan pasta gigi gel ekstrak buah apel manalagi

1. Tabel pH

Formula	Hari ke-1	Hari ke-21
1	6,60	6,30
	5,60	6,86
	6,20	6,99
Rata-rata±SD	6,05±0,632	6,52±0,797
2	6,00	6,78
	5,95	6,54
	6,35	6,89
Rata-rata±SD	6,10±0,218	6,74±0,357
3	6,71	5,2
	5,45	6,99
	6,00	6,97
Rata-rata±SD	6,13±0,503	6,72±0,367
4	6,10	5,77
	6,80	6,29
	6,21	7,52
Rata-rata±SD	6,37±0,376	6,53±0,889
5	5,85	6,94
	6,09	6,97
	7,67	6,97
Rata-rata±SD	6,54±0,989	6,96±0,017
6	6,97	6,96
	6,41	6,99
	7,27	6,95
Rata-rata± SD	6,88±0,437	6,97±0,021

Keterangan :

Formula 1 : 1,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 2 : 2% CMC-Na dengan 15% ekstrak apel manalagi
Formula 3 : 2,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 4 : 1,5% CMC-Na tanpa ekstrak apel manalagi
Formula 5 : 2% CMC-Na tanpa ekstrak apel manalagi
Formula 6 : 2,5% CMC-Na tanpa ekstrak apel manalagi

2. Tabel viskositas

Formula	Hari ke-1	Hari ke-21
1	300	200
	350	310
	300	350
Rata-rata±SD	283,33±28,868	286,67±77,675
2	250	310
	300	230
	350	350
Rata-rata±SD	300,00±50,000	326,67±61,101
3	300	320
	350	340
	320	350
Rata-rata±SD	323,33±25,166	336,66±15,273
4	210	250
	200	250
	200	300
Rata-rata±SD	203,33±5,773	266,67±28,868
5	200	200
	250	350
	250	350
Rata-rata±SD	233,33±28,867	300,00±86,603
6	200	300
	320	320
	300	320
Rata-rata± SD	273,33±64,291	313,33±11,547

Keterangan :

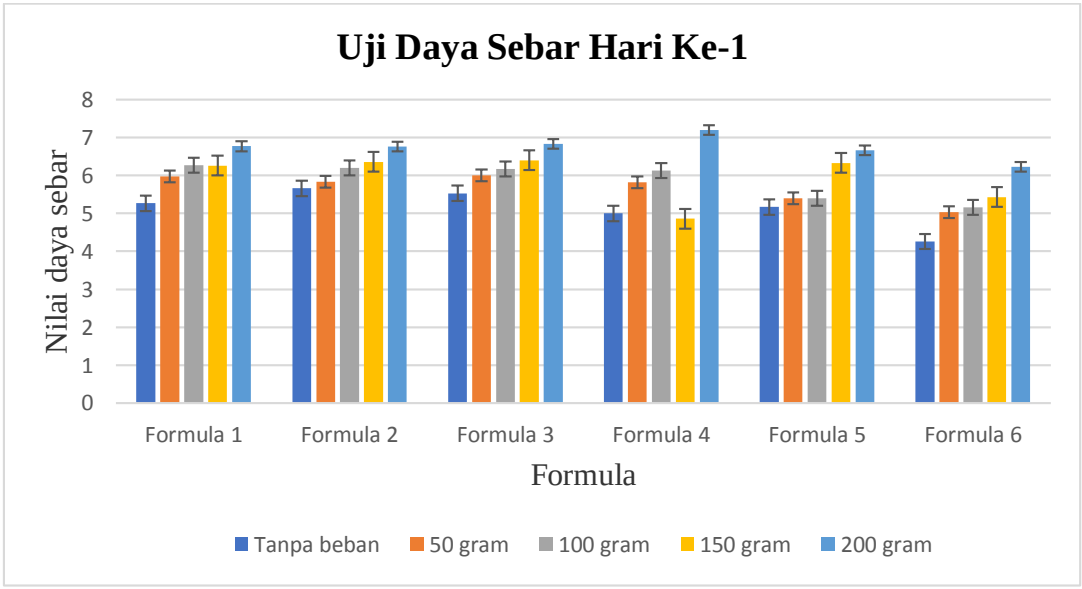
Formula 1 : 1,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 2 : 2% CMC-Na dengan 15% ekstrak apel manalagi
Formula 3 : 2,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 4 : 1,5% CMC-Na tanpa ekstrak apel manalagi
Formula 5 : 2% CMC-Na tanpa ekstrak apel manalagi
Formula 6 : 2,5% CMC-Na tanpa ekstrak apel manalagi

3. Tabel daya sebar

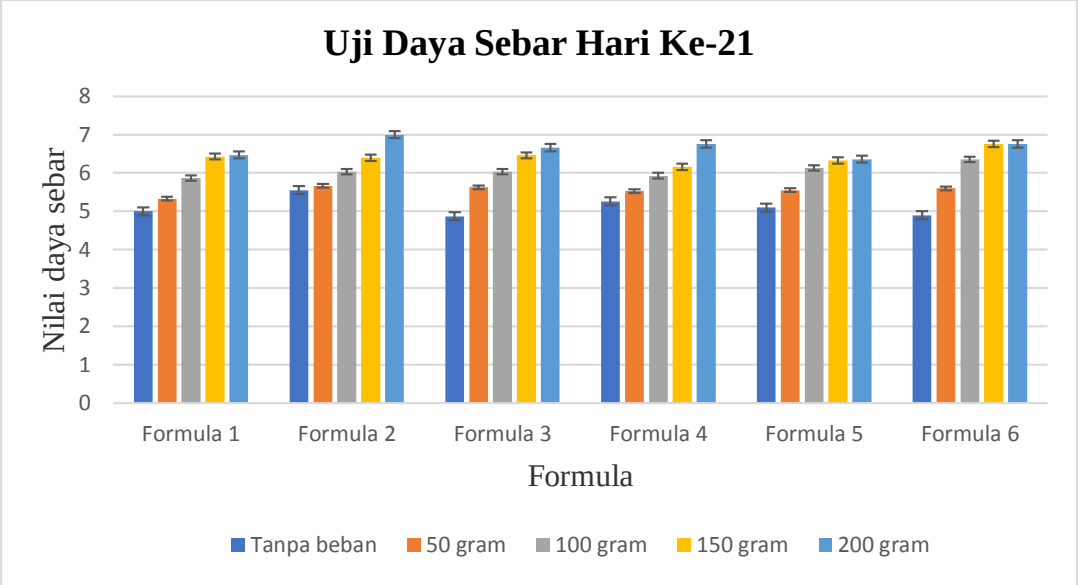
Formula	Beban	replikasi	Hari ke-1	Hari ke-21
1	Tanpa beban	1	5,5	5,1
		2	5,5	4,5
		3	4,9	5,4
	Rata-rata±SD		5,55±0,764	5,17±0,058
	50 gram	1	6	6,6
		2	6	5,4
		3	5,4	4,5
	Rata-rata±SD		5,40±0,557	5,33±0,586
	100 gram	1	6	6,1
		2	6,5	5,9
		3	6	5,2
	Rata-rata±SD		6,17±0,289	5,87±0,651
	150 gram	1	7	6,5
		2	6,9	6,8
		3	6,5	5,8
	Rata-rata±SD		6,46±0,529	6,36±0,361
	200 gram	1	6,9	6,8
		2	6,5	7,5
		3	6,9	5,8
	Rata-rata±SD		6,76±0,361	6,77±0,751
2	Tanpa beban	1	5,1	5,5
		2	4,5	5
		3	5,4	4,5
	Rata-rata±SD		5,00±0,458	5,00±0,500
	50 gram	1	5	6,5
		2	5	5,2
		3	5,5	4,2
	Rata-rata±SD		5,,33±0,557	5,16±0,436
	100 gram	1	6,5	6,1
		2	6,1	6,2
		3	5,5	6,1
	Rata-rata±SD		6,03±0,755	6,13±0,058
	150 gram	1	7	6,4
		2	6,4	7
		3	6	5,8
	Rata-rata±SD		6,43±0,551	6,26±0,600
	200 gram	1	7	7
		2	7	7
		3	6,3	6
	Rata-rata±SD		6,76±0,764	6,66±0,839
3	Tanpa beban	1	5,4	4,4
		2	5,1	4,1
		3	4,1	4,3
	Rata-rata±SD		4,87±0,681	4,26±0,058
	50 gram	1	6	5,1
		2	5	5
		3	5	5
	Rata-rata±SD		5,23±0,152	5,03±0,100
	100 gram	1	6,8	5

		2	5,9	5,2
		3	5,7	6
	Rata-rata±SD		6,13±0,709	5,40±0,529
		1	6,8	6,9
	150 gram	2	6,4	7
		3	6	7
	Rata-rata±SD		6,40±0,361	4,48±0,208
		1	6,6	7
	200 gram	2	6,3	6,9
		3	6,9	5,5
	Rata-rata±SD		6,66±0,351	6,46±0,529
		1	5,5	5,2
4	Tanpa beban	2	6	5,5
		3	5,5	5,1
	Rata-rata±SD		5,66±0,231	5,26±0,404
		1	6	6
	50 gram	2	6,5	6
		3	5,4	5
	Rata-rata±SD		5,82±0,312	5,33±0,587
		1	6,4	6,1
	100 gram	2	7	5,9
		3	5,4	5,8
	Rata-rata±SD		6,27±0,808	5,93±0,265
		1	6,9	6,2
	150 gram	2	6,9	7
		3	6,5	6
	Rata-rata±SD		6,76±0,400	6,40±0,529
		1	7,1	7
	200 gram	2	7,4	7,5
		3	7,1	6,5
	Rata-rata±SD		7,20±0,100	7,00±0,513
		1	5,4	5,3
5	Tanpa beban	2	5,8	5,5
		3	5,4	4,5
	Rata-rata±SD		5,53±0,321	5,10±0,529
		1	6	6,5
	50 gram	2	6	5,2
		3	5,5	4,2
	Rata-rata±SD		5,83±0,115	5,55±0,586
		1	6,3	6,2
	100 gram	2	6,5	6,4
		3	5,8	5,5
	Rata-rata±SD		6,20±0,656	6,03±0,755
		1	7	6,2
	150 gram	2	6,4	6,4
		3	5,9	5,5
	Rata-rata±SD		6,43±0,551	6,33±0,208
		1	6,6	6,9
	200 gram	2	7	6,9
		3	6,9	6,5
	Rata-rata±SD		6,83±0,208	6,76±0,400
6	Tanpa beban	1	5,4	5,1

	2	5,4	5,1
	3	5	4,5
Rata-rata±SD		5,27±0,321	4,90±0,404
50 gram	1	5,1	5
	2	5,2	5
	3	5,4	5,5
Rata-rata±SD		5,97±0,551	5,66±0,511
100 gram	1	6,1	5,2
	2	6,8	5,1
	3	6,2	5,2
Rata-rata±SD		6,36±0,551	5,17±0,153
150 gram	1	6,4	5,9
	2	6,2	5,1
	3	5,9	5,3
Rata-rata±SD		6,16±0,557	5,43±0,400
200 gram	1	6,8	6
	2	6,4	6,2
	3	5,9	6,5
Rata-rata±SD		6,36±0,854	6,23±0,252



Grafik uji daya sebar hari ke-1.



Grafik uji daya sebar ke-21.

Keterangan :

Formula 1 : 1,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 2 : 2% CMC-Na dengan 15% ekstrak apel manalagi
Formula 3 : 2,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 4 : 1,5% CMC-Na tanpa ekstrak apel manalagi
Formula 5 : 2% CMC-Na tanpa ekstrak apel manalagi
Formula 6 : 2,5% CMC-Na tanpa ekstrak apel manalagi

4. Uji tinggi busa

Formula	Hari ke-1	Hari ke-21
1	1,5	1,5
	1,5	1,6
	1,6	1,5
Rata-rata±SD	1,70±0,100	1,70±0,100
2	1,6	1,6
	1,5	1,8
	1,7	1,7
Rata-rata±SD	1,80±0,100	1,81±0,115
3	1,7	1,8
	1,9	2,2
	1,9	1,8
Rata-rata±SD	1,83±0,153	1,93±0,058
4	1,7	1,6
	1,5	1,5
	1,3	1,6
Rata-rata±SD	1,50±0,154	1,77±0,058
5	1,6	1,8
	1,7	1,7
	1,8	1,6
Rata-rata±SD	1,53±0,058	1,53±0,057
6	1,7	1,7
	1,6	1,8
	1,9	1,8
Rata-rata± SD	1,60±0,100	1,70±0,100

Keterangan :

Formula 1 : 1,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 2 : 2% CMC-Na dengan 15% ekstrak apel manalagi
Formula 3 : 2,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 4 : 1,5% CMC-Na tanpa ekstrak apel manalagi
Formula 5 : 2% CMC-Na tanpa ekstrak apel manalagi
Formula 6 : 2,5% CMC-Na tanpa ekstrak apel manalagi

5. Uji stabilitas viskositas

Formula	Viskositas (dPa) hari ke-1		Viskositas (dPa) hari ke-21	
	Sebelum	sesudah	sebelum	sesudah
1	310	210	250	210
	320	200	300	200
	350	350	250	250
Rata-rata±SD	326,67±20,817	253,33±45,092	266,67±28,868	220,00±26,458
2	310	320	300	250
	330	330	250	200
	340	350	300	210
Rata-rata±SD	333,33±15,275	326,67±15,275	283,33±28,868	220,00±26,458
3	330	330	330	300
	350	350	350	250
	350	350	350	200
Rata-rata±SD	343,33±11,547	343,33±11,547	306,67±5,774	250,00±50,000
4	300	230	300	200
	350	220	300	220
	350	350	220	250
Rata-rata±SD	333,33±28,868	266,67±71,342	273,33±46,188	223,33±25,166
5	300	330	310	210
	320	350	350	200
	350	300	300	250
Rata-rata±SD	323,33±25,166	326,67±15,166	320,00±26,458	220,00±26,458
6	320	320	350	300
	350	330	350	350
	320	350	320	300
Rata-rata±SD	330,00±17,321	333,33±15,275	340,00±17,321	316,67±28,868

Keterangan

Formula 1 : 1,5% CMC-Na dengan 15% ekstrak apel manalagi

Formula 2 : 2% CMC-Na dengan 15% ekstrak apel manalagi

Formula 3 : 2,5% CMC-Na dengan 15% ekstrak apel manalagi

Formula 4 : 1,5% CMC-Na tanpa ekstrak apel manalagi

Formula 5 : 2% CMC-Na tanpa ekstrak apel manalagi

Formula 6 : 2,5% CMC-Na tanpa ekstrak apel manalagi

6. Uji stabilitas Ph

Formula	*p*H Hari ke-1		*p*H Hari ke-21	
	Sebelum	**sesudah**	**sebelum**	**sesudah**
1	5,52	4,50	6,93	6,87
	6,67	5,07	6,78	6,71
	6,92	5,60	6,94	6,75
Rata-rata±SD	6,37±0,747	5,06±0,550	6,88±0,090	6,78±0,083
2	5,56	4,55	5,82	5,45
	6,70	5,20	5.85	5,50
	6,95	5,65	5,91	5,29
Rata-rata±SD	6,40±0,741	5,13±0,553	5,86±0,046	5,41±0,110
3	5,60	5,59	6,85	6,71
	6,75	6,71	6,42	6,53
	7,11	7,11	6,25	6,10
Rata-rata±SD	6,47±0,788	5,17±0,551	6,51±0,309	6,45±0,313
4	6,62	5,50	6,67	6,50
	6,69	5,09	6,34	6,34
	5,95	5,70	6,23	6,25
Rata-rata±SD	6,42±0,409	5,43±0,311	6,41±0,229	6,36±0,127
5	5,90	4,95	5,67	5,56
	6,80	5	5,98	5,98
	5,89	5,90	6,10	5,56
Rata-rata±SD	6,20±0,523	5,28±0,535	5,92±0,222	5,70±0,242
6	5,60	4,75	6,89	6,34
	6,79	5,50	6,54	6,56
	7,3	6,70	6,45	6,89
Rata-rata±SD	6,56±0,972	5,65±0,984	6,63±0,232	6,60±0,277

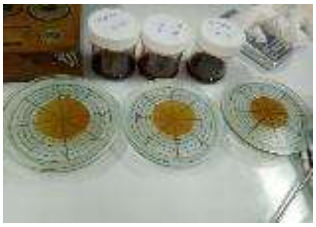
Keterangan :

Formula 1 : 1,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 2 : 2% CMC-Na dengan 15% ekstrak apel manalagi
Formula 3 : 2,5% CMC-Na dengan 15% ekstrak apel manalagi
Formula 4 : 1,5% CMC-Na tanpa ekstrak apel manalagi
Formula 5 : 2% CMC-Na tanpa ekstrak apel manalagi
Formula 6 : 2,5% CMC-Na tanpa ekstrak apel manalagi

Sediaan pasta gigi gel

Uji pH

Uji viskositas



Uji daya sebar

Uji tinggi busa

Uji stabilitas

Uji homogenitas

Sediaan pasta gigi gel tanpa ekstrak apel manalagi

Lampiran 15. Hasil uji antibakteri ekstrak apel manalagi

Ekstrak	Diameter zona hambat (mm)			Rata-rata ± SD
	R I	R II	R III	
Konsentrasi 10%	33	33	32	32,6±0,57
Konsentrasi 15%	31,8	33	40,2	35±4,54
Konsentrasi 20%	40,2	43	31,6	38,2±5,94
Kontrol positif	35,3	35,6	34,6	35,1±0,70
Kontrol negatif	0	0	0	0,00±0,00

1. Replikasi I

10% = $\frac{(32+34+33)mm}{3}$ = $\frac{9,9\ mm}{3}$ = 33 mm

15% = $\frac{(31+3+32)mm}{3}$ = $\frac{9,3mm}{3}$ =31,8 mm

20% = $\frac{4+43+43mm}{3}$ = $\frac{12,6mm}{3}$ = 40,2 mm

K + = $\frac{36+34+36mm}{3}$ = $\frac{9,5mm}{3}$ = 35,3mm

K - = 0

2. Replikasi II

10% = $\frac{32+34+33mm}{3}$ = $\frac{9,9mm}{3}$ = 33 mm

15% = $\frac{32+34+33mm}{3}$ = $\frac{9,9mm}{3}$ = 33 mm

20% = $\frac{39+4+5mm}{3}$ = $\frac{12,9mm}{3}$ = 43 mm

K + = $\frac{36+34+37mm}{3}$ = $\frac{9,9mm}{3}$ = 35,6 mm

K - = 0

3. Replikasi III

10% = $\frac{33+32+31mm}{3}$ = $\frac{9,6mm}{3}$ = 32 mm

15% = $\frac{4+43+43mm}{3}$ = $\frac{12,6mm}{3}$ = 40,2 mm

20% = $\frac{3+33+32mm}{3}$ = $\frac{9,5mm}{3}$ = 31,6 mm

K + = $\frac{37+39+28mm}{3}$ = $\frac{9,63mm}{3}$ = 34,6 mm

K - = 0

Lampiran 16. Hasil uji antibakteri sediaan pasta gigi gel ekstrak apel manalagi

Sampel	Diameter zona hambat (mm)			Rata-rata ± SD
	R I	R II	R III	
F I	41,6	43	35	39,8±4,27
F II	35	45	39	39,6±5,03
F III	43	36	33	37,3±5,13
K (+)	34,6	36,6	35,3	35,5±1,01
K (-)	0	0	0	0,00±0,00

Replikasi I

1,5 % = $\frac{4+4+45mm}{3} = \frac{12,5mm}{3}$ = 41,6 mm

2 % = $\frac{3,7+7+3,1mm}{3} = \frac{10,5mm}{3}$ = 35 mm

2,5 % = $\frac{4+41+48mm}{3} = \frac{12,9mm}{3}$ =43 mm

K + = $\frac{34+36+34mm}{3} = \frac{9,6mm}{3}$ = 34,6 mm

K - = 0

Replikasi II

1,5% = $\frac{39+4+5mm}{3} = \frac{12,9mm}{3}$ = 43 mm

2 % = $\frac{41+49+45mm}{3} = \frac{13,5mm}{3}$ = 45 mm

2,5 % = $\frac{32+35+41mm}{3} = \frac{10,8mm}{3}$ = 36 mm

K + = $\frac{35+36+39mm}{3} = \frac{10,8mm}{3}$ = 36,6 mm

K - = 0

Replikasi III

1,5 %= $\frac{37+37+31mm}{3} = \frac{10,5mm}{3}$ = 35 mm

2 % = $\frac{35+35+47mm}{3} = \frac{11,7mm}{3}$ = 39 mm

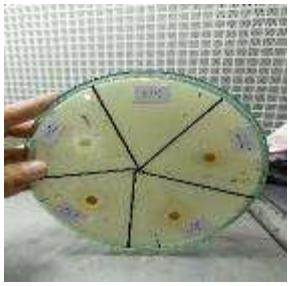
2,5 % = $\frac{32+34+33mm}{3} = \frac{9,9mm}{3}$ = 33 mm

K + = $\frac{36+34+35mm}{3} = \frac{9,9mm}{3}$ = 35,3 mm

K - = 0

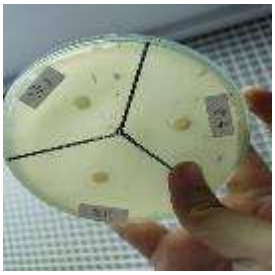
Lampiran 17. Uji antibakteri sediaan pasta gigi gel ekstrak apel manalagi

Replikasi I



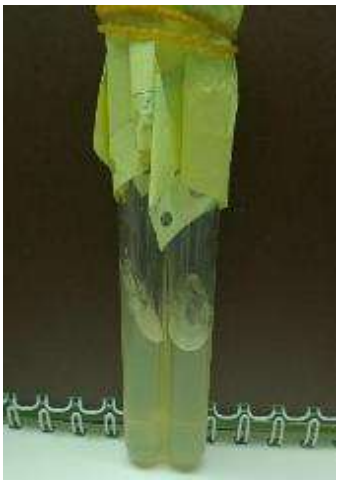
Replikasi II

Replikasi III



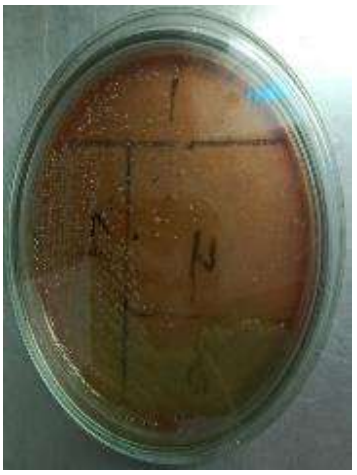
Kontrol negatif

Lampiran 18. Uji dan identifikasi bakteri *Streptococcus mutans*

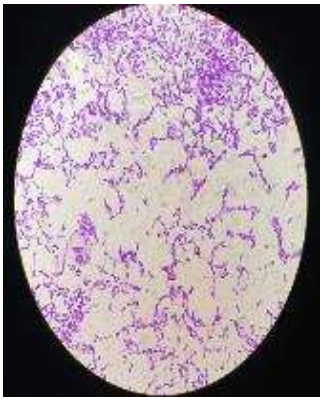


Peremajaan bakateri dengan media NA

Suspensi bakteri Streptococcus mutans dan larutan Mac Farland 0,5



Hasil identifikasi media agar darah (BAP)



Hasil identifikasi uji mikroskopis *Streptococcus mutans*

Hasil identifikasi uji katalase *Streptococcus mutans*

Hasil identifikasi uji koagulase *Streptococcus mutans*

Lampiran 19. Hasil uji statistik mutu fisik sediaan pasta gigi gel dan aktivitas antibakteri

1. Uji aktivitas ekstrak

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
AKTIVITAS_EKSTRAK	KONSENTRASI 10%	,385	3	.	,750	3	,000
	FKONSENTRASI 15%	,337	3	.	,855	3	,253
	KONSENTRASI 20%	,276	3	.	,942	3	,537
	KONTROL POSITIF	,385	3	.	,750	3	,000
	KONTROL NEGATIF	.	3	.	.	3	.

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
AKTIVITAS_EKSTRAK	Based on Mean	9,045	4	10	,002
	Based on Median	1,095	4	10	,410
	Based on Median and with adjusted df	1,095	4	2,556	,504
	Based on trimmed mean	7,729	4	10	,004

Ranks

	FORMULA	N	Mean Rank
KONSENTRASI	KONSENTRASI 10%	3	7.33
	KONSENTRASI 15%	3	8.83
	KONSENTRASI 20%	3	10.83
	KONTROL POSITIF	3	10.00
	KONTROL NEGATIF	3	2.00
	Total	15	

Kruskal-Wallis Test

Test Statistics[a,b]

	KONSENTRASI
Chi-Square	8.258
df	4
Asymp. Sig.	.083

a. Kruskal Wallis Test
b. Grouping Variable: FORMULA

13. pH

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
pH_1	FI	.219	3	.	.987	3	.780
	FII	.343	3	.	.842	3	.220
	FIII	.200	3	.	.995	3	.860
	KNI	.331	3	.	.865	3	.280
	KNII	.341	3	.	.847	3	.232
	KNIII	.245	3	.	.970	3	.670
pH_21	FI	.319	3	.	.885	3	.340
	FII	.262	3	.	.956	3	.597
	FIII	.384	3	.	.752	3	.005
	KNI	.271	3	.	.948	3	.561
	KNII	.385	3	.	.750	3	.000
	KNIII	.292	3	.	.923	3	.463

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
pH_1	Based on Mean	2.019	5	12	.148
	Based on Median	.414	5	12	.831
	Based on Median and with adjusted df	.414	5	4.796	.822
	Based on trimmed mean	1.836	5	12	.180
pH_21	Based on Mean	12.864	5	12	.000
	Based on Median	.867	5	12	.531
	Based on Median and with adjusted df	.867	5	2.140	.608
	Based on trimmed mean	10.282	5	12	.001

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
pH_1	Between Groups	15511.611	5	3102.322	.926	.497
	Within Groups	40196.667	12	3349.722		
	Total	55708.278	17			
pH_21	Between Groups	99637.111	5	19927.422	.803	.569
	Within Groups	297709.333	12	24809.111		
	Total	397346.444	17			

Homogeneous Subsets

pH_1

Tukey HSD[a]

FORMULA	N	Subset for alpha = 0.05 1
FIII	3	605.3333
FII	3	610.0000
FI	3	613.3333
KNI	3	637.0000
KNII	3	653.6667
KNIII	3	688.3333
Sig.		.524

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

pH_21

Tukey HSD[a]

FORMULA	N	Subset for alpha = 0.05 1
FIII	3	482.6667
KNI	3	652.6667
FI	3	671.6667
FII	3	673.6667
KNII	3	696.0000
KNIII	3	696.6667
Sig.		.577

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

T-Test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pH_1	634.8111	18	57.24472	13.49271
	pH_21	645.7556	18	152.88336	36.03496

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pH_1 & pH_21	18	-.158	.532

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_1 - pH_21	-10.94444	171.39444	40.39826	-96.17690	74.28801	-.271	17	.790

14. Viskositas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
VISKOSITAS_1	FI	.385	3	.	.750	3	.000
	FII	.175	3	.	1.000	3	1.000
	FIII	.219	3	.	.987	3	.780
	KNI	.385	3	.	.750	3	.000
	KNII	.385	3	.	.750	3	.000
	KNIII	.328	3	.	.871	3	.298
VISKOSITAS_21	FI	.285	3	.	.932	3	.497
	FII	.253	3	.	.964	3	.637
	FIII	.253	3	.	.964	3	.637
	KNI	.385	3	.	.750	3	.000
	KNII	.385	3	.	.750	3	.000
	KNIII	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
VISKOSITAS_1	Based on Mean	2.352	5	12	.104
	Based on Median	.570	5	12	.722
	Based on Median and with adjusted df	.570	5	6.211	.723
	Based on trimmed mean	2.163	5	12	.127
VISKOSITAS_21	Based on Mean	3.912	5	12	.025
	Based on Median	.547	5	12	.738
	Based on Median and with adjusted df	.547	5	5.091	.738
	Based on trimmed mean	3.418	5	12	.036

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
VISKOSITAS_1	Between Groups	34716.667	5	6943.333	4.646	.014
	Within Groups	17933.333	12	1494.444		
	Total	52650.000	17			
VISKOSITAS_21	Between Groups	8466.667	5	1693.333	.550	.736
	Within Groups	36933.333	12	3077.778		
	Total	45400.000	17			

Kruskal-Wallis Test

Ranks

	FORMULA	N	Mean Rank
VISKOSITAS_1	FI	3	13.00
	FII	3	11.67
	FIII	3	14.17
	KNI	3	3.33
	KNII	3	5.50
	KNIII	3	9.33
	Total	18	
VISKOSITAS_21	FI	3	8.67
	FII	3	9.17
	FIII	3	13.33
	KNI	3	5.17
	KNII	3	11.17
	KNIII	3	9.50
	Total	18	

Test Statistics[a,b]

	VISKOSITAS_1	VISKOSITAS_21
Kruskal-Wallis H	10.176	4.017
df	5	5
Asymp. Sig.	.070	.547

a. Kruskal Wallis Test

b. Grouping Variable: FORMULA

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
VISKOSITAS_21 - VISKOSITAS_1	Negative Ranks	4[a]	7.38	29.50
	Positive Ranks	11[b]	8.23	90.50
	Ties	3[c]		
	Total	18		

a. VISKOSITAS_21 < VISKOSITAS_1

b. VISKOSITAS_21 > VISKOSITAS_1

c. VISKOSITAS_21 = VISKOSITAS_1

Test Statistics[a]

	VISKOSITAS_21 - VISKOSITAS_1
Z	-1.740[b]
Asymp. Sig. (2-tailed)	.082

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

15. Tinggi busa

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
TINGGI_BUSA_1	FI	.385	3	.	.750	3	.000
	FII	.175	3	.	1.000	3	1.000
	FIII	.385	3	.	.750	3	.000
	KNI	.175	3	.	1.000	3	1.000
	KNII	.175	3	.	1.000	3	1.000
	KNIII	.253	3	.	.964	3	.637
TINGGI_BUSA_21	FI	.385	3	.	.750	3	.000
	FII	.175	3	.	1.000	3	1.000
	FIII	.385	3	.	.750	3	.000
	KNI	.385	3	.	.750	3	.000
	KNII	.175	3	.	1.000	3	1.000
	KNIII	.385	3	.	.750	3	.000

Kruskal-Wallis Test

Ranks

	FORMULA	N	Mean Rank
TINGGI_BUSA_1	FI	3	4.83
	FII	3	7.67
	FIII	3	15.33
	KNI	3	5.50
	KNII	3	11.50
	KNIII	3	12.17
	Total	18	
TINGGI_BUSA_21	FI	3	3.33
	FII	3	10.17
	FIII	3	15.67
	KNI	3	4.67
	KNII	3	10.17
	KNIII	3	13.00
	Total	18	

Test Statistics[a,b]

	TINGGI_BUSA_1	TINGGI_BUSA_21
Kruskal-Wallis H	9.514	12.672
df	5	5
Asymp. Sig.	.090	.027

a. Kruskal Wallis Test

b. Grouping Variable: FORMULA

a. Lilliefors Significance Correction

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
TINGGI_BUSA_21 - TINGGI_BUSA_1	Negative Ranks	5[a]	4.40	22.00
	Positive Ranks	7[b]	8.00	56.00
	Ties	6[c]		
	Total	18		

a. TINGGI_BUSA_21 < TINGGI_BUSA_1

b. TINGGI_BUSA_21 > TINGGI_BUSA_1

c. TINGGI_BUSA_21 = TINGGI_BUSA_1

Test Statistics[a]

	TINGGI_BUSA_21 - TINGGI_BUSA_1
Z	-1.358[b]
Asymp. Sig. (2-tailed)	.175

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

16. Stabilitas uji pH

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
STABILITAS_pH_SEBELUM_1	FI	.323	3	.	.879	3	.321
	FII	.322	3	.	.880	3	.324
	FIII	.297	3	.	.916	3	.440
	KNI	.354	3	.	.820	3	.164
	KNII	.382	3	.	.758	3	.018
	KNIII	.315	3	.	.891	3	.356
STABILITAS_pH_SETELAH_1	FI	.178	3	.	1.000	3	.960
	FII	.215	3	.	.989	3	.800
	FIII	.286	3	.	.930	3	.490
	KNI	.256	3	.	.962	3	.625
	KNII	.329	3	.	.868	3	.290
	KNIII	.227	3	.	.983	3	.747
STABILITAS_pH_SEBELUM_21	FI	.365	3	.	.797	3	.107
	FII	.380	3	.	.762	3	.026
	FIII	.277	3	.	.941	3	.532
	KNI	.292	3	.	.923	3	.463
	KNII	.279	3	.	.939	3	.523
	KNIII	.312	3	.	.896	3	.372
STABILITAS_pH_SETELAH_21	FI	.292	3	.	.923	3	.463
	FII	.298	3	.	.916	3	.439
	FIII	.272	3	.	.947	3	.556
	KNI	.240	3	.	.975	3	.694
	KNII	.385	3	.	.750	3	.000
	KNIII	.219	3	.	.987	3	.780

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
STABILITAS_pH_SEBELUM_1	Based on Mean	6.555	5	12	.004
	Based on Median	1.022	5	12	.447
	Based on Median and with adjusted df	1.022	5	2.985	.528
	Based on trimmed mean	5.748	5	12	.006
STABILITAS_pH_SETELAH_1	Based on Mean	6.420	5	12	.004
	Based on Median	.967	5	12	.475
	Based on Median and with adjusted df	.967	5	2.583	.558
	Based on trimmed mean	5.660	5	12	.007
STABILITAS_pH_SEBELUM_21	Based on Mean	13.605	5	12	.000
	Based on Median	.897	5	12	.514
	Based on Median and with adjusted df	.897	5	2.052	.600
	Based on trimmed mean	10.812	5	12	.000
STABILITAS_pH_SETELAH_21	Based on Mean	1.805	5	12	.186
	Based on Median	.469	5	12	.792
	Based on Median and with adjusted df	.469	5	6.941	.789
	Based on trimmed mean	1.665	5	12	.217

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
STABILITAS_pH_SEBELUM_1	Between Groups	101613.833	5	20322.767	.977	.470
	Within Groups	249558.667	12	20796.556		
	Total	351172.500	17			
STABILITAS_pH_SETELAH_1	Between Groups	130281.778	5	26056.356	1.287	.332
	Within Groups	242986.000	12	20248.833		
	Total	373267.778	17			
STABILITAS_pH_SEBELUM_21	Between Groups	176452.434	5	35290.487	1.841	.179
	Within Groups	229997.448	12	19166.454		
	Total	406449.882	17			
STABILITAS_pH_SETELAH_21	Between Groups	43340.944	5	8668.189	19.358	.000
	Within Groups	5373.333	12	447.778		
	Total	48714.278	17			

Kruskal-Wallis Test

Ranks

	FORMULA	N	Mean Rank
STABILITAS_pH_SEBELUM_1	FI	3	9.33
	FII	3	10.67
	FIII	3	11.83
	KNI	3	9.33
	KNII	3	9.33
	KNIII	3	6.50
	Total	18	
STABILITAS_pH_SETELAH_1	FI	3	6.67
	FII	3	8.00
	FIII	3	15.33
	KNI	3	10.17
	KNII	3	7.00
	KNIII	3	9.83
	Total	18	
STABILITAS_pH_SEBELUM_21	FI	3	16.33
	FII	3	2.67
	FIII	3	11.00
	KNI	3	9.67
	KNII	3	4.33
	KNIII	3	13.00
	Total	18	
STABILITAS_pH_SETELAH_21	FI	3	15.83
	FII	3	2.00
	FIII	3	11.17
	KNI	3	9.50
	KNII	3	5.00
	KNIII	3	13.50
	Total	18	

Test Statistics[a,b]

	STABILITAS_pH_SEBELUM_1	STABILITAS_pH_SETELAH_1	STABILITAS_pH_SEBELUM_21	STABILITAS_pH_SETELAH_21
Kruskal-Wallis H	1.674	5.386	14.170	14.296
df	5	5	5	5
Asymp. Sig.	.892	.371	.015	.014

a. Kruskal Wallis Test
b. Grouping Variable: FORMULA

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
STABILITAS_pH_SETELAH_1 - STABILITAS_pH_SEBELUM_1	Negative Ranks	15[a]	9.03	135.50
	Positive Ranks	2[b]	8.75	17.50
	Ties	1[c]		
	Total	18		
STABILITAS_pH_SETELAH_21 - STABILITAS_pH_SEBELUM_21	Negative Ranks	11[d]	9.05	99.50
	Positive Ranks	5[e]	7.30	36.50
	Ties	2[f]		
	Total	18		

a. STABILITAS_pH_SETELAH_1 < STABILITAS_pH_SEBELUM_1
b. STABILITAS_pH_SETELAH_1 > STABILITAS_pH_SEBELUM_1
c. STABILITAS_pH_SETELAH_1 = STABILITAS_pH_SEBELUM_1
d. STABILITAS_pH_SETELAH_21 < STABILITAS_pH_SEBELUM_21
e. STABILITAS_pH_SETELAH_21 > STABILITAS_pH_SEBELUM_21
f. STABILITAS_pH_SETELAH_21 = STABILITAS_pH_SEBELUM_21

Test Statistics[a]

	STABILITAS_pH_SETELAH_1 - STABILITAS_pH_SEBELUM_1	STABILITAS_pH_SETELAH_21 - STABILITAS_pH_SEBELUM_21
Z	-2.794[b]	-1.629[b]
Asymp. Sig. (2-tailed)	.005	.103

a. Wilcoxon Signed Ranks Test

17. Stabilitas viskositas

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
STABILITAS_VISKOSITAS_SEBELUM_1	FI	.292	3	.	.923	3	.463
	FII	.253	3	.	.964	3	.637
	FIII	.385	3	.	.750	3	.000
	KNI	.385	3	.	.750	3	.000
	KNII	.219	3	.	.987	3	.780
	KNIII	.385	3	.	.750	3	.000
STABILITAS_VISKOSITAS_SETELAH_1	FI	.364	3	.	.800	3	.114
	FII	.253	3	.	.964	3	.637
	FIII	.385	3	.	.750	3	.000
	KNI	.361	3	.	.807	3	.132
	KNII	.219	3	.	.987	3	.780
	KNIII	.253	3	.	.964	3	.637
STABILITAS_VISKOSITAS_SEBELUM_21	FI	.385	3	.	.750	3	.000
	FII	.385	3	.	.750	3	.000
	FIII	.385	3	.	.750	3	.000

	KNI	.385	3	.	.750	3	.000
	KNII	.314	3	.	.893	3	.363
	KNIII	.385	3	.	.750	3	.000
STABILITAS_VISKOSITAS_SETELAH_21	FI	.314	3	.	.893	3	.363
	FII	.314	3	.	.893	3	.363
	FIII	.175	3	.	1.000	3	1.000
	KNI	.219	3	.	.987	3	.780
	KNII	.314	3	.	.893	3	.363
	KNIII	.385	3	.	.750	3	.000

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
STABILITAS_VISKOSITAS_SEBELUM_1	Based on Mean	.991	5	12	.463
	Based on Median	.160	5	12	.973
	Based on Median and with adjusted df	.160	5	7.298	.970
	Based on trimmed mean	.876	5	12	.526
STABILITAS_VISKOSITAS_SETELAH_1	Based on Mean	6.711	5	12	.003
	Based on Median	.580	5	12	.715
	Based on Median and with adjusted df	.580	5	4.326	.719
	Based on trimmed mean	5.560	5	12	.007
STABILITAS_VISKOSITAS_SEBELUM_21	Based on Mean	2.644	5	12	.078
	Based on Median	.183	5	12	.964
	Based on Median and with adjusted df	.183	5	6.985	.960
	Based on trimmed mean	2.118	5	12	.133
STABILITAS_VISKOSITAS_SETELAH_21	Based on Mean	.411	5	12	.832
	Based on Median	.260	5	12	.926
	Based on Median and with adjusted df	.260	5	10.206	.925
	Based on trimmed mean	.401	5	12	.839

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
STABILITAS_VISKOSITAS_SEBELUM_1	Between Groups	761.111	5	152.222	.356	.869
	Within Groups	5133.333	12	427.778		
	Total	5894.444	17			
STABILITAS_VISKOSITAS_SETELAH_1	Between Groups	22694.444	5	4538.889	2.017	.148
	Within Groups	27000.000	12	2250.000		
	Total	49694.444	17			
STABILITAS_VISKOSITAS_SEBELUM_21	Between Groups	17577.778	5	3515.556	4.276	.018
	Within Groups	9866.667	12	822.222		
	Total	27444.444	17			
STABILITAS_VISKOSITAS_SETELAH_21	Between Groups	22316.667	5	4463.333	4.414	.016
	Within Groups	12133.333	12	1011.111		
	Total	34450.000	17			

Kruskal-Wallis Tes

Ranks

	FORMULA	N	Mean Rank
STABILITAS_VISKOSITAS_SEBELUM_1	FI	3	8.33
	FII	3	8.00
	FIII	3	13.17
	KNI	3	10.50
	KNII	3	7.67
	KNIII	3	9.33
	Total	18	
STABILITAS_VISKOSITAS_SETELAH_1	FI	3	6.00
	FII	3	10.33
	FIII	3	13.17
	KNI	3	7.33
	KNII	3	9.83
	KNIII	3	10.33
	Total	18	
STABILITAS_VISKOSITAS_SEBELUM_21	FI	3	4.50
	FII	3	6.00
	FIII	3	15.00
	KNI	3	5.33
	KNII	3	11.50
	KNIII	3	14.67
	Total	18	
STABILITAS_VISKOSITAS_SETELAH_21	FI	3	7.33
	FII	3	7.33
	FIII	3	10.33
	KNI	3	8.00
	KNII	3	7.33
	KNIII	3	16.67
	Total	18	

Test Statistics[a,b]

	STABILITAS_VISKOSITAS_SEBELUM_1	STABILITAS_VISKOSITAS_SETELAH_1	STABILITAS_VISKOSITAS_SEBELUM_21	STABILITAS_VISKOSITAS_SETELAH_21
Kruskal-Wallis H	2.430	3.606	12.952	7.574
df	5	5	5	5
Asymp. Sig.	.787	.607	.024	.181

a. Kruskal Wallis Test

b. Grouping Variable: FORMULA

Wilcoxon Signed Ranks Test

Ranks

		N	Mean Rank	Sum of Ranks
STABILITAS_VISKOSITAS_SETELAH_1 - STABILITAS_VISKOSITAS_SEBELUM_1	Negative Ranks	6[a]	8.00	48.00
	Positive Ranks	5[b]	3.60	18.00
	Ties	7[c]		
	Total	18		
STABILITAS_VISKOSITAS_SETELAH_21 - STABILITAS_VISKOSITAS_SEBELUM_21	Negative Ranks	15[d]	8.90	133.50
	Positive Ranks	1[e]	2.50	2.50
	Ties	2[f]		
	Total	18		

a. STABILITAS_VISKOSITAS_SETELAH_1 < STABILITAS_VISKOSITAS_SEBELUM_1

b. STABILITAS_VISKOSITAS_SETELAH_1 > STABILITAS_VISKOSITAS_SEBELUM_1

c. STABILITAS_VISKOSITAS_SETELAH_1 = STABILITAS_VISKOSITAS_SEBELUM_1

d. STABILITAS_VISKOSITAS_SETELAH_21 < STABILITAS_VISKOSITAS_SEBELUM_21

e. STABILITAS_VISKOSITAS_SETELAH_21 > STABILITAS_VISKOSITAS_SEBELUM_21

f. STABILITAS_VISKOSITAS_SETELAH_21 = STABILITAS_VISKOSITAS_SEBELUM_21

Test Statistics[a]

	STABILITAS_VISKOSITAS_SETELAH_1 - STABILITAS_VISKOSITAS_SEBELUM_1	STABILITAS_VISKOSITAS_SETELAH_21 - STABILITAS_VISKOSITAS_SEBELUM_21
Z	-1.337[b]	-3.399[b]
Asymp. Sig. (2-tailed)	.181	.001

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

18. Daya sebar

Tests of Normality[a,c,d,e,f,g,h,i,j,k,l,m]

		Kolmogorov-Smirnov[b]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
DAYA_SEBAR_FI_1	TANPA BEBAN	.260	2	.			
	50 GRAM	.385	3	.	.750	3	.000
	100 GRAM	.260	2	.			
DAYA_SEBAR_FI_21	TANPA BEBAN	.260	2	.			
	50 GRAM	.204	3	.	.993	3	.843
	100 GRAM	.260	2	.			
DAYA_SEBAR_FII_1	TANPA BEBAN	.260	2	.			
	50 GRAM	.253	3	.	.964	3	.637
	100 GRAM	.260	2	.			
DAYA_SEBAR_FII_21	TANPA BEBAN	.260	2	.			
	50 GRAM	.201	3	.	.994	3	.856
	100 GRAM	.260	2	.			
DAYA_SEBAR_FIII_1	TANPA BEBAN	.260	2	.			
	50 GRAM	.385	3	.	.750	3	.000
	100 GRAM	.260	2	.			
DAYA_SEBAR_FIII_21	TANPA BEBAN	.260	2	.			
	50 GRAM	.385	3	.	.750	3	.000
	100 GRAM	.260	2	.			
DAYA_SEBAR_FIV_1	TANPA BEBAN	.260	2	.			
	50 GRAM	.191	3	.	.997	3	.900
	100 GRAM	.260	2	.			
DAYA_SEBAR_FIV_21	TANPA BEBAN	.260	2	.			
	50 GRAM	.385	3	.	.750	3	.000
	100 GRAM	.260	2	.			
DAYA_SEBAR_FV_1	TANPA BEBAN	.260	2	.			
	50 GRAM	.385	3	.	.750	3	.000
	100 GRAM	.260	2	.			
DAYA_SEBAR_FV_21	TANPA BEBAN	.260	2	.			
	50 GRAM	.201	3	.	.994	3	.856
	100 GRAM	.260	2	.			
DAYA_SEBAR_FVI_1	TANPA BEBAN	.260	2	.			
	50 GRAM	.253	3	.	.964	3	.637
	100 GRAM	.260	2	.			
DAYA_SEBAR_FVI_21	TANPA BEBAN	.260	2	.			
	50 GRAM	.385	3	.	.750	3	.000
	100 GRAM	.260	2	.			

a. There are no valid cases for DAYA_SEBAR_FI_1 when FORMULA = .000. Statistics cannot be computed for this level.
b. Lilliefors Significance Correction
c. There are no valid cases for DAYA_SEBAR_FI_21 when FORMULA = .000. Statistics cannot be computed for this level.

d. There are no valid cases for DAYA_SEBAR_FII_1 when FORMULA = .000. Statistics cannot be computed for this level.
e. There are no valid cases for DAYA_SEBAR_FII_21 when FORMULA = .000. Statistics cannot be computed for this level.
f. There are no valid cases for DAYA_SEBAR_FIII_1 when FORMULA = .000. Statistics cannot be computed for this level.
g. There are no valid cases for DAYA_SEBAR_FIII_21 when FORMULA = .000. Statistics cannot be computed for this level.
h. There are no valid cases for DAYA_SEBAR_FIV_1 when FORMULA = .000. Statistics cannot be computed for this level.
i. There are no valid cases for DAYA_SEBAR_FIV_21 when FORMULA = .000. Statistics cannot be computed for this level.
j. There are no valid cases for DAYA_SEBAR_FV_1 when FORMULA = .000. Statistics cannot be computed for this level.
k. There are no valid cases for DAYA_SEBAR_FV_21 when FORMULA = .000. Statistics cannot be computed for this level.
l. There are no valid cases for DAYA_SEBAR_FVI_1 when FORMULA = .000. Statistics cannot be computed for this level.
m. There are no valid cases for DAYA_SEBAR_FVI_21 when FORMULA = .000. Statistics cannot be computed for this level.

Between-Subjects Factors

		Value Label	N
FORMULA	1	TANPA BEBAN	2
	2	50 GRAM	3
	3	100 GRAM	2

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	1.000	4237.476[b]	4.000	1.000	.012
	Wilks' Lambda	.000	4237.476[b]	4.000	1.000	.012
	Hotelling's Trace	16949.905	4237.476[b]	4.000	1.000	.012
	Roy's Largest Root	16949.905	4237.476[b]	4.000	1.000	.012
FORMULA	Pillai's Trace	1.777	3.983	8.000	4.000	.099
	Wilks' Lambda	.001	6.828[b]	8.000	2.000	.134
	Hotelling's Trace	176.795	.000	8.000	.000	.
	Roy's Largest Root	173.193	86.597[c]	4.000	2.000	.011

a. Design: Intercept + FORMULA

b. Exact statistic

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

DAYA_SEBAR_FI_21

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	4.9500
50 GRAM	3	5.5000
100 GRAM	2	6.0000
Sig.		.436

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .661.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

Homogeneous Subsets

DAYA_SEBAR_FI_1

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
50 GRAM	3	22.0000
100 GRAM	2	49.5000
TANPA BEBAN	2	52.0000
Sig.		.347

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = 398.625.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FII_1

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	4.9500
50 GRAM	3	5.6667
100 GRAM	2	6.0500
Sig.		.264

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .394.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FII_21

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	4.7500
50 GRAM	3	5.3000
100 GRAM	2	6.1500
Sig.		.287

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .697.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FIII_1

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	4.6000
50 GRAM	3	5.3333
100 GRAM	2	6.3500
Sig.		.087

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .393.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FIII_21

Tukey HSD[a,b,c]

FORMULA	N	Subset 1	2
TANPA BEBAN	2	4.2000	
50 GRAM	3		5.0333
100 GRAM	2		5.1000
Sig.		1.000	.800

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .012.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FIV_21

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	5.3000
50 GRAM	3	5.6667
100 GRAM	2	6.0000
Sig.		.312

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .192.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FIV_1

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	5.7500
50 GRAM	3	5.9667
100 GRAM	2	6.7000
Sig.		.203

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .228.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FVI_1

Tukey HSD[a,b,c]

FORMULA	N	Subset 1	Subset 2
TANPA BEBAN	2	5.2000	
50 GRAM	3	5.2333	
100 GRAM	2		6.4500
Sig.		.993	1.000

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .093.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FV_1

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	5.6000
50 GRAM	3	5.8333
100 GRAM	2	6.4000
Sig.		.064

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .067.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FV_21

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	5.0000
50 GRAM	3	5.3000
100 GRAM	2	6.3000
Sig.		.365

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .795.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

DAYA_SEBAR_FVI_21

Tukey HSD[a,b,c]

FORMULA	N	Subset 1
TANPA BEBAN	2	4.8000
100 GRAM	2	5.1500
50 GRAM	3	5.1667
Sig.		.461

Means for groups in homogeneous subsets are displayed.
Based on observed means.
The error term is Mean Square(Error) = .088.

a. Uses Harmonic Mean Sample Size = 2.250.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

c. Alpha = ,05.

4. Aktivitas antibakteri sediaan pasta gigi gel

Test of Homogeneity of Variances

AKTIVITAS_ANTIBAKTERI

Levene Statistic	df1	df2	Sig.
1.714	3	8	.241

ANOVA

AKTIVITAS_ANTIBAKTERI

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	38.769	3	12.923	.729	.563
Within Groups	141.900	8	17.738		
Total	180.669	11			

Homogeneous Subsets

AKTIVITAS SEDIAAN

Tukey HSD [a]

FORMULA	N	Subset for alpha - 0 05 1	2
KONTROL NEGATIF	3	, 0000	
KONTROL POSITIF	3		3,5567
FIII	3		3,7333
FII	3		3,9667
FI	3		3,9867
Sig.		1.000	344

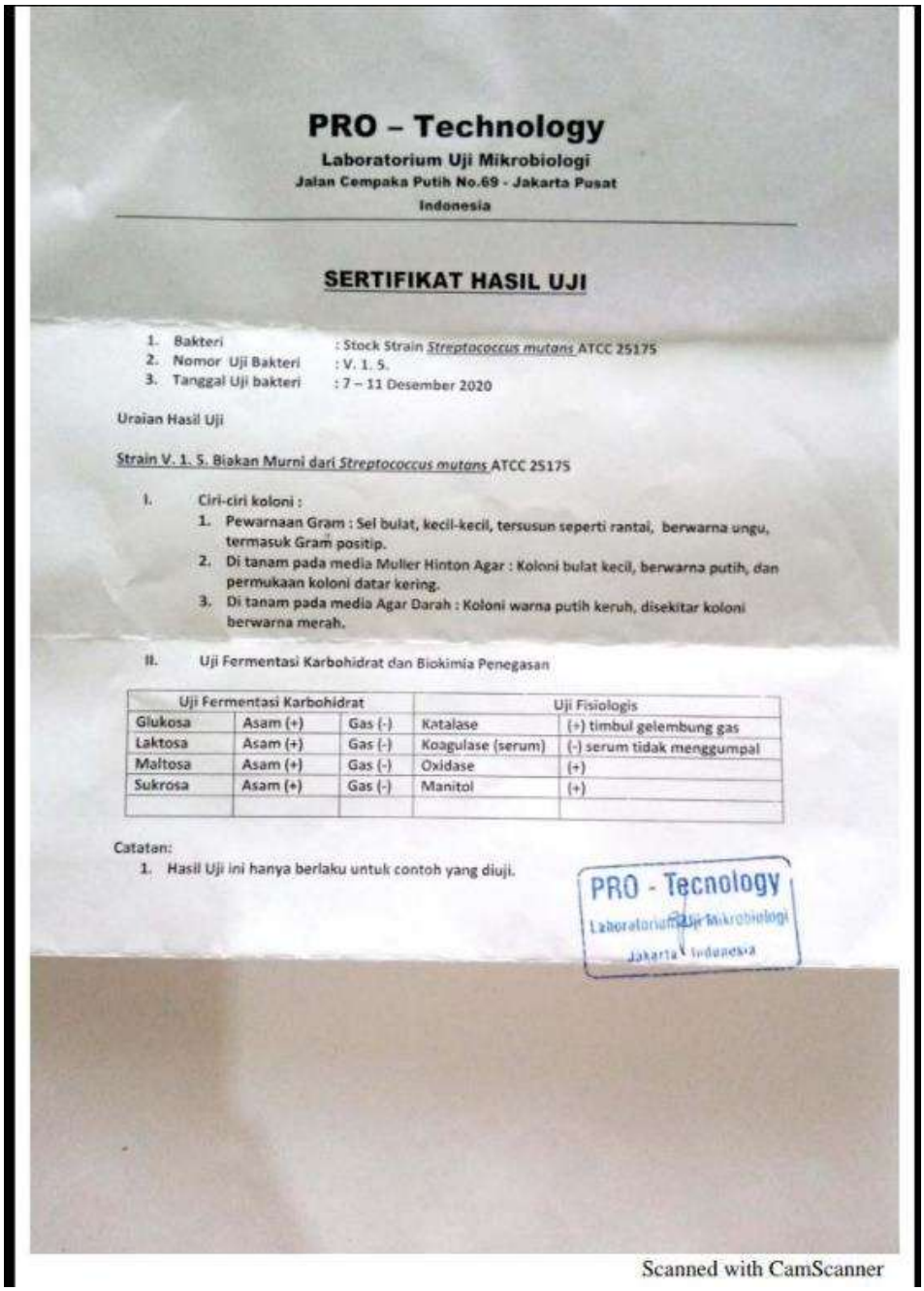
Means for groups in homogeneous subsets are displayed a
Uses Harmonic Mean Sample Size = 3,000

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	FORMULA	Statistic	df	Sig.	Statistic	df	Sig.
AKTIVITAS_SEDIAAN	FI	,324	3	.	977	3	,314
	FII	,219	3	.	987	3	,780
	FIII	,269	3	.	949	3	,567
	KONTROL POSITIF	,292	3	.	923	3	,483
	KONTROL NEGATIF	.	3		.	3	.

a. Lilliefors Significance Correction

Lampiran 20. **Sertifikat uji bakteri *Streptococcus mutans***



PRO – Technology

Laboratorium Uji Mikrobiologi

Jalan Cempaka Putih No.69 - Jakarta Pusat

Indonesia

SERTIFIKAT HASIL UJI

1. Bakteri : Stock Strain *Streptococcus mutans* ATCC 25175
2. Nomor Uji Bakteri : V. 1. 5.
3. Tanggal Uji bakteri : 7 – 11 Desember 2020

Uraian Hasil Uji

Strain V. 1. 5. Biakan Murni dari *Streptococcus mutans* ATCC 25175

I. Ciri-ciri koloni :
1. Pewarnaan Gram : Sel bulat, kecil-kecil, tersusun seperti rantai, berwarna ungu, termasuk Gram positip.
2. Di tanam pada media Muller Hinton Agar : Koloni bulat kecil, berwarna putih, dan permukaan koloni datar kering.
3. Di tanam pada media Agar Darah : Koloni warna putih keruh, disekitar koloni berwarna merah.

II. Uji Fermentasi Karbohidrat dan Biokimia Penegasan

Uji Fermentasi Karbohidrat			Uji Fisiologis	
Glukosa	Asam (+)	Gas (-)	Katalase	(+) timbul gelembung gas
Laktosa	Asam (+)	Gas (-)	Koagulase (serum)	(-) serum tidak menggumpal
Maltosa	Asam (+)	Gas (-)	Oxidase	(+)
Sukrosa	Asam (+)	Gas (-)	Manitol	(+)

Catatan:
1. Hasil Uji ini hanya berlaku untuk contoh yang diuji.

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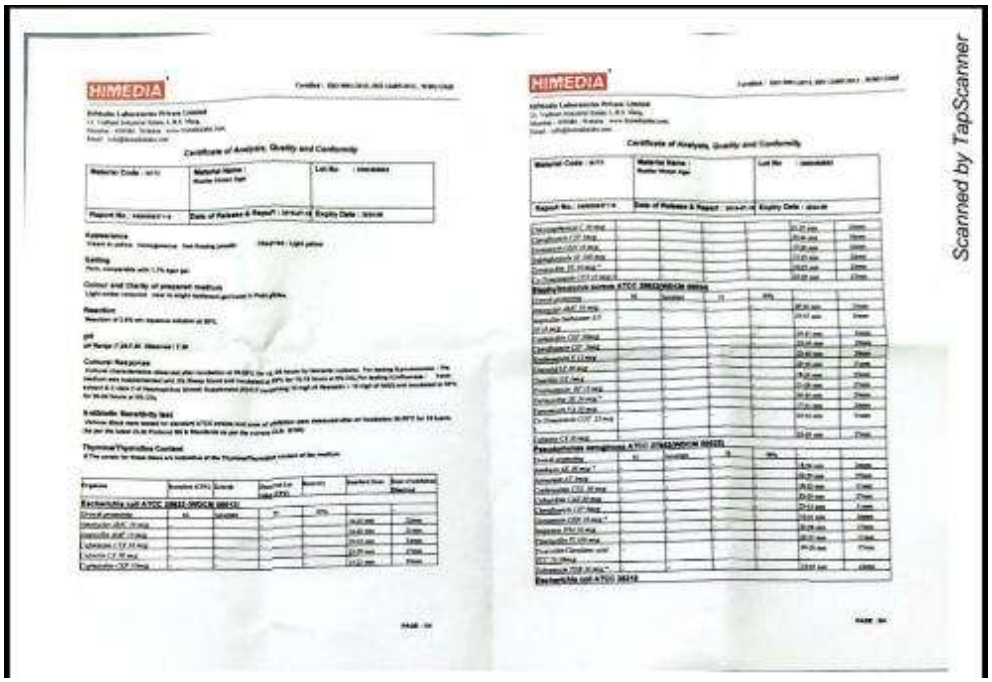
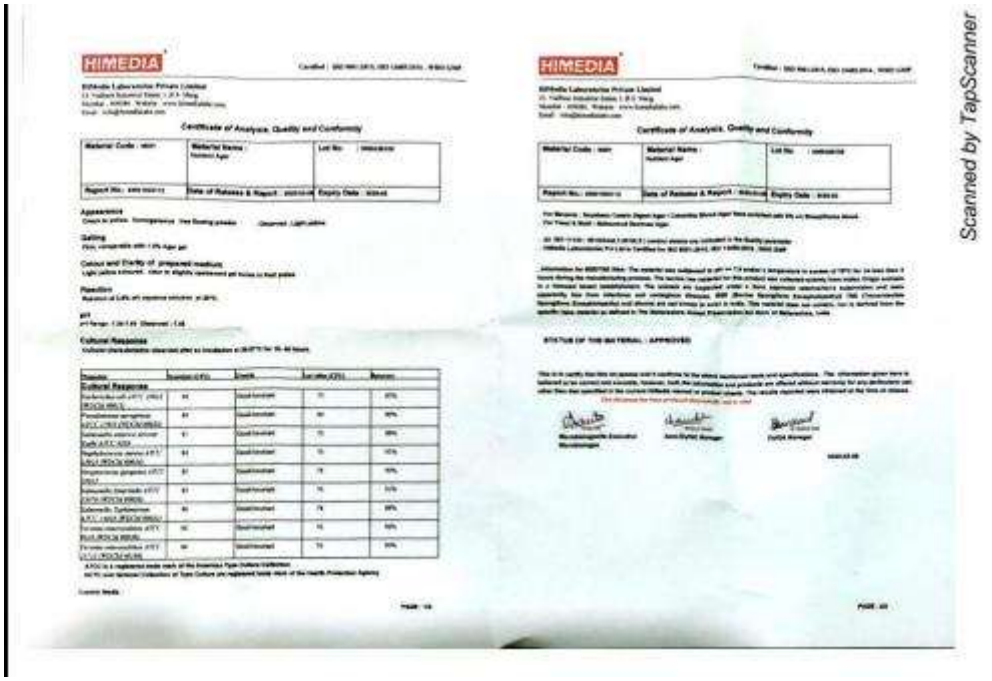
Scanned with CamScanner

Lampiran 21. Surat COA MHA



Lampiran 22. Surat COA NA



Lampiran 23. Surat COA DMSO

Certificate of Analysis

1.02952.1000 Dimethyl sulfoxide for analysis EMSURE® ACS
Batch K52488352

	Spec. Values		Batch Values	
Purity (GC)	≥ 99.9	%	99.9	%
Identity (IR)	conforms		conforms	
Appearance	clear		clear	
Color	≤ 10	Hazen	5	Hazen
Titrable acid	≤ 0.0002	meq/g	0.0001	meq/g
Density (d 20 °C/20 °C)	1.101 - 1.103		1.102	
Refractive index (n 20/D)	1.478 - 1.479		1.479	
Melting point	≥ 18.0	°C	18.1	°C
Absorption	conforms		conforms	
Heavy metals (as Pb)	≤ 0.0001	%	≤ 0.0001	%
Fe (iron)	≤ 0.0001	%	≤ 0.0001	%
Related substances (GC)	conforms		conforms	
Readily carbonizable substances	conforms		conforms	
Evaporation residue	≤ 0.001	%	< 0.001	%
Water	≤ 0.1	%	< 0.1	%

Date of release (DD.MM.YYYY) 28.05.2020
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Jeannette David
Responsible laboratory manager quality control

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