

BAB V

KESIMPULAN

A. Kesimpulan

Pertama, dari 33 sampel urin pasien ISK di RSUD Kota Surakarta terdapat 30 sampel positif bakteri *Escherichia coli*.

Kedua, pola sensitivitas *Escherichia coli* hasil isolasi urin pasien ISK di RSUD Kota Surakarta terhadap antibiotik levofloksasin *susceptible* 63,3 % dan *resistant* 36,7%; kotrimoksazol *susceptible* 60%, *intermediate* 6,7%, dan *resistant* 33,3%; seftriakson *susceptible* 63,3% dan *resistant* 36,7%; amoksisilin-klavulanat *susceptible* 3,3% dan *resistant* 96,7%.

Ketiga, antibiotik levofloksasin dan seftriakson yang memiliki persentase terbesar memberikan hasil *susceptible*.

B. Saran

Pertama, perlu dilakukan penelitian terhadap bakteri patogen lain seperti *Klebsiella sp.*, *Proteus*, *Pseudomonas* yang terdapat pada urin pasien ISK.

Kedua, perlu dilakukan penelitian dengan antibiotik lain yang dapat disesuaikan dengan bakteri penyebabnya ataupun infeksi lainnya sehingga tepat sasaran, dan dapat mengurangi efek yang tidak diinginkan.

Ketiga, untuk rumah sakit perlu diadakannya terkait pemeriksaan kultur untuk mengetahui pola sensitivitas antibiotik.

Keempat, perlu adanya klasifikasi riwayat ISK sebelumnya seperti lama perawatan pasien, pasien ISK baru atau berulang untuk menentukan sampel yang akan digunakan pada penelitian.

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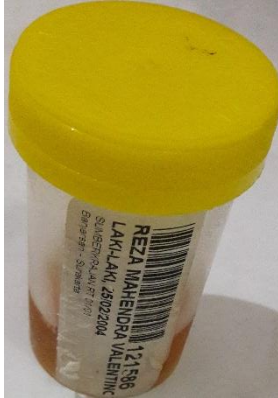
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Lampiran 1. Sampel Urin Pasien Terduga ISK di RSUD Kota Surakarta

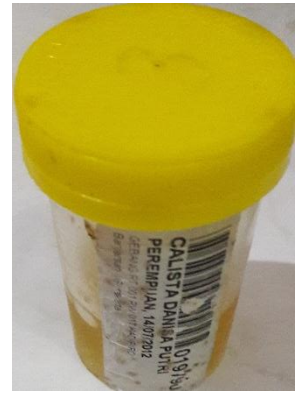
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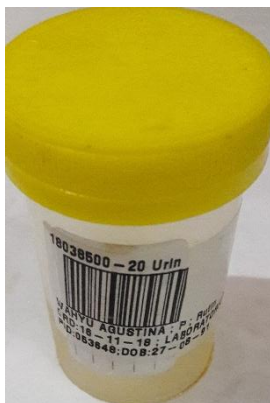
Sampel 2



Sampel 3



Sampel 4



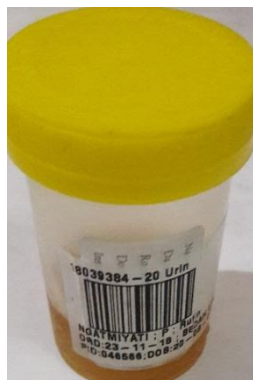
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Sampel 6



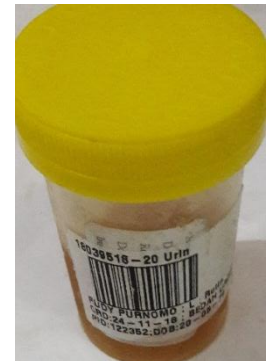
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Sampel 8



Sampel 9



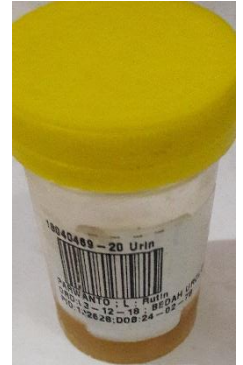
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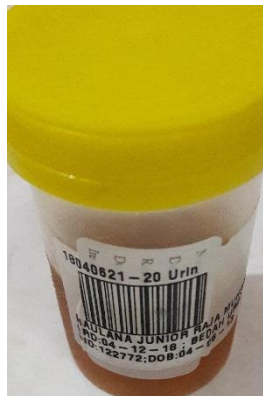
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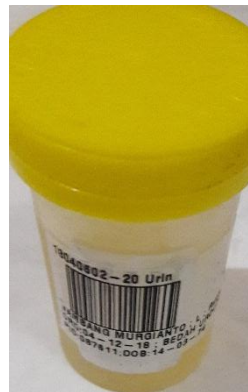
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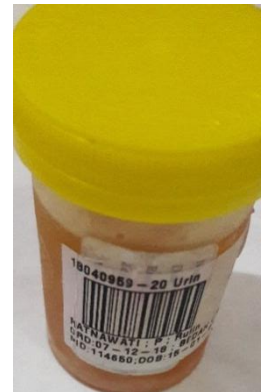
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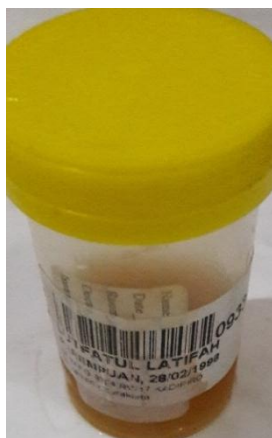
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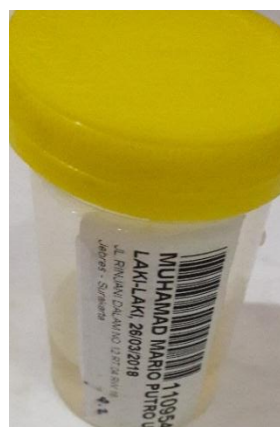
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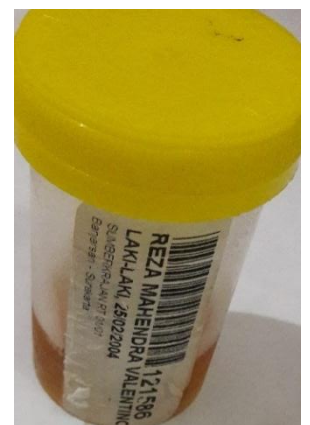
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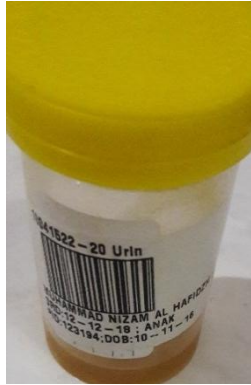
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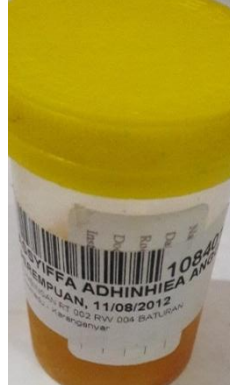
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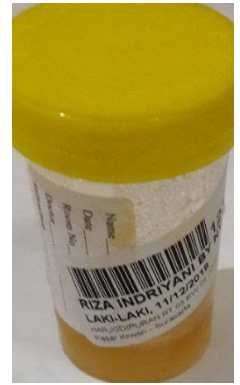
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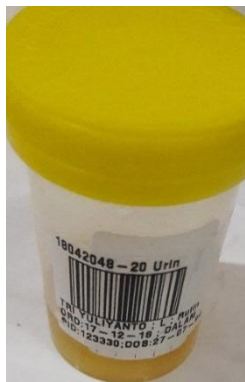
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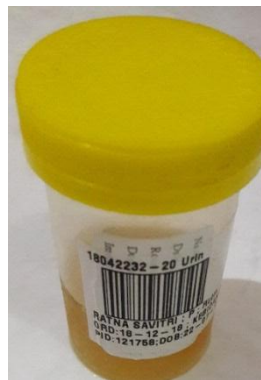
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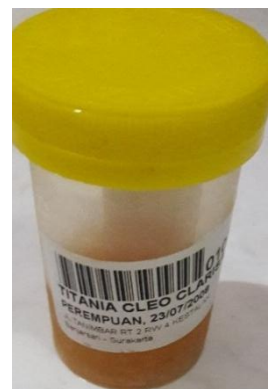
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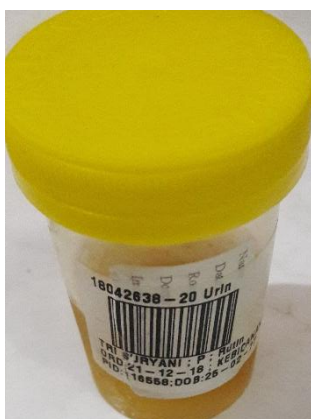
Sampel 23



Sampel 24



Sampel 25



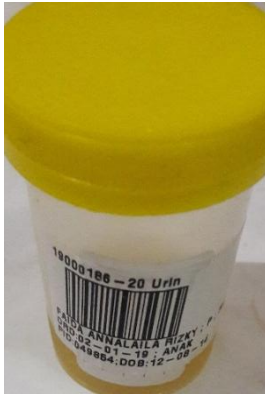
Sampel 26



Sampel 27



Sampel 28



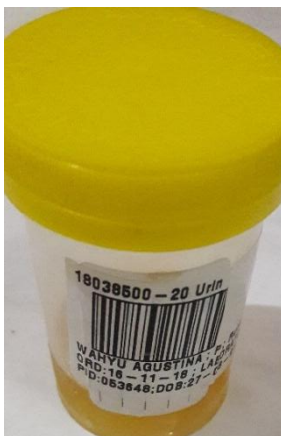
Sampel 29



Sampel 30



Sampel 31



Sampel 32



Sampel 33

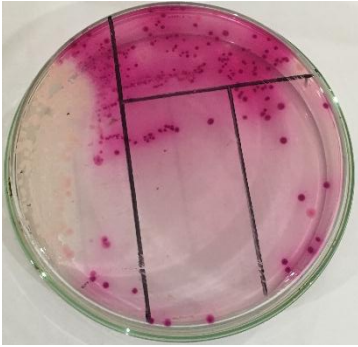


Lampiran 2. Hasil Klasifikasi Pasien Terduga ISK Berdasarkan Usia dan Jenis kelamin

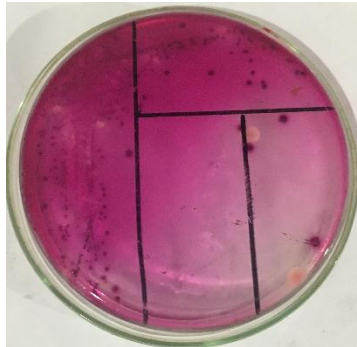
No Sampel	Jenis Kelamin	Usia Pasien
1	Perempuan	46 tahun
2	Laki-laki	14 tahun
3	Perempuan	6 tahun
4	Perempuan	8 tahun
5	Perempuan	27 tahun
6	Laki-laki	9 tahun
7	Perempuan	51 tahun
8	Laki-laki	33 tahun
9	Laki-laki	39 tahun
10	Laki-laki	10 tahun
11	Laki-laki	6 tahun
12	Laki-laki	40 tahun
13	Laki-laki	5 tahun
14	Laki-laki	44 tahun
15	Perempuan	27 tahun
16	Perempuan	20 tahun
17	Laki-laki	10 bulan
18	Perempuan	12 tahun
19	Laki-laki	2 tahun
20	Perempuan	6 tahun
21	Laki-laki	2 tahun
22	Laki-laki	24 tahun
23	Perempuan	27 tahun
24	Perempuan	10 tahun
25	Perempuan	47 tahun
26	Laki-laki	16 tahun
27	Perempuan	5 tahun
28	Perempuan	4 tahun
29	Perempuan	45 tahun
30	Perempuan	15 tahun
31	Perempuan	27 tahun
32	Perempuan	11 bulan
33	Perempuan	3 bulan

Lampiran 3. Koloni *Escherichia coli*

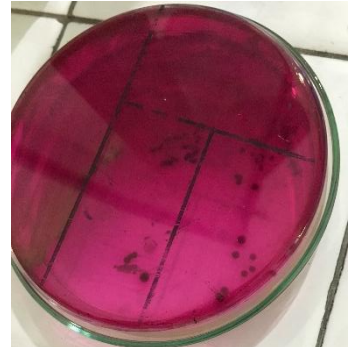
Sampel 1



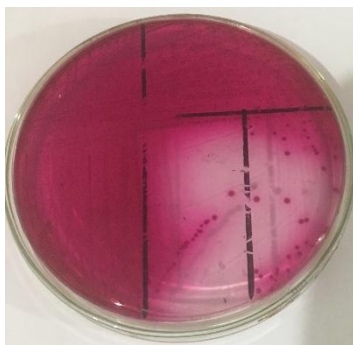
Sampel 2



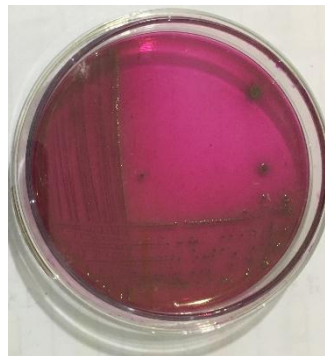
Sampel 3



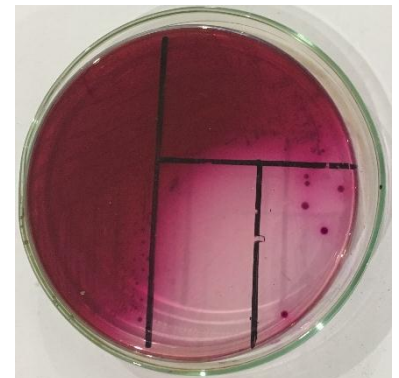
Sampel 4



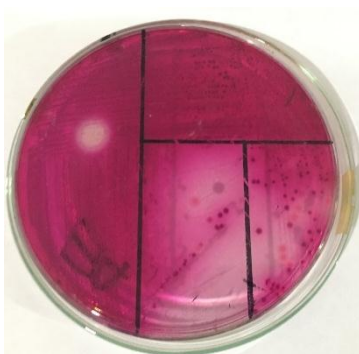
Sampel 5



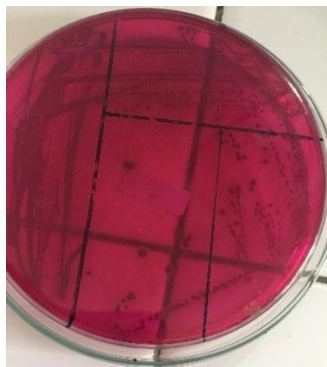
Sampel 6



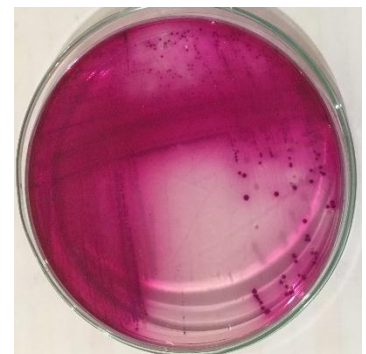
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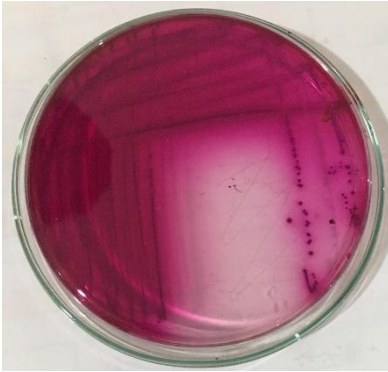
Sampel 8



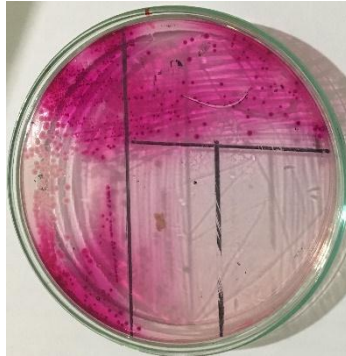
Sampel 9



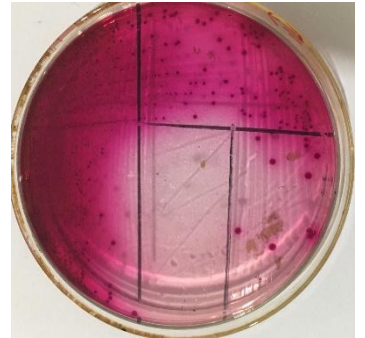
Sampel 10



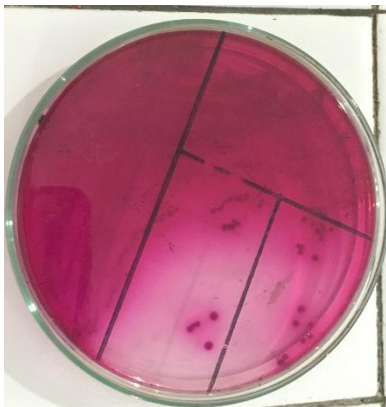
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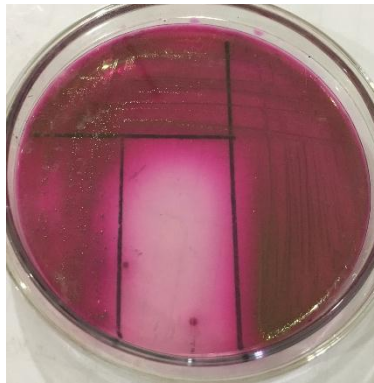
Sampel 12



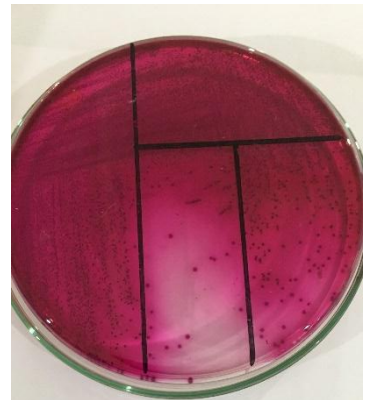
Sampel 13



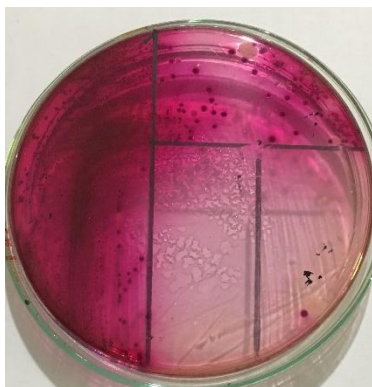
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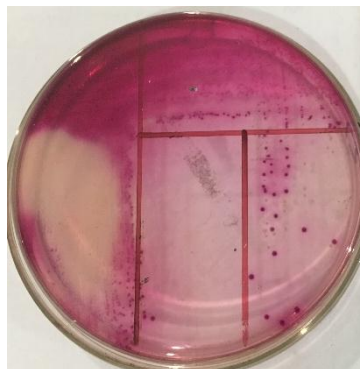
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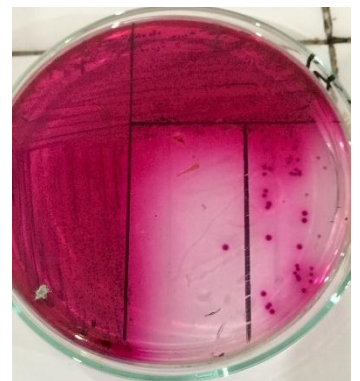
Sampel 16



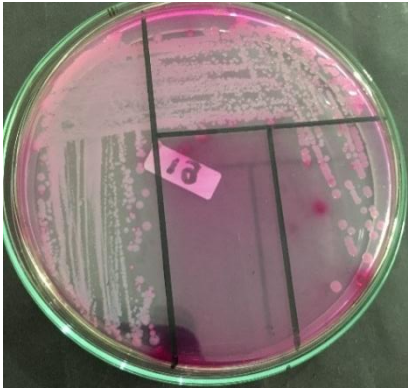
Sampel 17



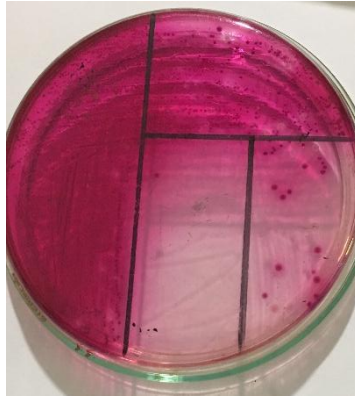
Sampel 18



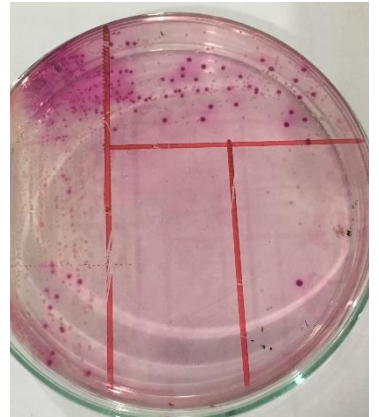
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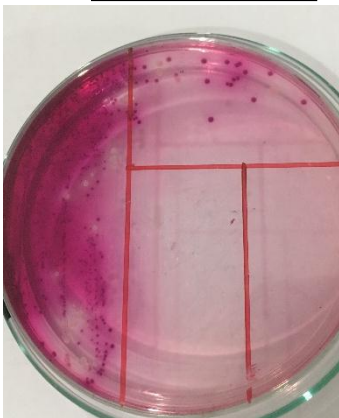
Sampel 20



Sampel 21



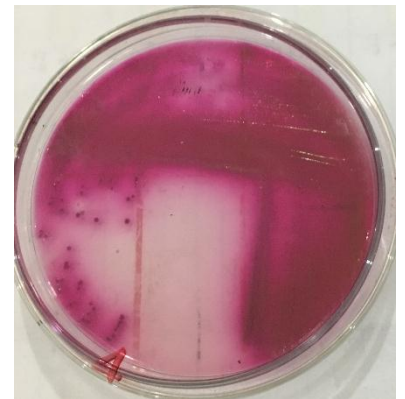
Sampel 22



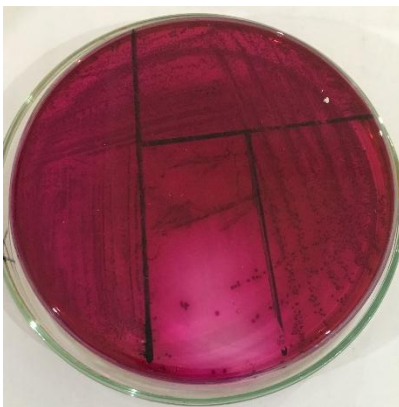
Sampel 23



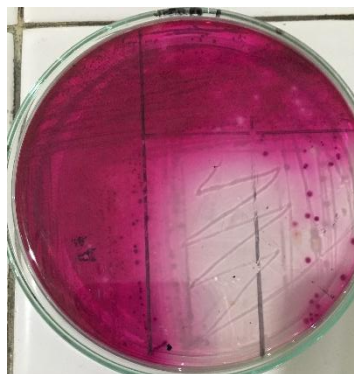
Sampel 24



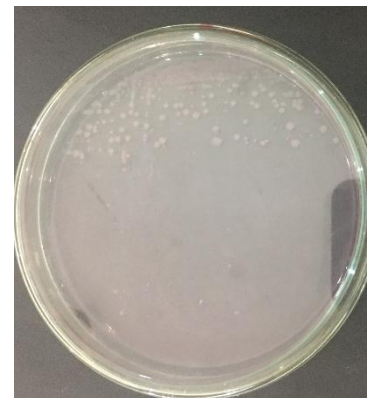
Sampel 25



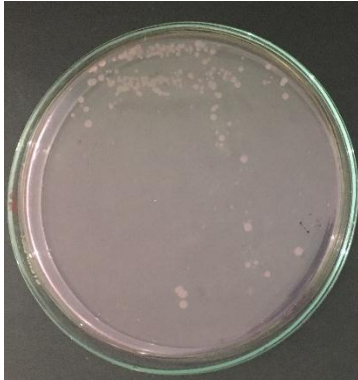
Sampel 26



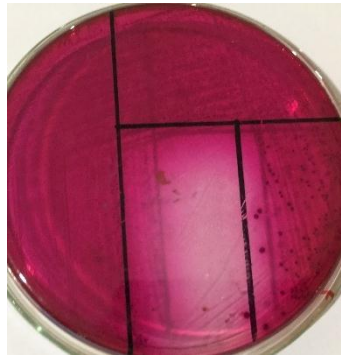
Sampel 27



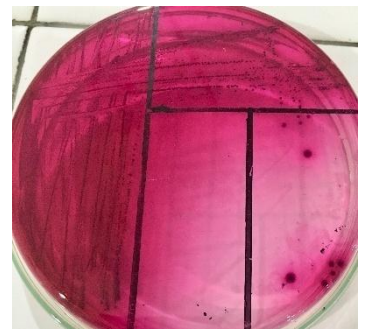
Sampel 28



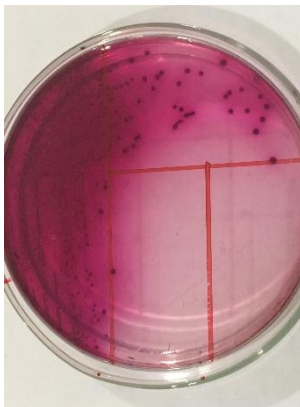
Sampel 29



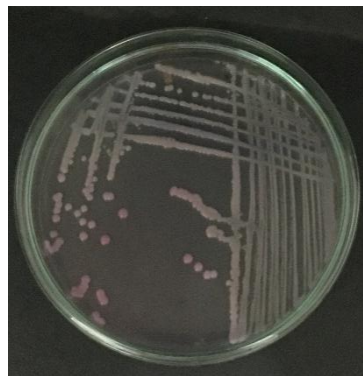
Sampel 30



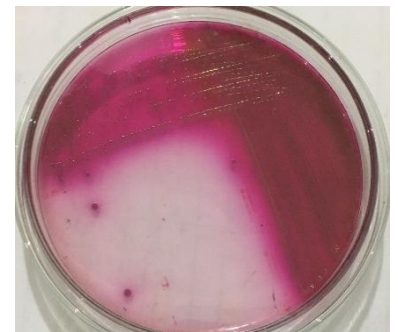
Sampel 31



Sampel 32



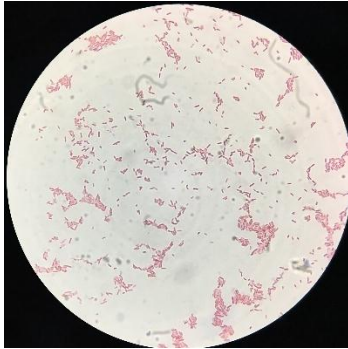
Sampel 33

*Escherichia coli* ATCC 25922

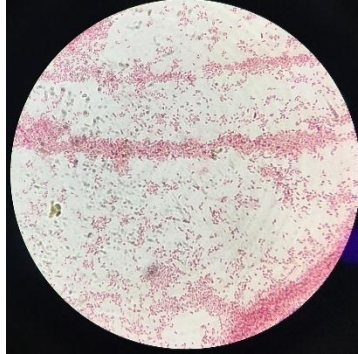
Hasil (-) *Escherichia coli* : sampel 27,28, dan 32.

Lampiran 4. Hasil Uji Mikroskop Sampel

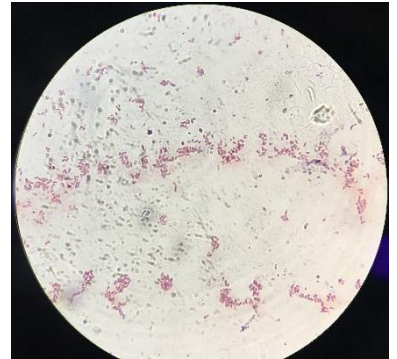
Sampel 1



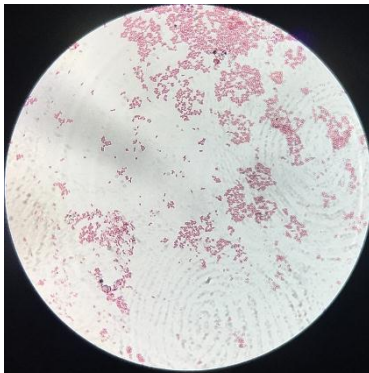
Sampel 2



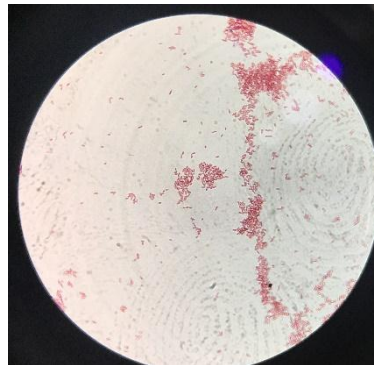
Sampel 3



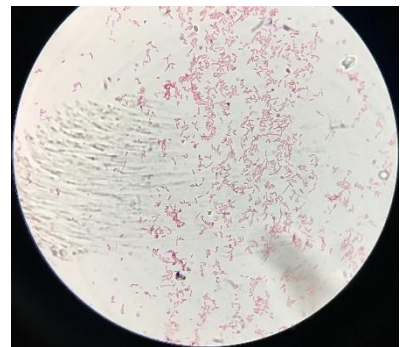
Sampel 4



Sampel 5



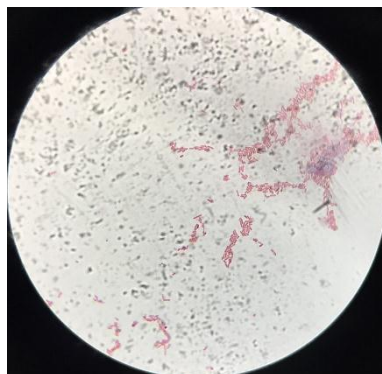
Sampel 6



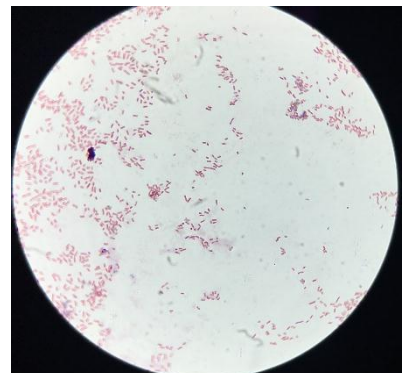
Sampel 7



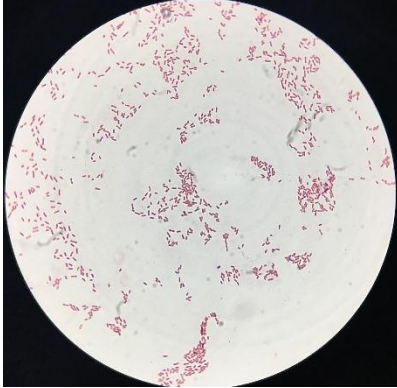
Sampel 8



Sampel 9



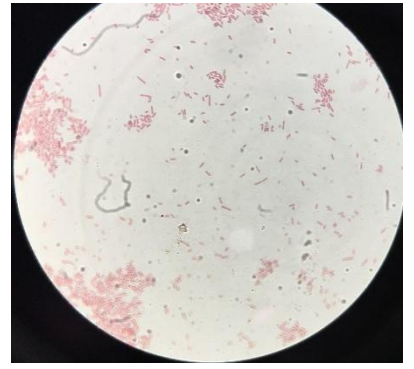
Sampel 10



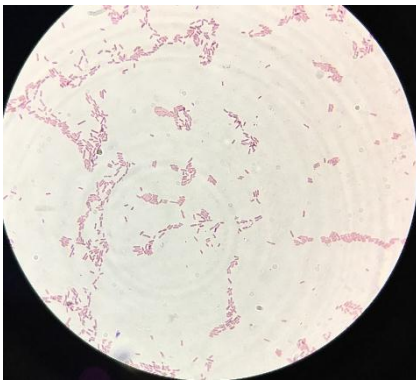
Sampel 11



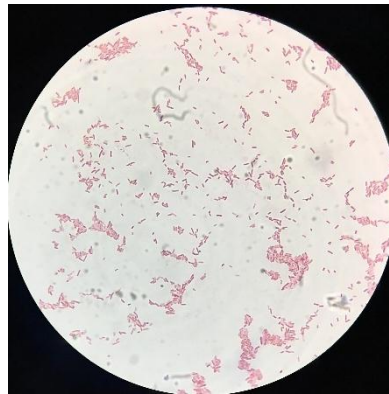
Sampel 12



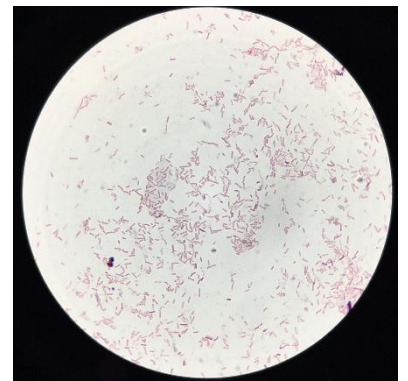
Sampel 13



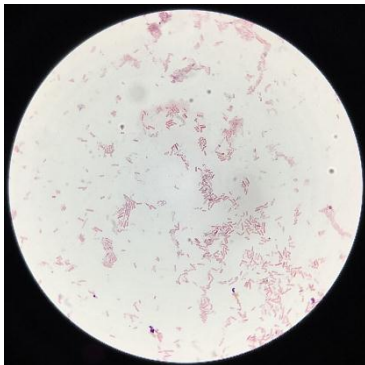
Sampel 14



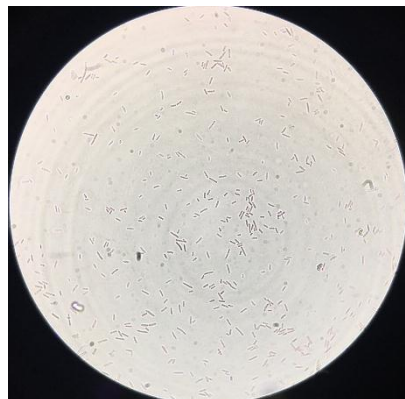
Sampel 15



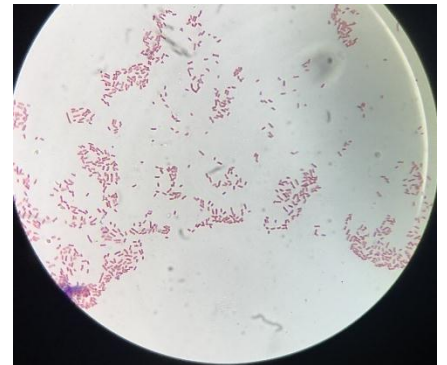
Sampel 16



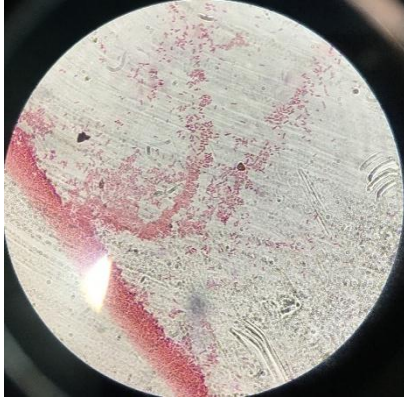
Sampel 17



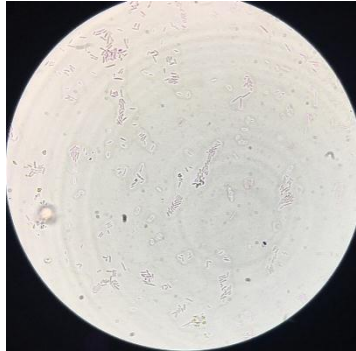
Sampel 18



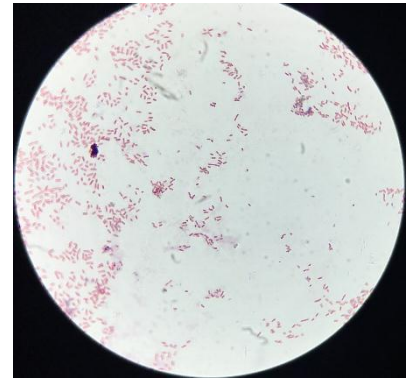
Sampel 19



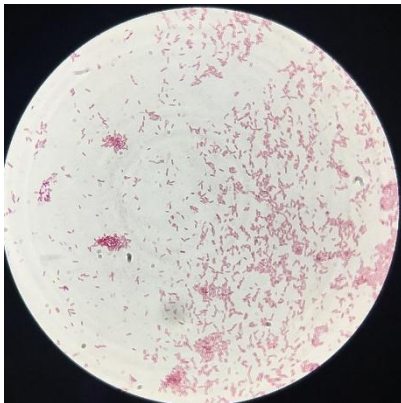
Sampel 20



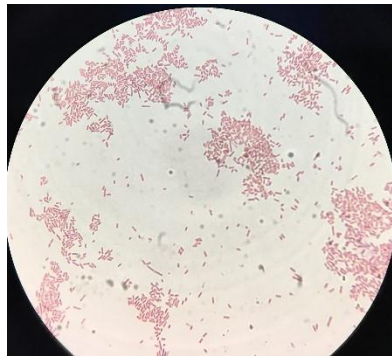
Sampel 21



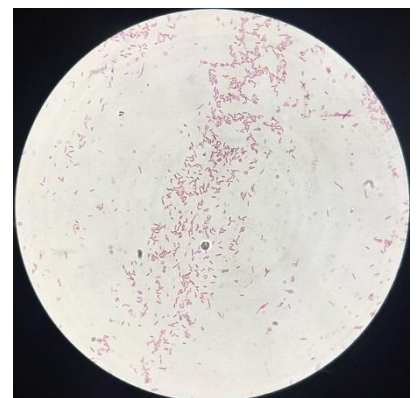
Sampel 22



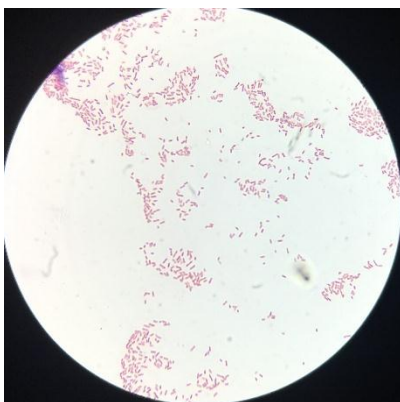
Sampel 23



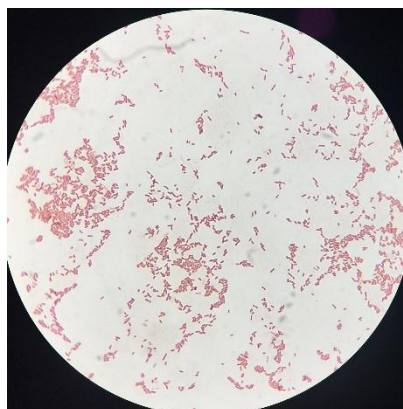
Sampel 24



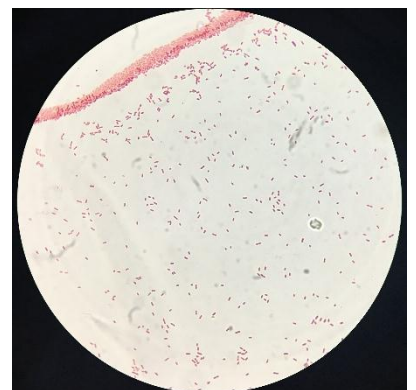
Sampel 25



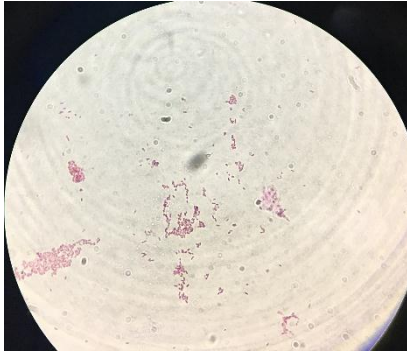
Sampel 26



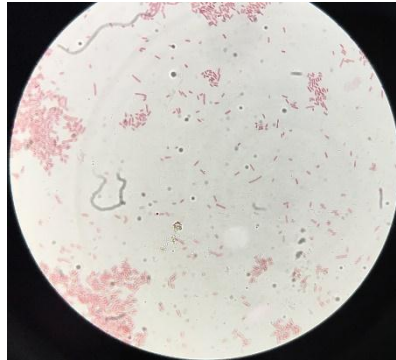
Sampel 27



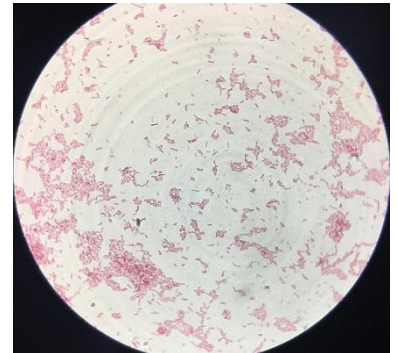
Sampel 28



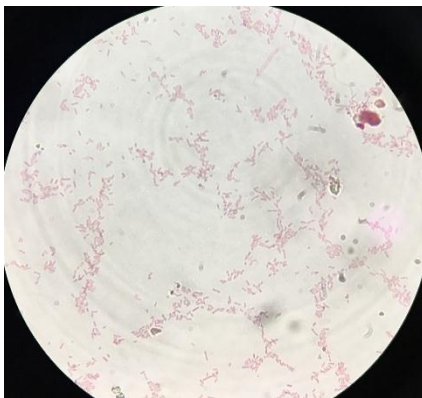
Sampel 29



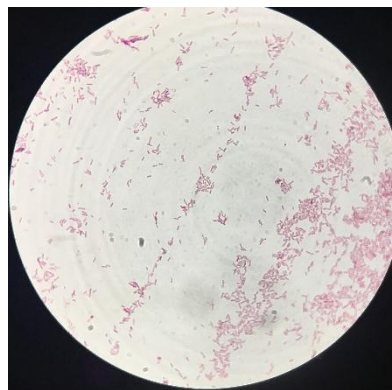
Sampel 30



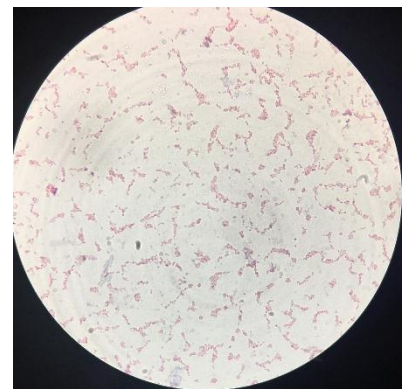
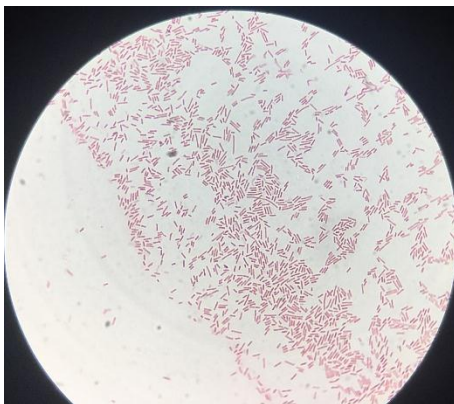
Sampel 31

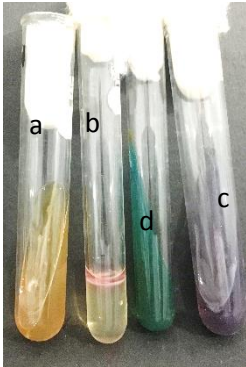
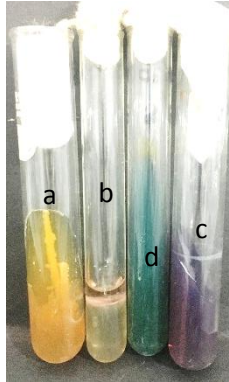
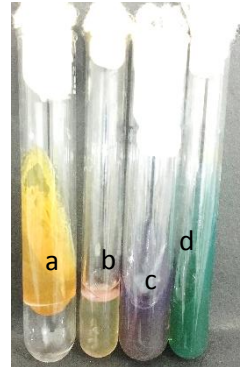
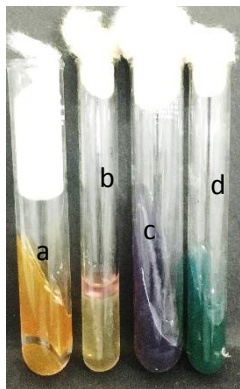
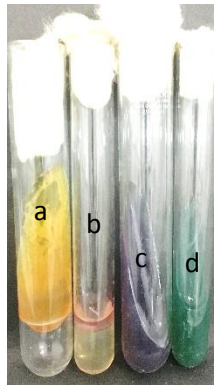
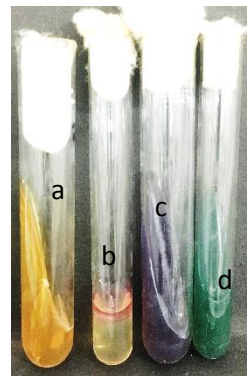
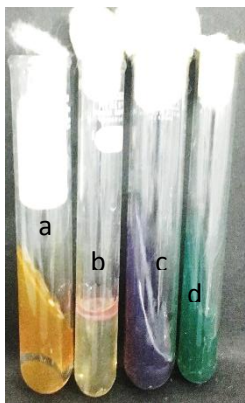
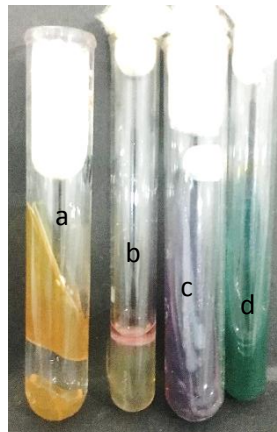
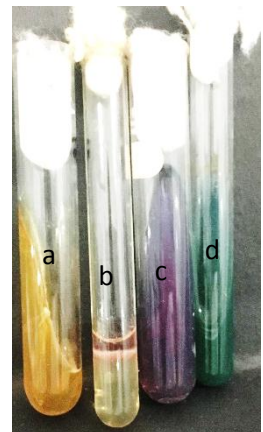


Sampel 32

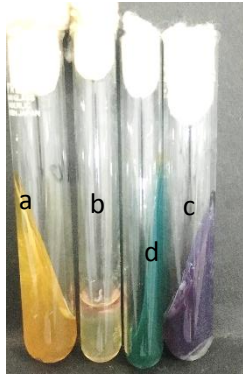


Sampel 33

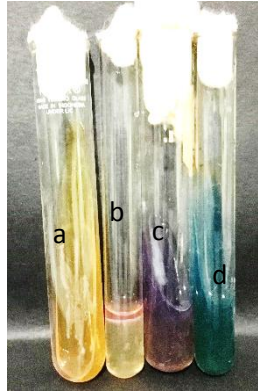
*Escherichia coli* ATCC 25922

Lampiran 5. Hasil Uji Biokimia Identifikasi *Escherichia coli***Sampel 1****Sampel 2****Sampel 3****Sampel 4****Sampel 5****Sampel 6****Sampel 7****Sampel 8****Sampel 9**

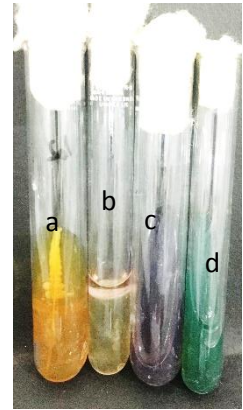
Sampel 10



Sampel 11



Sampel 12



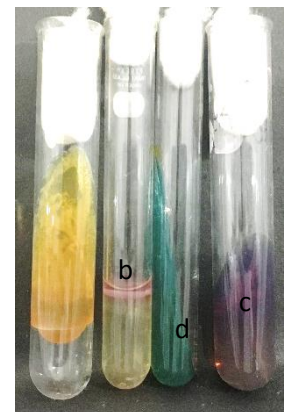
Sampel 13



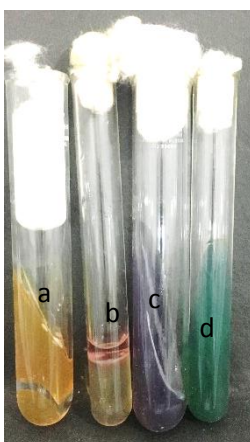
Sampel 14



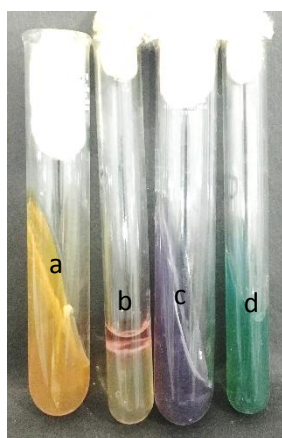
Sampel 15



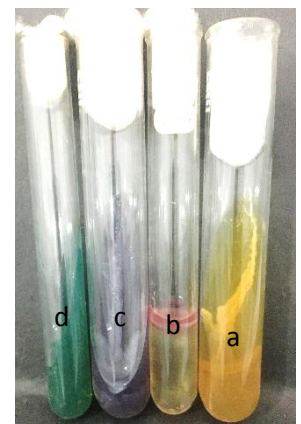
Sampel 16



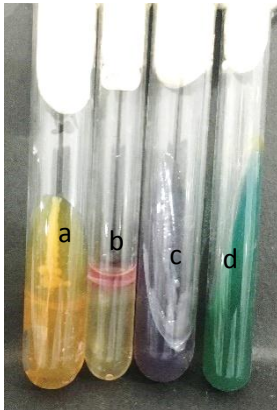
Sampel 17



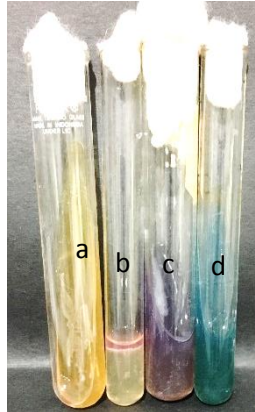
Sampel 18



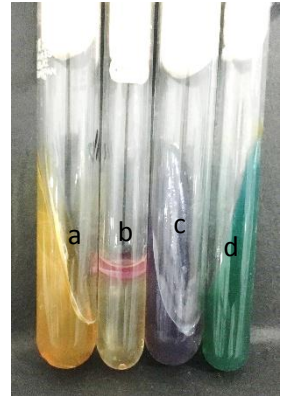
Sampel 19



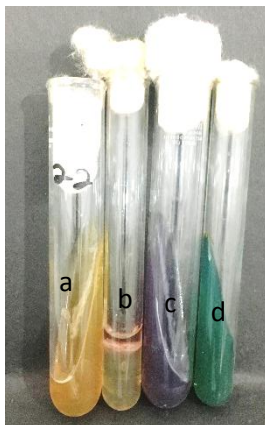
Sampel 20



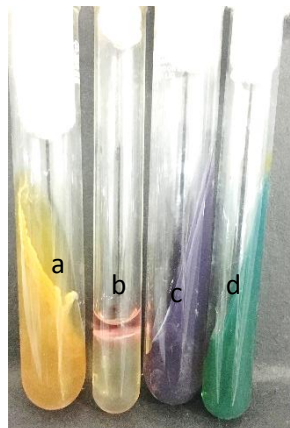
Sampel 21



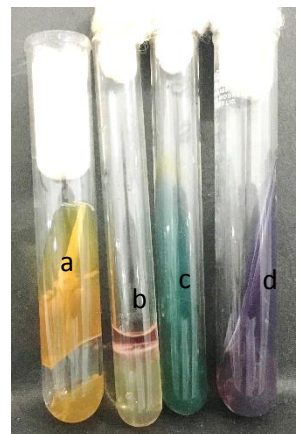
Sampel 22



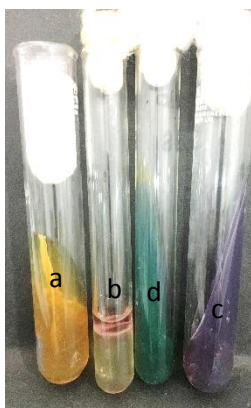
Sampel 23



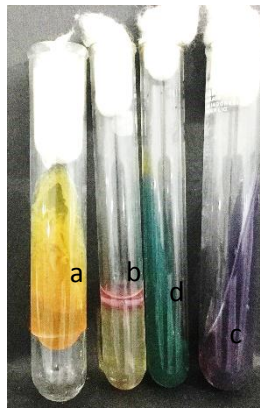
Sampel 24



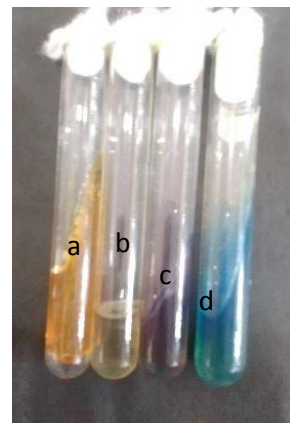
Sampel 25



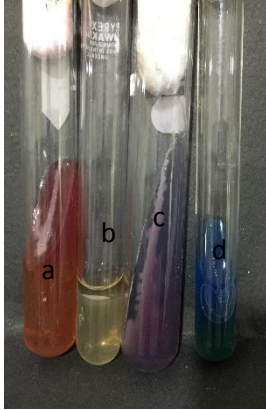
Sampel 26



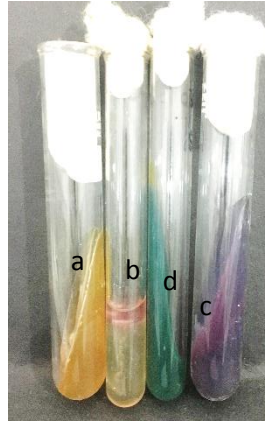
Sampel 27



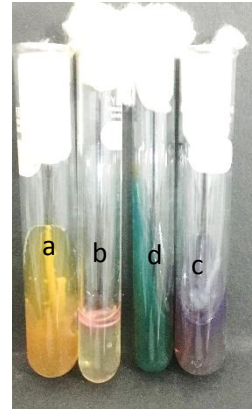
Sampel 28



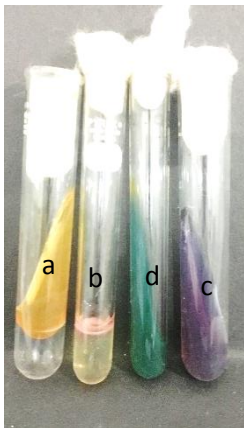
Sampel 29



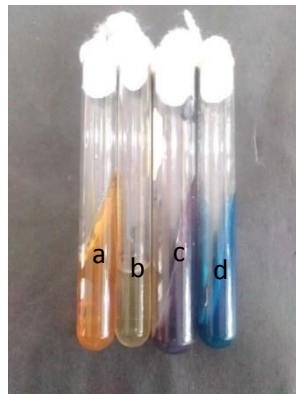
Sampel 30



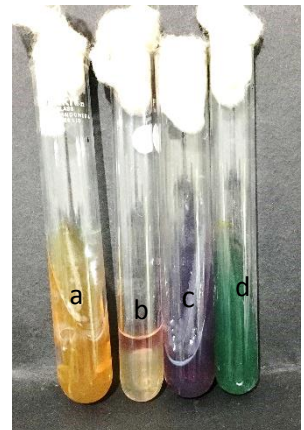
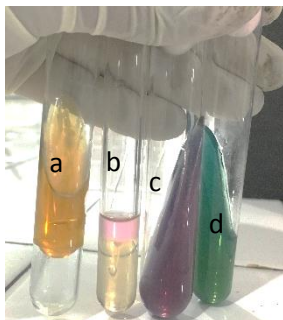
Sampel 31



Sampel 32



Sampel 33

*Escherichia coli* ATCC 25922

Keterangan

a : KIA

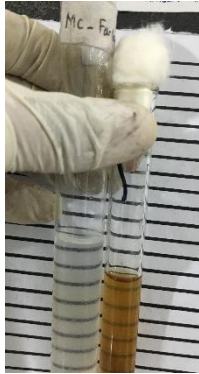
b : SIM

c : LIA

d : Sitrat

Lampiran 6. Hasil Penyetaraan Suspensi Bakteri dengan Mc Farland 0,5

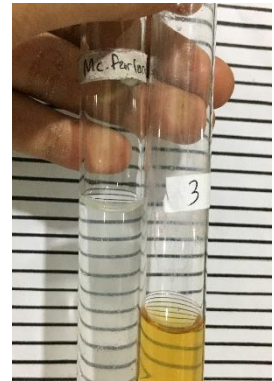
Sampel 1



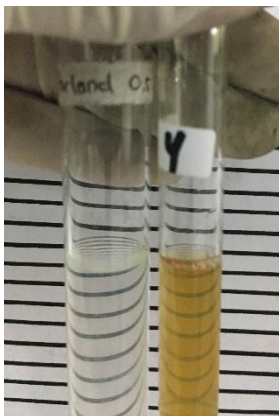
Sampel 2



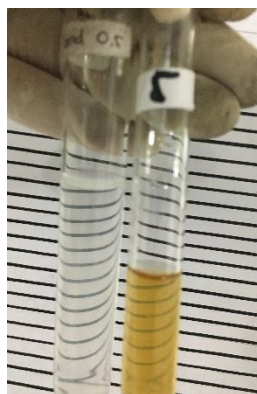
Sampel 3



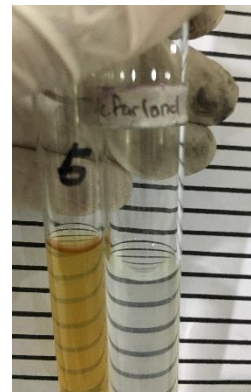
Sampel 4



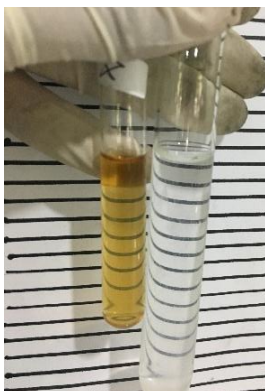
Sampel 5



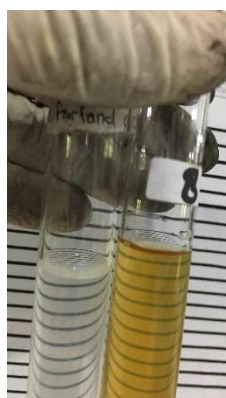
Sampel 6



Sampel 7



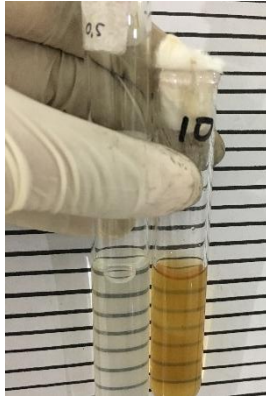
Sampel 8



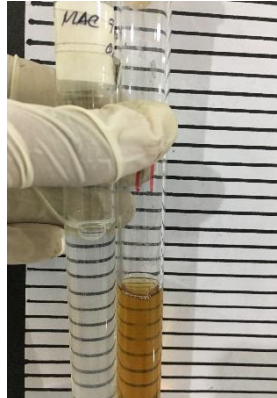
Sampel 9



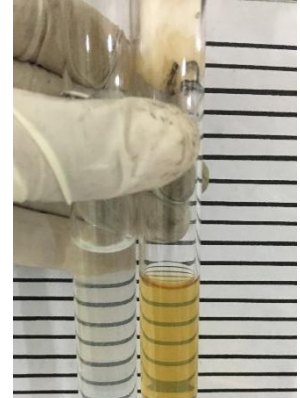
Sampel 10



Sampel 11



Sampel 12



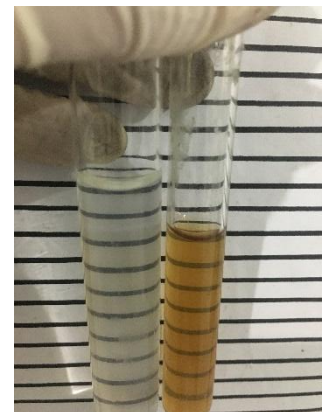
Sampel 13



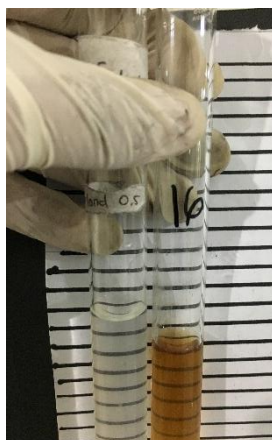
Sampel 14



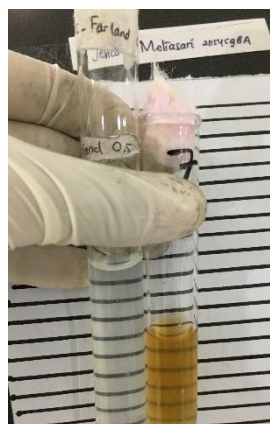
Sampel 15



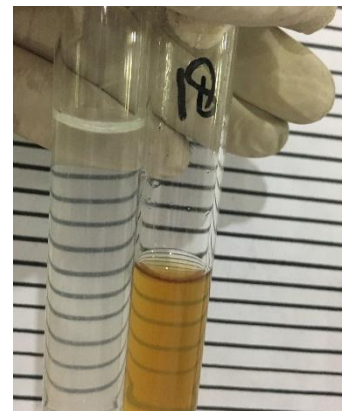
Sampel 16



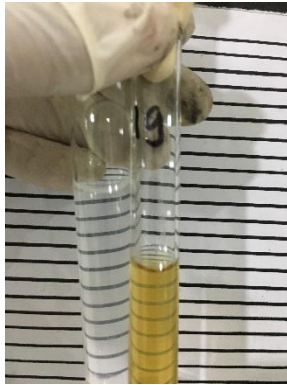
Sampel 17



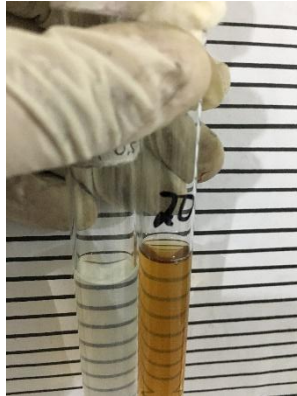
Sampel 18



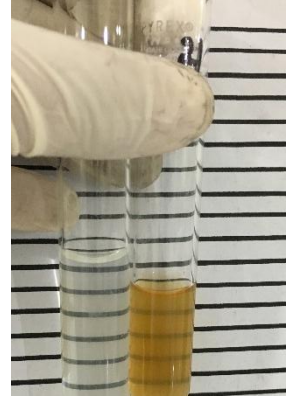
Sampel 19



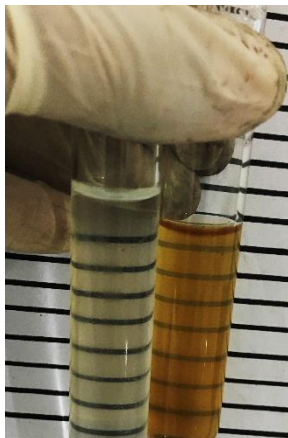
Sampel 20



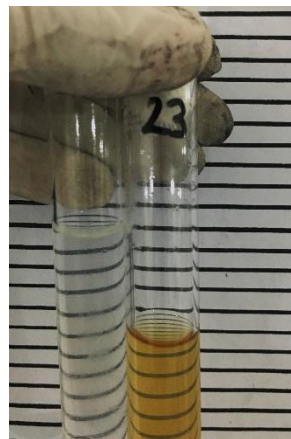
Sampel 21



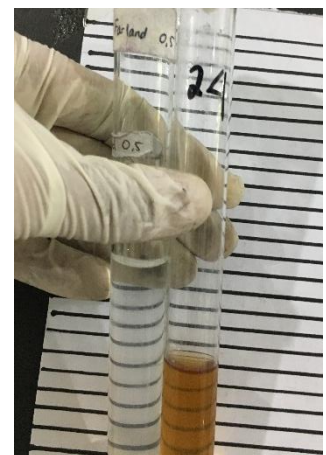
Sampel 22



Sampel 23



Sampel 24



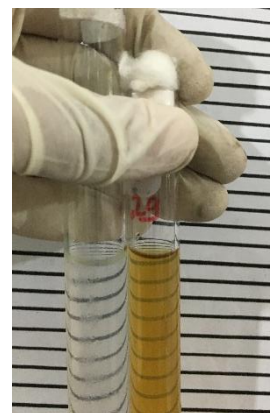
Sampel 25



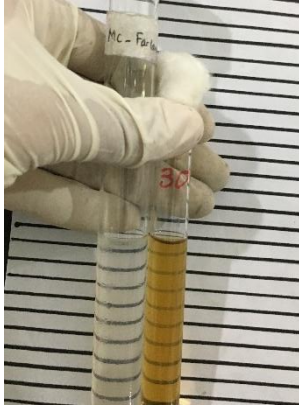
Sampel 26



Sampel 29



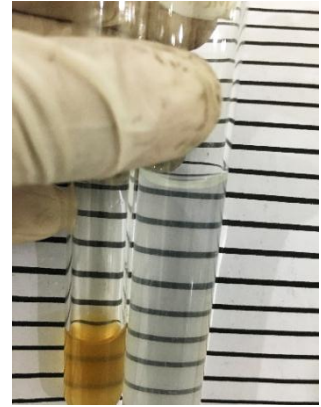
Sampel 30



Sampel 31



Sampel 33

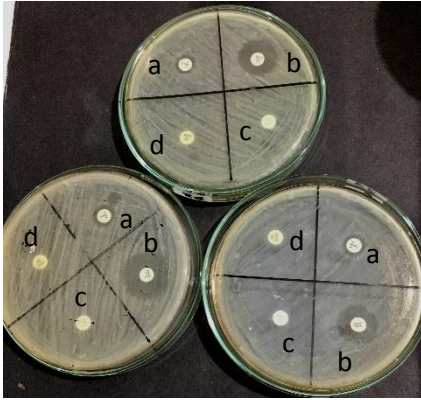


Escherichia coli ATCC 25922

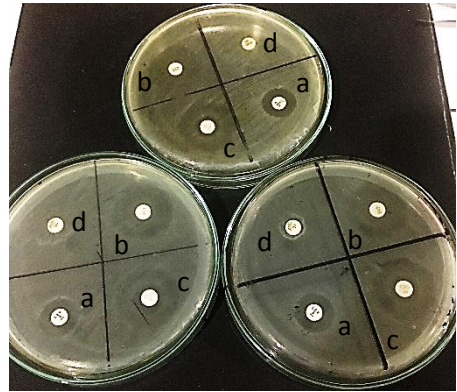


Lampiran 7. Hasil Uji Sensitivitas Antibiotik

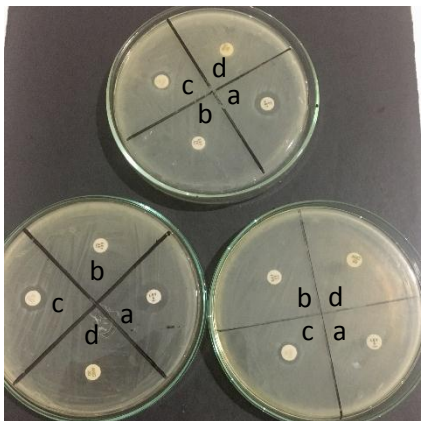
Sampel 1



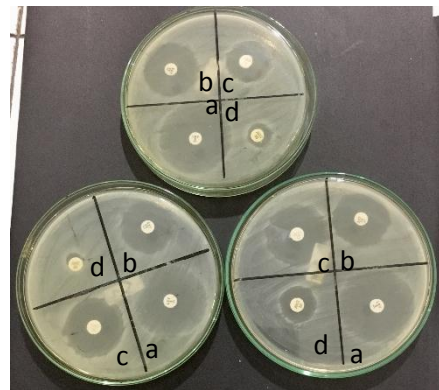
Sampel 2



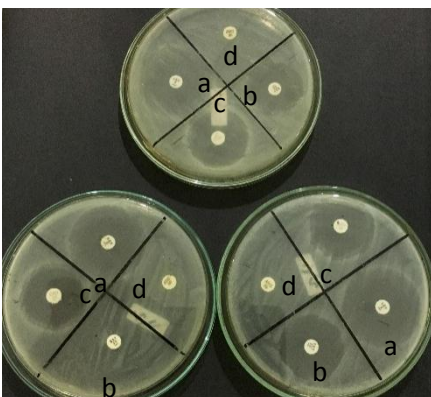
Sampel 3



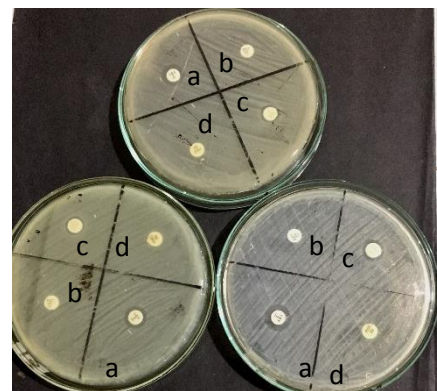
Sampel 4



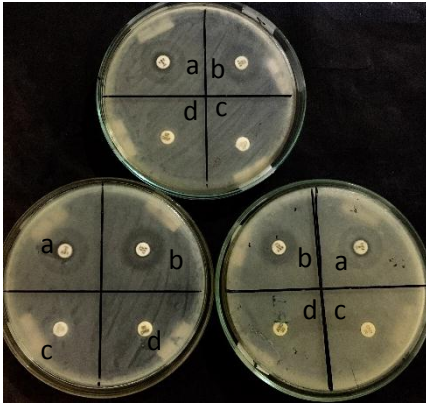
Sampel 5



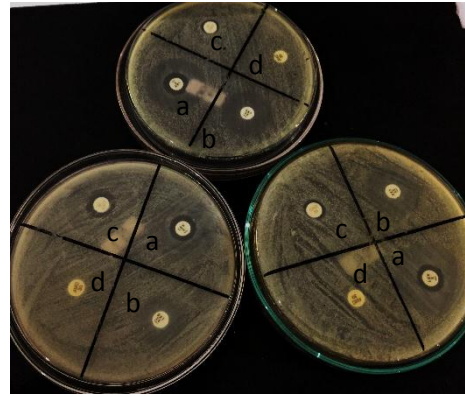
Sampel 6



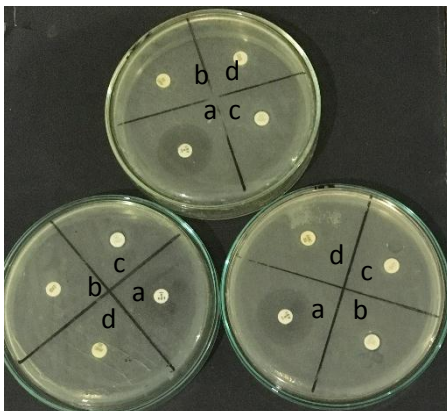
Sampel 7



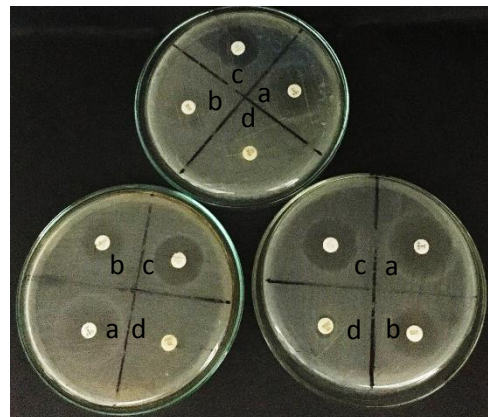
Sampel 8



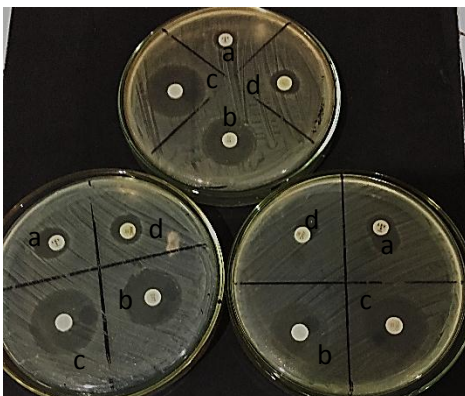
Sampel 9



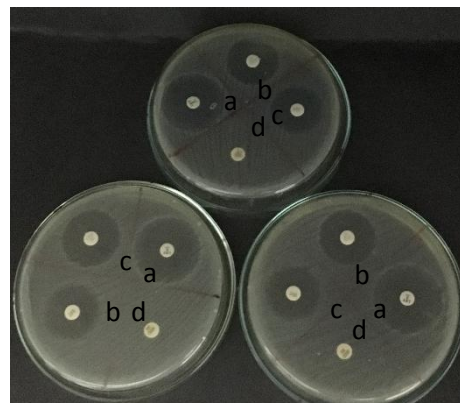
Sampel 10



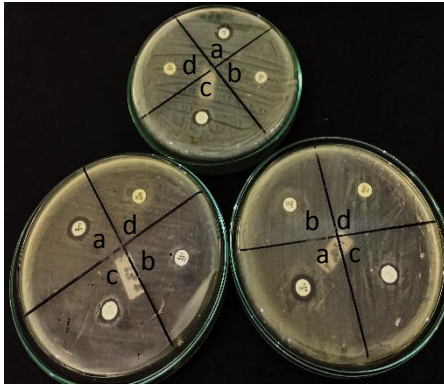
Sampel 11



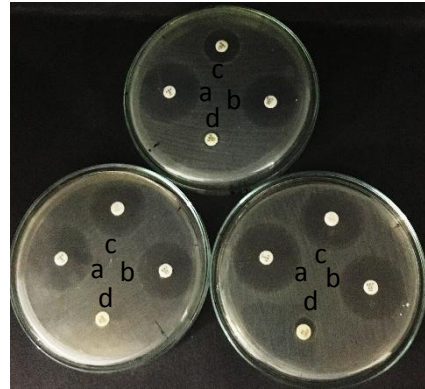
Sampel 12



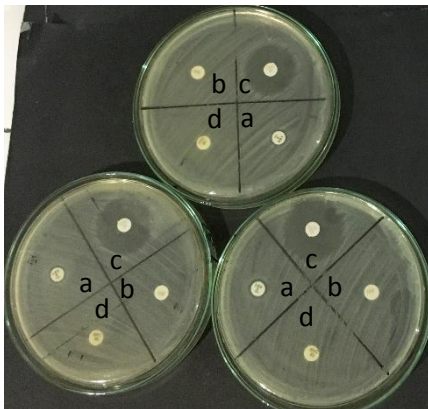
Sampel 13



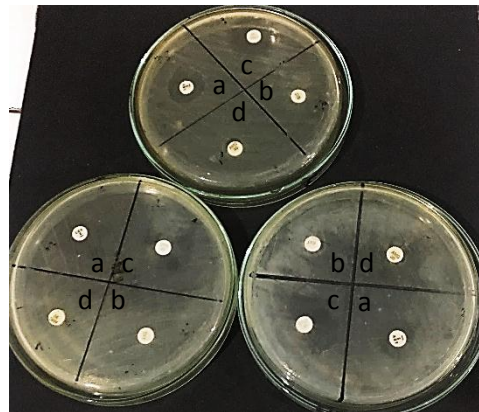
Sampel 14



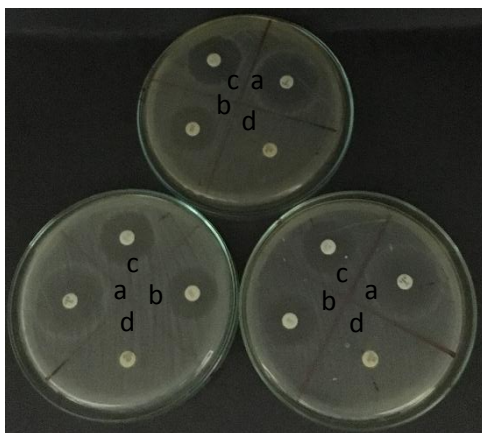
Sampel 15



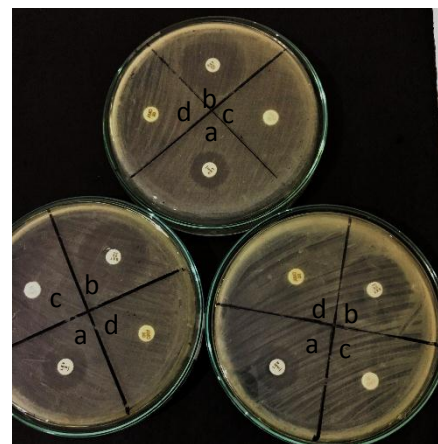
Sampel 16



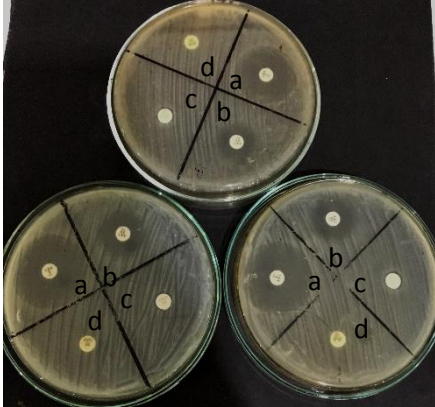
Sampel 17



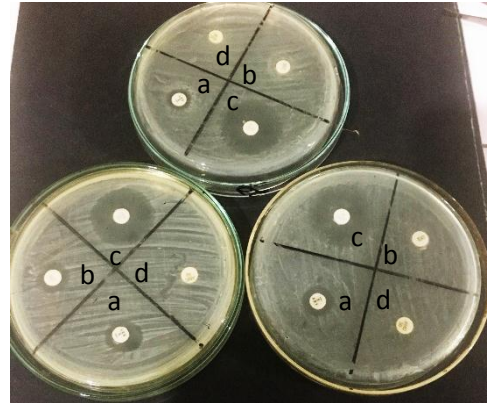
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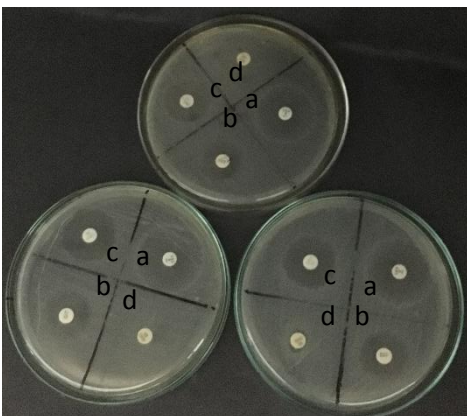
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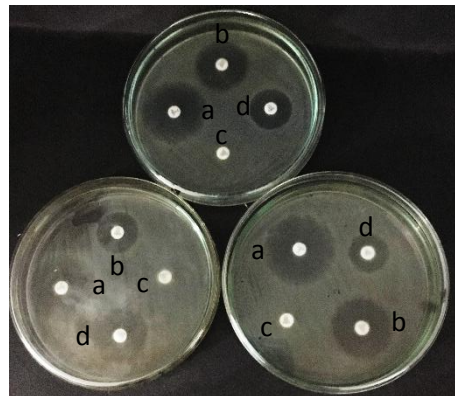
Sampel 20



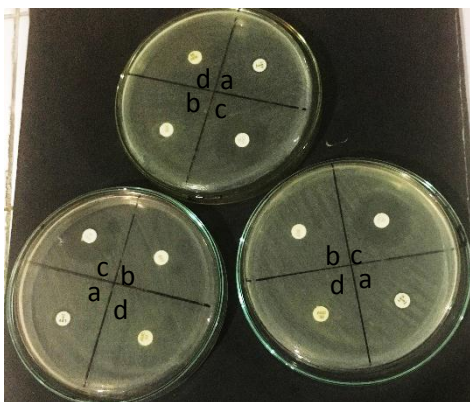
Sampel 21



Sampel 22



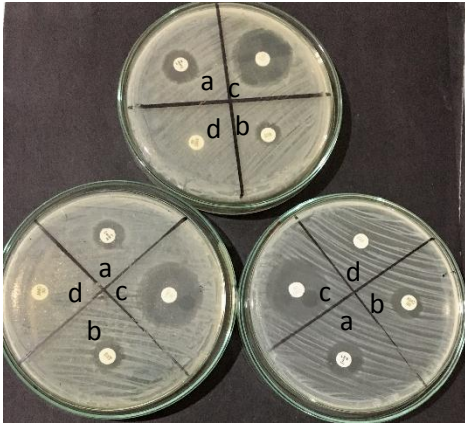
Sampel 23



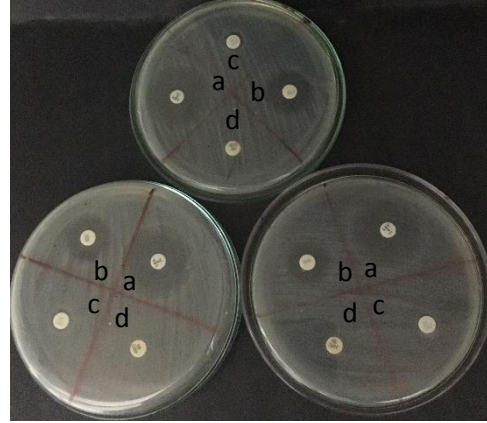
Sampel 24



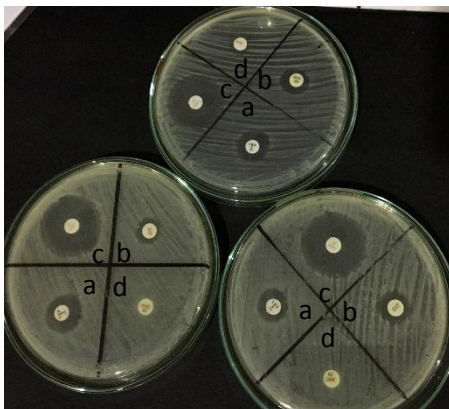
Sampel 25



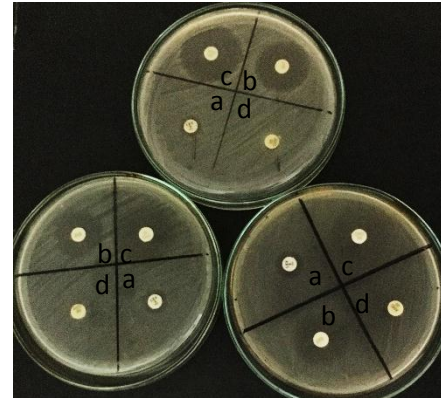
Sampel 26



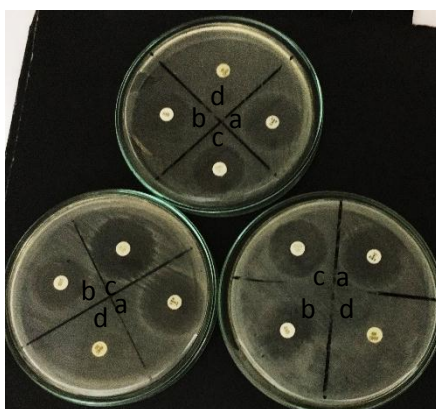
Sampel 29



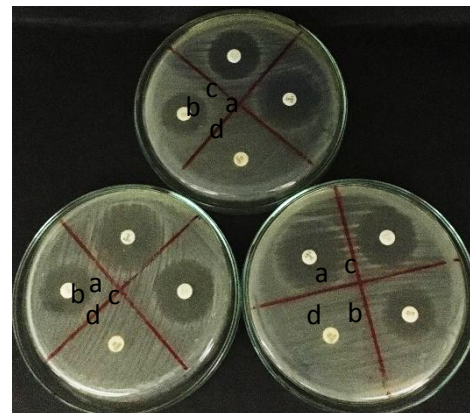
Sampel 30



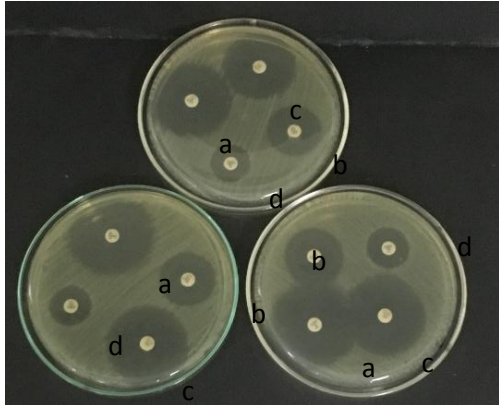
Sampel 31



Sampel 33



Escherichia coli ATCC 25922



Keterangan

a : Levofloksasin

b : Kotrimoksazol

c : Seftriakson

d : Amoksisilin-klavulanat

Lampiran 8. Gambar Alat

Autoclave



Oven



Inkubator



Inkas



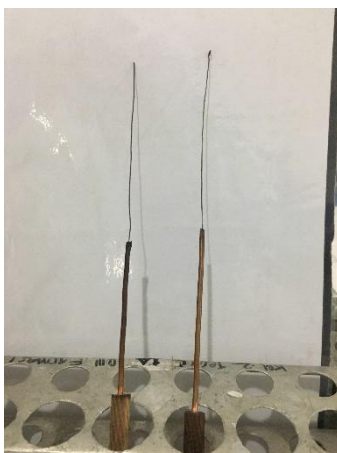
Bunsen



Rak tabung reaksi



Jarum ent dan ose



Kapas lidi steril



Vortex



**Lampiran 9. Hasil Uji Sensitivitas, Perhitungan Persentase dan Perhitungan
Diameter Daya Hambat (mm).**

1. Hasil uji sensitivitas tiap replikasi

No sampel	Replikasi	Diameter zona hambat antibiotik (mm) dan tingkat kepekaan antibiotik							
		Levofloksasin	PS	Kotrimoksazol	PS	Seftriakson	PS	Amoksisilin-klavulanat	PS
1	1	12	R	17	S	0	R	0	R
	2	11	R	18	S	0	R	0	R
	3	12	R	18	S	0	R	0	R
2	1	17	S	20	S	24	S	10	R
	2	18	S	20	S	25	S	11	R
	3	17	S	20	S	24	S	11	R
3	1	12	R	0	R	8	R	0	R
	2	11	R	0	R	9	R	0	R
	3	11	R	0	R	9	R	0	R
4	1	35	S	28	S	27	S	14	I
	2	35	S	28	S	29	S	10	R
	3	30	S	25	S	27	S	11	R
5	1	33	S	25	S	30	S	0	R
	2	33	S	27	S	30	S	0	R
	3	33	S	26	S	30	S	0	R
6	1	12	R	0	R	8	R	0	R
	2	12	R	0	R	7	R	0	R
	3	11	R	0	R	8	R	0	R
7	1	18	S	15	I	0	R	0	R
	2	18	S	15	I	0	R	0	R
	3	18	S	15	I	0	R	0	R
8	1	13	R	18	S	13	R	0	R
	2	12	R	20	S	12	R	0	R
	3	12	R	20	S	12	R	0	R
9	1	25	S	6	R	7	R	6	R
	2	24	S	6	R	7	R	6	R
	3	24	S	6	R	7	R	6	R
10	1	29	S	17	S	25	S	6.5	R
	2	28	S	17	S	25	S	6.5	R
	3	30	S	19	S	25	S	6.5	R
11	1	12	R	21	S	28	S	13	R
	2	11	R	20	S	26	S	12	R
	3	12	R	21	S	27	S	13	R
12	1	31	S	24	S	26	S	6	R
	2	31	S	23	S	26	S	6	R
	3	30	S	23	S	25	S	6	R
13	1	12	R	7	R	10	R	6	R
	2	11	R	6	R	10	R	6	R
	3	12	R	7	R	11	R	6	R
14	1	30	S	26	S	28	S	9	R
	2	30	S	24	S	28	S	8	R
	3	29	S	25	S	25	S	10	R
15	1	7	R	0	R	26	S	6	R
	2	7	R	0	R	27	S	6	R
	3	7	R	0	R	26	S	6	R

16	1	17	S	6	R	23	S	7	R
	2	18	S	7	R	24	S	8	R
	3	17	S	6	R	23	S	7	R
17	1	30	S	21	S	25	S	6	R
	2	30	S	21	S	25	S	6	R
	3	30	S	20	S	25	S	6	R
18	1	18	S	25	S	0	R	0	R
	2	19	S	24	S	0	R	0	R
	3	18	S	25	S	0	R	0	R
19	1	30	S	19	S	9	R	0	R
	2	29	S	18	S	8	R	0	R
	3	29	S	19	S	9	R	0	R
20	1	12	R	10	R	26	S	6	R
	2	13	R	7	R	27	S	6	R
	3	12	R	7	R	26	S	6	R
21	1	30.2	S	21.7	S	24	S	6	R
	2	29.2	S	20.7	S	23.5	S	6	R
	3	29.2	S	21.7	S	23.5	S	6	R
22	1	30.5	S	26	S	0	R	21	S
	2	31	S	26.7	S	0	R	19.4	S
	3	29.3	S	25	S	0	R	20	S
23	1	9	R	6	R	26	S	6	R
	2	9	R	6	R	25	S	6	R
	3	10	R	6	R	25	S	6	R
24	1	12	R	7	R	25	S	7	R
	2	13	R	7	R	24	S	7	R
	3	12	R	7	R	24	S	7	R
25	1	17	S	11	I	28	S	0	R
	2	17	S	12	I	29	S	0	R
	3	17	S	12	I	29	S	0	R
26	1	30	S	19	S	9	R	0	R
	2	30	S	18	S	9	R	0	R
	3	30	S	17	S	7	R	0	R
29	1	17	S	8	R	24	S	6	R
	2	18	S	7	R	25	S	6	R
	3	17	S	8	R	24	S	6	R
30	1	9	R	23	S	27	S	6	R
	2	11	R	22	S	27	S	6	R
	3	11	R	21	S	27	S	6	R
31	1	29	S	21	S	23	S	0	R
	2	30	S	22	S	25	S	0	R
	3	29	S	22	S	25	S	0	R
33	1	30	S	20	S	25	S	6	R
	2	30	S	21	S	26	S	6	R
	3	30	S	20	S	25	S	6	R
K+	1	40.5	S	27	S	35	S	21	S
	2	41	S	26	S	36.2	S	20	S
	3	39.7	S	27.2	S	36.7	S	20.7	S

Perhitungan Rumus Persentase (%)

a. Levofloksasin

$$\begin{aligned}\text{Resistant} &= \frac{\text{Jumlah total pola resisten}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{33}{90} \times 100\% = 36,7\%\end{aligned}$$

$$\begin{aligned}\text{Susceptible} &= \frac{\text{Jumlah total pola susceptible}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{57}{90} \times 100\% = 63,3 \%\end{aligned}$$

b. Kotrimoksazol

$$\begin{aligned}\text{Resistant} &= \frac{\text{Jumlah total pola resisten}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{30}{90} \times 100\% = 33,3 \%\end{aligned}$$

$$\begin{aligned}\text{Susceptible} &= \frac{\text{Jumlah total pola susceptible}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{54}{90} \times 100\% = 60 \%\end{aligned}$$

$$\begin{aligned}\text{Intermediate} &= \frac{\text{Jumlah total pola intermediate}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{6}{90} \times 100\% = 6,7 \%\end{aligned}$$

c. Seftriakson

$$\begin{aligned}\text{Resistant} &= \frac{\text{Jumlah total pola resisten}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{33}{90} \times 100\% = 36,7 \%\end{aligned}$$

$$\begin{aligned}\text{Susceptible} &= \frac{\text{Jumlah total pola susceptible}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{57}{90} \times 100\% = 63,3 \%\end{aligned}$$

d. Amoksisilin-klavulanat

$$\begin{aligned}\text{Resistant} &= \frac{\text{Jumlah total pola resisten}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{87}{90} \times 100\% = 96,7 \%\end{aligned}$$

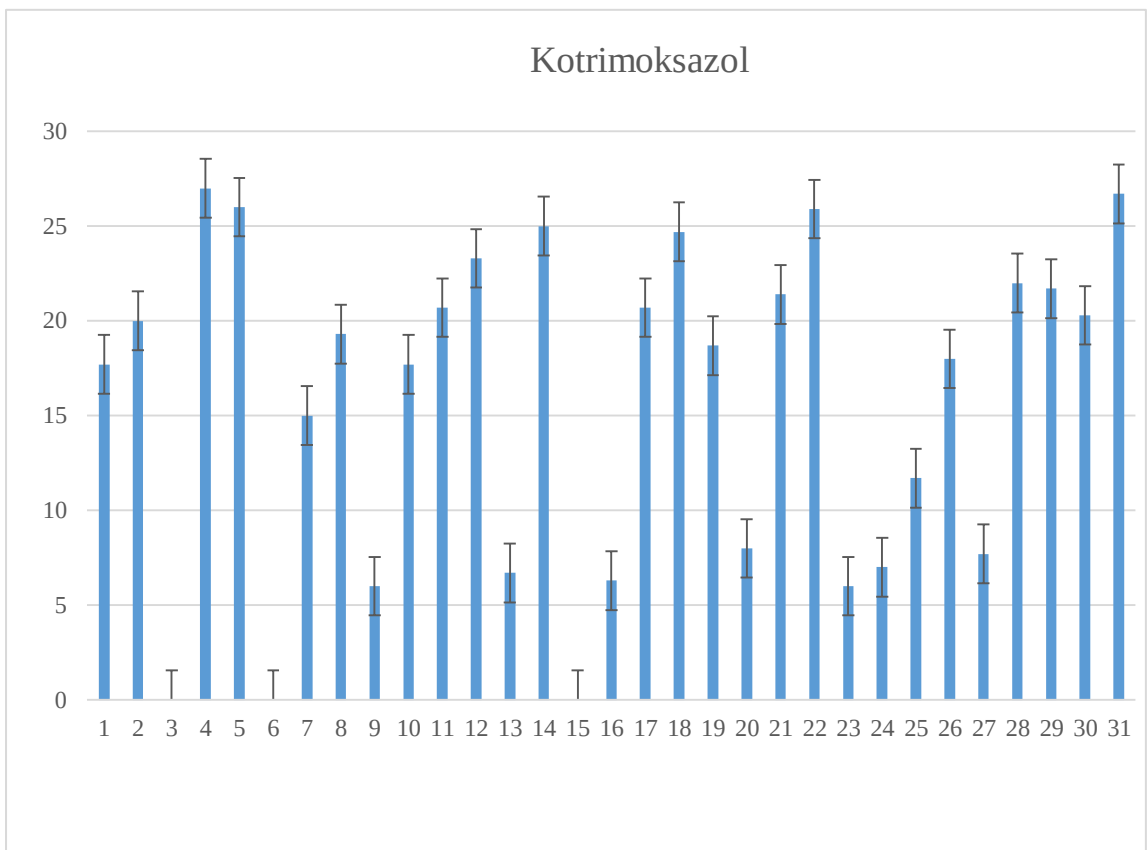
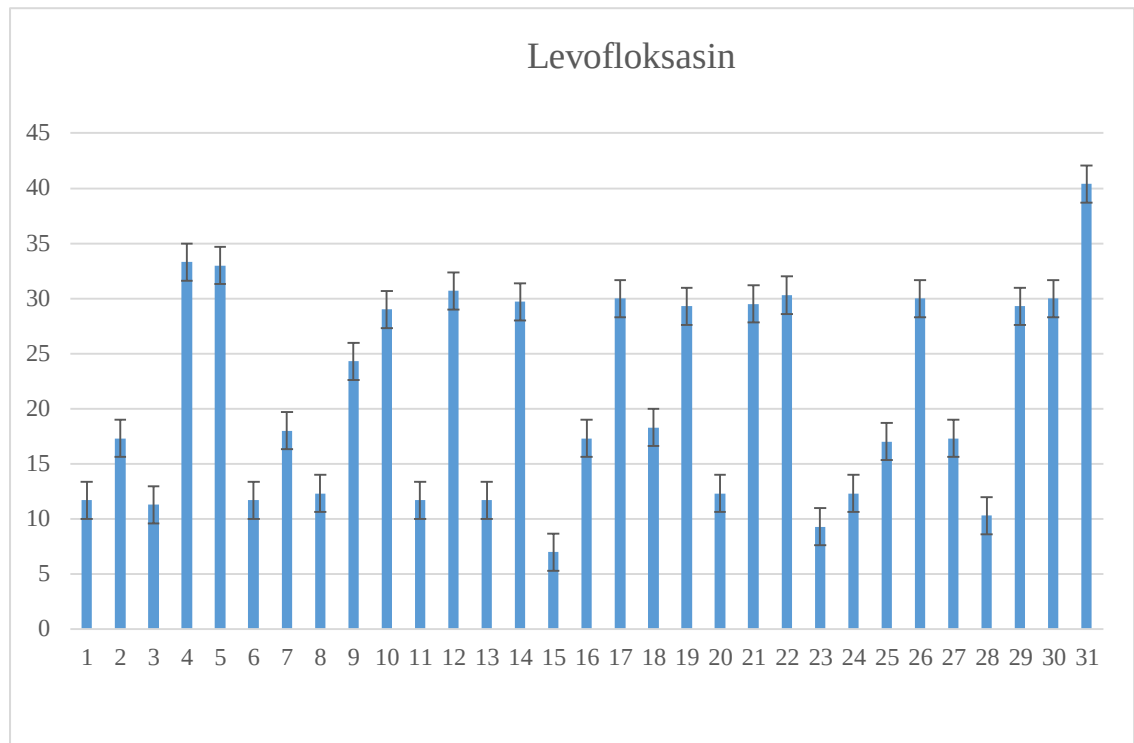
$$\begin{aligned}\text{Susceptible} &= \frac{\text{Jumlah total pola susceptible}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\%\end{aligned}$$

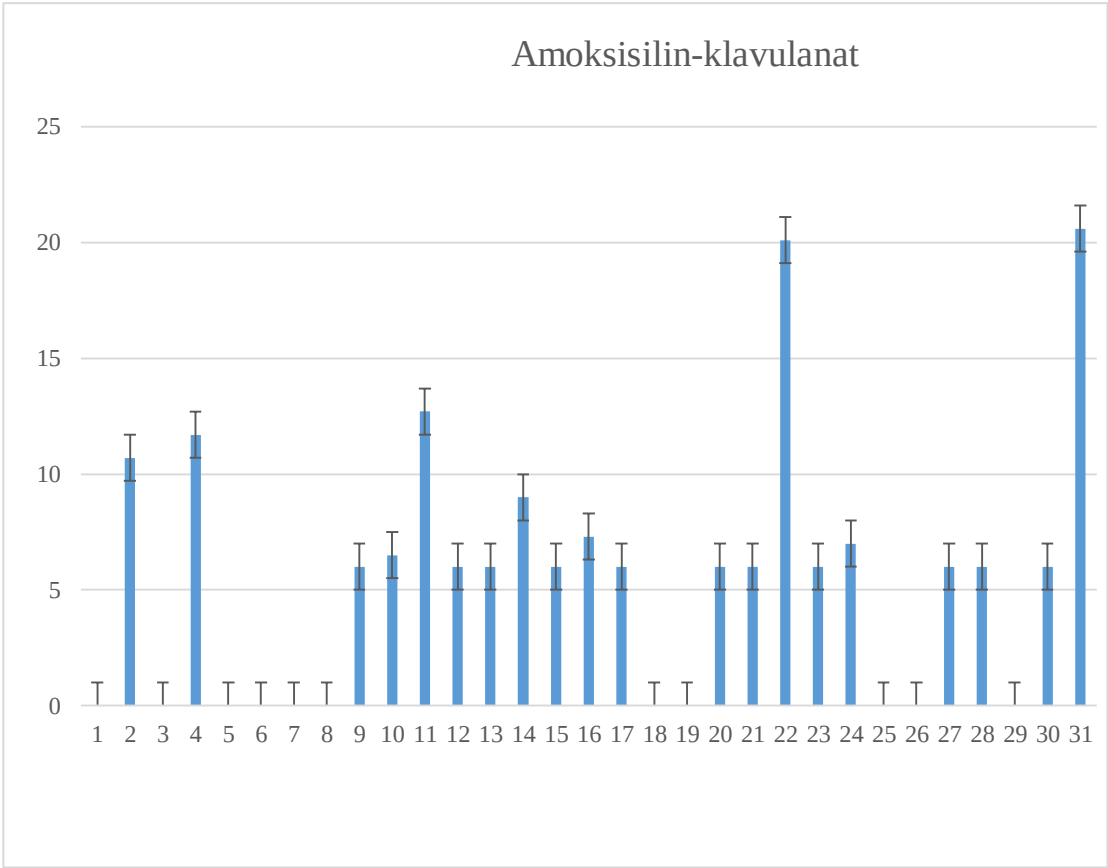
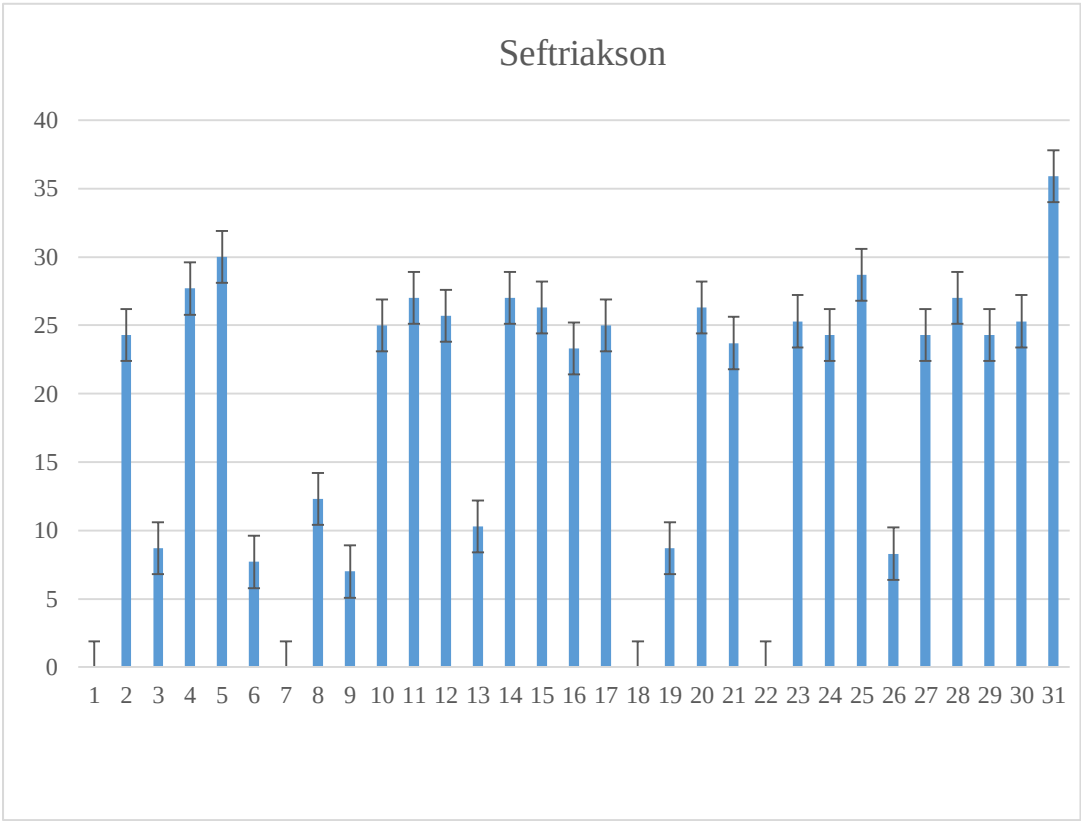
$$= \frac{3}{90} \times 100\% = 3,3 \%$$

2. Hasil rata-rata dari uji sensitivitas

No Sampel	Levofloksasin		Kotrimoksazol		Seftriakson		Amoksisilin- klavulanat	
	D	PS	D	PS	D	PS	D	PS
1	11,7 ±0,5	R	17,7 ±0,5	S	0,0 ±0,0	R	0,0 ±0,0	R
2	17,3 ±0,5	S	20,0 ±0,0	S	24,3 ±0,5	S	10,7 ±0,5	R
3	11,3 ±0,5	R	0,0 ±0,0	R	8,7 ±0,5	R	0,0 ±0,0	R
4	33,3 ±2,4	S	27,0 ±1,4	S	27,7 ±0,9	S	11,7 ±1,7	R
5	33,0 ±0,0	S	26,0 ±0,8	S	30,0 ±0,0	S	0,0 ±0,0	R
6	11,7 ±0,5	R	0,0 ±0,0	R	7,7 ±0,5	R	0,0 ±0,0	R
7	18,0 ±0,0	S	15,0 ±0,0	I	0,0 ±0,0	R	0,0 ±0,0	R
8	12,3 ±0,5	R	19,3 ±0,9	S	12,3 ±0,5	R	0,0 ±0,0	R
9	24,3 ±0,5	S	6,0 ±0,0	R	7,0 ±0,0	R	6,0 ±0,0	R
10	29,0 ±0,8	S	17,7 ±0,9	S	25 ±0,0	S	6,5 ±0,0	R
11	11,7 ±0,5	R	20,7 ±0,5	S	27,0 ±0,8	S	12,7 ±0,5	R
12	30,7 ±0,5	S	23,3 ±0,5	S	25,7 ±0,5	S	6,0 ±0,0	R
13	11,7 ±0,5	R	6,7 ±0,5	R	10,3 ±0,5	R	6,0 ±0,0	R
14	29,7 ±0,5	S	25,0 ±0,8	S	27,0 ±1,4	S	9,0 ±0,8	R
15	7,0 ±0,0	R	0,0 ±0,0	R	26,3 ±0,5	S	6,0 ±0,0	R
16	17,3 ±0,5	S	6,3 ±0,5	R	23,3 ±0,5	S	7,3 ±0,5	R
17	30,0 ±0,0	S	20,7 ±0,5	S	25,0 ±0,0	S	6,0 ±0,0	R
18	18,3 ±0,5	S	24,7 ±0,5	S	0,0 ±0,0	R	0,0 ±0,0	R
19	29,3 ±0,5	S	18,7 ±0,5	S	8,7 ±0,5	R	0,0 ±0,0	R
20	12,3 ±0,5	R	8,0 ±1,4	R	26,3 ±0,5	S	6,0 ±0,0	R
21	29,5 ±0,5	S	21,4 ±0,5	S	23,7 ±0,2	S	6,0 ±0,0	R
22	30,3 ±0,7	S	25,9 ±0,7	S	0,0 ±0,0	R	20,1 ±0,7	S
23	9,3 ±0,5	R	6,0 ±0,0	R	25,3 ±0,5	S	6,0 ±0,0	R
24	12,3 ±0,5	R	7,0 ±0,0	R	24,3 ±0,5	S	7,0 ±0,0	R
25	17,0 ±0,0	S	11,7 ±0,5	I	28,7 ±0,5	S	0,0 ±0,0	R
26	30,0 ±0,0	S	18,0 ±0,8	S	8,3 ±0,9	R	0,0 ±0,0	R
29	17,3 ±0,5	S	7,7 ±0,5	R	24,3 ±0,5	S	6,0 ±0,0	R
30	10,3 ±0,9	R	22,0 ±0,8	S	27,0 ±0,0	S	6,0 ±0,0	R
31	29,3 ±0,5	S	21,7 ±0,5	S	24,3 ±0,9	S	0,0 ±0,0	R
33	30,0 ±0,0	S	20,3 ±0,5	S	25,3 ±0,5	S	6,0 ±0,0	R
K+	40,4 ±0,5	S	26,7 ±0,5	S	35,9 ±0,7	S	20,6 ±0,4	S

Lampiran 10. Grafik hasil analisis perbedaan *Escherichia coli* hasil isolasi pasien dengan *Escherichia coli* ATCC 25922.





Perhitungan Rumus Persentase (%)

a. Levofloksasin

$$\begin{aligned}\text{Berbeda nyata} &= \frac{\text{Jumlah total garis tidak bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{30}{30} \times 100\% \\ &= 100,0 \%\end{aligned}$$

$$\begin{aligned}\text{Tidak berbeda nyata} &= \frac{\text{Jumlah total garis bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{0}{30} \times 100\% \\ &= 0,0 \%\end{aligned}$$

b. Kotrimoksazol

$$\begin{aligned}\text{Berbeda nyata} &= \frac{\text{Jumlah total garis tidak bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{25}{30} \times 100\% \\ &= 83,3\%\end{aligned}$$

$$\begin{aligned}\text{Tidak berbeda nyata} &= \frac{\text{Jumlah total garis bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{5}{30} \times 100\% \\ &= 16,7 \%\end{aligned}$$

c. Seftriakson

$$\begin{aligned}\text{Berbeda nyata} &= \frac{\text{Jumlah total garis tidak bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{30}{30} \times 100\% \\ &= 100,0 \%\end{aligned}$$

$$\begin{aligned}\text{Tidak berbeda nyata} &= \frac{\text{Jumlah total garis bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{0}{30} \times 100\% \\ &= 0,0 \%\end{aligned}$$

d. Amoksisilin-klavulanat

$$\begin{aligned}\text{Berbeda nyata} &= \frac{\text{Jumlah total garis tidak bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{29}{30} \times 100\% \\ &= 96,7 \%\end{aligned}$$

$$\begin{aligned}\text{Tidak berbeda nyata} &= \frac{\text{Jumlah total garis bersinggungan}}{\text{Jumlah total sampel bakteri yang dilakukan}} \times 100\% \\ &= \frac{1}{30} \times 100\% \\ &= 3,3 \%\end{aligned}$$

Lampiran 11. Formulasi dan Pembuatan Media

1. Media *Endo Agar*

Peptone 10 g

Di-photasium hydrogen phosphate 2,5 g

Lactose 10 g

Sodium sulfit anhidrate 3,3 g

Fuchsin 0,3 g

Agar-agar 12,5 g

pH $7.4 \pm 0,2$ g

Dilarutkan 39 g bahan diatas dalam 1 liter aqua destilata kemudian disterilisasi dengan autoklaf 121°C selama 15 menit (Merck 2005).

2. *Mueller Hinton Agar*(MHA)

Ekstrak daging 2.0 g

Casein hydrolisate 17,5 g

Tepung kanji 1,5 g

Agar-agar 17,0 g

pH $7.3 \pm 0,2$ g

Dilarutkan 38 g bahan diatas dalam 1 liter aqua destilata dan disterilisasi menggunakan autoklaf pada suhu 121°C selama 15 menit (Merck 2005).

3. *Brain Heart Infusion*(BHI)

Ekstrak otak, ekstrak hati, dan pepton 27,5 g

Dekstroza 2 g

Sodium chloride 5 g

Dy-sodium hydrogen phosphate 2,5 g

Agar-agar 15 g

pH $7.4 \pm 0,2$

Dilarutkan 52 g bahan diatas dalam 1 liter aqua destilata dan disterilisasi dengan autoklaf pada suhu 121°C selama 15 menit.

4. Sulfide Indol Motility (SIM)

Peptone from casein 20.0 g

Peptone from meat 6. g

Ammonium iron(II)sitrate 0.2 g

Sodium thiosulfate 0.2 g

Agar-agar 3.0 g

pH: 7.3 ± 0.2

Bahan tersebut dilarutkan dalam 1 liter aqua destilata dan dan disterilisasi menggunakan autoklaf pada suhu 121°C selama 15 menit (Merck 2005).

5. Kligler's Iron Agar(KIA)

Peptone from casein 15.0 g

Peptone from meat 5.0 g

Meat extract 3.0 g

Yeast extract 3.0 g

Sodium chloride 5. g 0

Lactose 10.0 g

*D(+)*glucose 1.0 g

Ammonium iron(III) sitrate 0.5 g

Sodium thiosulfate 0.5 g

Phenol red 0.024 g

Agar-agar 12.0. g

pH 7.4 ± 0.2

Bahan tersebut dilarutkan dalam 1 liter aqua destilata dan dan disterilisasi menggunakan autoklaf pada suhu 121°C selama 15 menit (Merck 2005).

6. Lisyne Iron Agar(LIA)

Peptone from meat 5.0 g

Yeast extract 3.0 g

*D(+)*glucose 1.0 g

L-lysine monohydrochloride 10.0 g

Sodium thiosulfate 0.04 g

Ammonium iron(III) citrate 0.5 g

Bromocresol purple 0.02 g

Agar-agar 12.5 g

pH: 6.7 ± 0.2 g

Bahan tersebut dilarutkan dalam 1 liter aqua destilata dan dan disterilisasi menggunakan autoklaf pada suhu 121°C selama 15 menit (Merck 2005).

7. Simmon Sitrat Agar

Ammonium dihydrogen phosphate 1.0 g

Di-potassium hydrogen phosphate 1.0 g

Sodium chloride 5.0 g

Sodium citrate 2.0 g

Magnesium sulfate 0.2 g

Bromothymol blue 0.08 g

Agar-agar 13.0. G

pH: 6.6 ± 0.2

Bahan tersebut dilarutkan dalam 1 liter aqua destilata dan dan disterilisasi menggunakan autoklaf pada suhu 121°C selama 15 menit (Merck 2005).

Lampiran 12. Ethical Clearance



KOMISI ETIK PENELITIAN KESEHATAN (KEPK)

Health Research Ethics Committee

FAKULTAS KEDOKTERAN

Universitas Muhammadiyah Surakarta

Faculty of Medicine Universitas Muhammadiyah Surakarta

Komplek kampus 4 UMS Gonilan Kartasura, Telp.(0271)716844, Fax.(0271)724883 Surakarta 57102, email:kepk@ums.ac.id

ETHICAL CLEARANCE LETTER

Surat Kelaikan Etik

No. 1585/B.1/KEPK-FKUMS/XI/2018

Komisi Etik Penelitian Kesehatan (KEPK) FK UMS, setelah menelaah rancangan penelitian yang diusulkan menyatakan bahwa:

Health Research Ethics Committee Faculty of medicine of Universitas Muhammadiyah Surakarta, after reviewing the research design, state that:

Penelitian dengan judul:

The research proposal with topic:

Uji Sensitivitas *Escherichia coli* Dari Urin Pasien Infeksi Saluran Kemih Di RSUD Kota Surakarta Terhadap Antibiotik Levofloksasin, Kotrimoksazol, Seftriakson, dan Amoksisilin-klavulanat.

Peneliti:

The researcher:

Nama/ Name : **Jesica Meliasari**

Alamat/ Address : Dusun Karya Rt 005 Air Muring Kec. Putri Hijau Kab. Bengkulu Utara
Provinsi Bengkulu

Institusi/ Institution : Fakultas Farmasi Universitas Setia Budi

Telah memenuhi deklarasi Helsinki 1975 dan Pedoman nasional etik penelitian kesehatan Departemen Kesehatan RI 2004

Has met the declaration of Helsinki 1975 and national health research ethics Department of Health of the Republic of Indonesia in 2004

dan dinyatakan lolos etik

and ethically approve



Surakarta, 22 November 2018

Ketua/Chairman,

Prof. Dr. dr. EM. Sutrisna, M.Kes.

Lampiran 13. Surat Keterangan Dari Rumah Sakit



**PEMERINTAH KOTA SURAKARTA
RUMAH SAKIT UMUM DAERAH**

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SURAKARTA
Kode Pos 57136

SURAT KETERANGAN

Nomor : 070/ 416/ IV/ 2019

Yang bertanda tangan di bawah ini :

Nama : PATRICIA GONIE, SE
Jabatan : Kepala Sub Bagian Tata Usaha

Dengan ini menerangkan :

Nama : Jesica Meliasari
NIM : 21154598A
Program Studi : S1 Farmasi Universitas Setia Budi Surakarta
Judul : Uji Sensitivitas *Escherichia Coli* dari Urin Pasien Infeksi Saluran Kemih di RSUD Kota Surakarta terhadap Antibiotik Levofloksasin, Kotrimoksazol, Seftriakson, dan Amoksisilin-Klavulanat.
Maksud : Yang bersangkutan telah selesai melakukan Penelitian di RSUD Kota Surakarta.

Demikian surat keterangan ini dibuat untuk dipergunakan sebagaimana mestinya.

Ditetapkan di : Surakarta

Pada tanggal : 15 April 2019

a.n. PEMIMPIN BADAN LAYANAN UMUM DAERAH
PADA RUMAH SAKIT UMUM DAERAH
KOTA SURAKARTA
KEPALA SUB BAGIAN TATA USAHA



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