

## **BAB V**

### **KESIMPULAN DAN SARAN**

#### **A. Kesimpulan**

Berdasarkan hasil penelitian ini dapat disimpulkan :

1. Ekstrak bawang bombay (*Allium cepa L.*) memiliki aktivitas antibakteri terhadap *S. aureus* ATCC 25923 dan *E.coli* ATCC 25922
2. Tidak terdapat perbedaan aktivitas hambatan pada pertumbuhan bakteri gram positif *S.aureus* ATCC 25923 & bakteri gram negatif *E.coli* ATCC 25922

#### **B. Saran**

1. Perlu dilakukan pengujian aktivitas antibakteri ekstrak bawang bombay (*Allium cepa L.*) pada bakteri yang berbeda dan dengan metode ekstraksi yang berbeda

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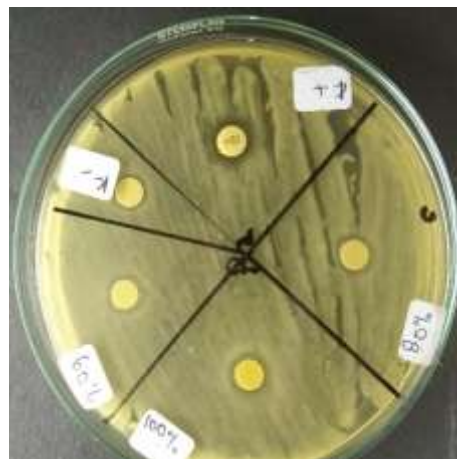
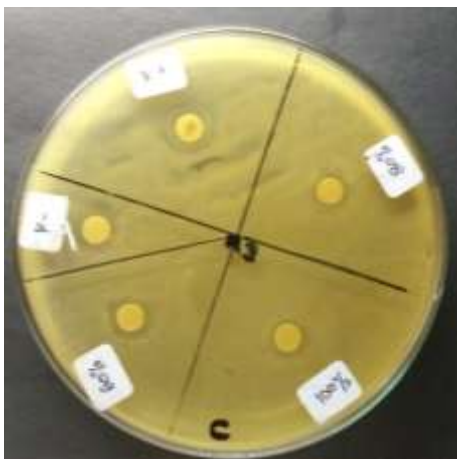
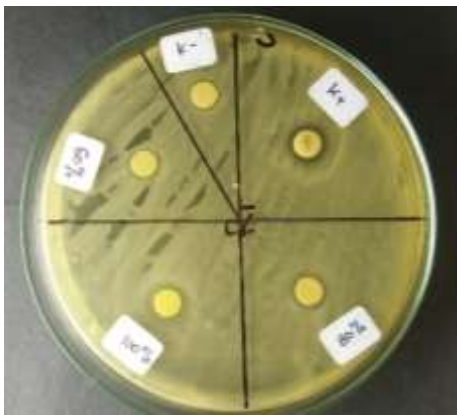
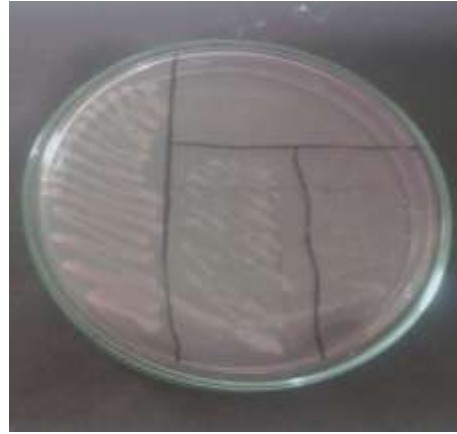
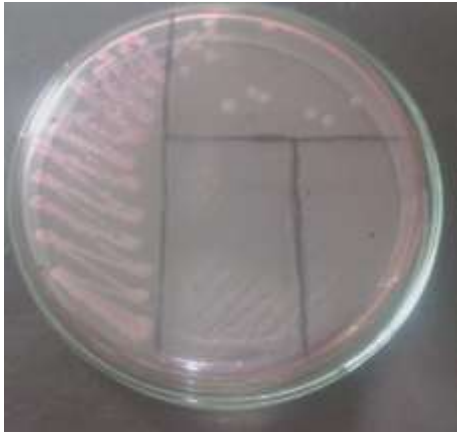
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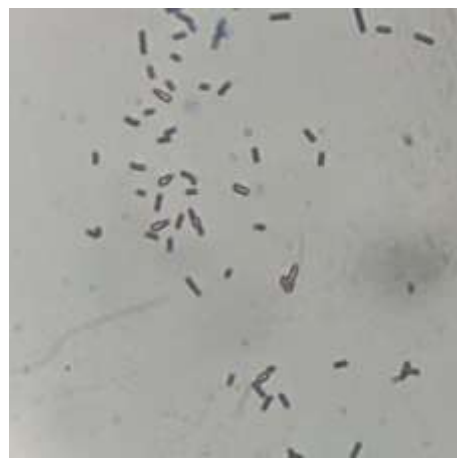
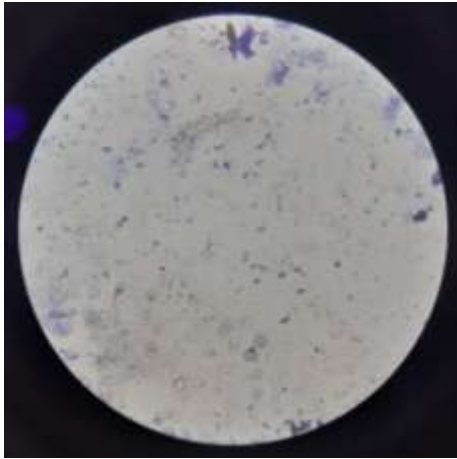
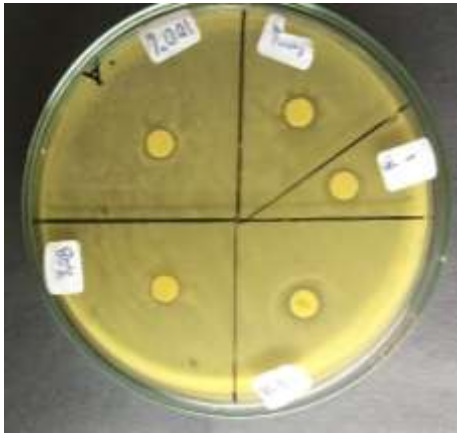
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**Lampiran 1. Hasil penelitian**



**Lampiran 2. Bahan penelitian**

**Lampiran 3. Alat penelitian**



#### Lampiran 4. Hasil statistic ANOVA

##### Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Staphylococcus aureus	12	.7583	.13114	.55	.95
Escherichia coli	12	.9000	.15076	.65	1.15

##### One-Sample Kolmogorov-Smirnov Test

		Staphylococcus aureus	Escherichia coli
N		12	12
Normal Parameters <sup>a,b</sup>	Mean	.7583	.9000
	Std. Deviation	.13114	.15076
Most Extreme Differences	Absolute	.174	.130
	Positive	.111	.130
	Negative	-.174	-.130
Kolmogorov-Smirnov Z		.604	.450
Asymp. Sig. (2-tailed)		.859	.987

a. Test distribution is Normal.

b. Calculated from data.

Dari data uji *One-Sample Kolmogorov-Smirnov* diperoleh *S. aureus* dengan Signifikasi =  $0,859 > 0,05$  ( $H_0$  diterima), *E.coli* dengan dengan sig. =  $0,987 > 0,05$ . Disimpulkan data tersebut mengikuti distribusi normal sehingga dapat dilakukan analisis menggunakan *One Way ANOVA*.

## Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
Staphylococcus aureus	60%	3	.6000	.08660	.05000	.3849	.8151	.55	.70
	80%	3	.8500	.05000	.02887	.7258	.9742	.80	.90
	100%	3	.7500	.10000	.05774	.5016	.9984	.65	.85
	kloramfenikol	3	.8333	.12583	.07265	.5208	1.1459	.70	.95
	Total	12	.7583	.13114	.03786	.6750	.8417	.55	.95
Escherichia coli	60%	3	.8667	.12583	.07265	.5541	1.1792	.75	1.00
	80%	3	.8667	.07638	.04410	.6769	1.0564	.80	.95
	100%	3	.8000	.18028	.10408	.3522	1.2478	.65	1.00
	kloramfenikol	3	1.0667	.10408	.06009	.8081	1.3252	.95	1.15
	Total	12	.9000	.15076	.04352	.8042	.9958	.65	1.15

## Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Staphylococcus aureus	.701	3	8	.577
Escherichia coli	1.005	3	8	.439

Nilai probabilitas *Lavene Statistic* adalah  $0,577 > 0,05$  dan  $0,439 > 0,05$  maka  $H_0$  diterima

## ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Staphylococcus aureus	Between Groups	.118	3	.039	4.372	.042
	Within Groups	.072	8	.009		
	Total	.189	11			
Escherichia coli	Between Groups	.120	3	.040	2.462	.137
	Within Groups	.130	8	.016		
	Total	.250	11			

Hasil dari pengujian statistik menggunakan *One Way ANOVA* menunjukkan signifikansi pada *S. aureus*  $0,042 < 0,05$  sehingga menunjukkan bahwa terdapat perbedaan yang nyata diantara perlakuan. Sedangkan signifikansi pada *E. coli*  $0,137 > 0,05$  sehingga menunjukkan bahwa tidak terdapat perbedaan yang nyata diantara perlakuan.

## Multiple Comparisons

Tukey HSD

Dependent Variable	(I) konsentrasi sampel	(J) konsentrasi sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
						Staphylococcus aureus	60%
		100%	-.15000	.07728	.285	-.3975	.0975
		kloramfenikol	-.23333	.07728	.065	-.4808	.0141
	80%	60%	.25000*	.07728	.048	.0025	.4975
		100%	.10000	.07728	.591	-.1475	.3475
		kloramfenikol	.01667	.07728	.996	-.2308	.2641
	100%	60%	.15000	.07728	.285	-.0975	.3975
		80%	-.10000	.07728	.591	-.3475	.1475
		kloramfenikol	-.08333	.07728	.711	-.3308	.1641
	kloramfenikol	60%	.23333	.07728	.065	-.0141	.4808
		80%	-.01667	.07728	.996	-.2641	.2308
		100%	.08333	.07728	.711	-.1641	.3308
Escherichia coli	60%	80%	.00000	.10408	1.000	-.3333	.3333
		100%	.06667	.10408	.916	-.2666	.4000
		kloramfenikol	-.20000	.10408	.292	-.5333	.1333
	80%	60%	.00000	.10408	1.000	-.3333	.3333
		100%	.06667	.10408	.916	-.2666	.4000
		kloramfenikol	-.20000	.10408	.292	-.5333	.1333
	100%	60%	-.06667	.10408	.916	-.4000	.2666
		80%	-.06667	.10408	.916	-.4000	.2666
		kloramfenikol	-.26667	.10408	.123	-.6000	.0666
	kloramfenikol	60%	.20000	.10408	.292	-.1333	.5333
		80%	.20000	.10408	.292	-.1333	.5333
		100%	.26667	.10408	.123	-.0666	.6000

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

### Staphylococcus aureus

Tukey HSD<sup>a</sup>

konsentrasi sampel	N	Subset for alpha = 0.05	
		1	2
60%	3	.6000	
100%	3	.7500	.7500
Kloramfenikol	3	.8333	.8333
80%	3		.8500
Sig.		.065	.591

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

### Escherichia coli

Tukey HSD<sup>a</sup>

konsentrasi sampel	N	Subset for alpha = 0.05
		1
100%	3	.8000
80%	3	.8667
60%	3	.8667
Kloramfenikol	3	1.0667
Sig.		.123

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

### One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Staphylococcus aureus	12	.7583	.13114	.03786
Escherichia coli	12	.9000	.15076	.04352

**One-Sample Test**

	Test Value = 0					
					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
staphylococcus aureus	20.032	11	.000	.75833	.6750	.8417
escherichia coli	20.680	11	.000	.90000	.8042	.9958