

BAB V

KESIMPULAN DAN SARAN

A. Kesimpulan

Berdasarkan hasil peneilian yang telah dilakukan dapat disimpulkan bahwa:

Pertama, ketiga sampel merk “X” , merk “Y” dan merk “Z” sabun cuci wajah berbahan aktif ekstrak tanaman mampu menghambat bakteri *Staphylococcus epidermidis* ATCC 12228.

Kedua, diameter zona hambat yang paling bagus untuk menghambat bakteri *Staphylococcus epidermidis* ATCC 12228, dari ketiga sampel merk sabun cuci wajah dimiliki sampel uji merk “Y”.

B. Saran

Pertama, perlu dilakukan penelitian lebih lanjut aktivitas antibakteri sabun cuci wajah berbahan aktif ekstrak tanaman mer lain terhadap bakteri pathogen lainnya.

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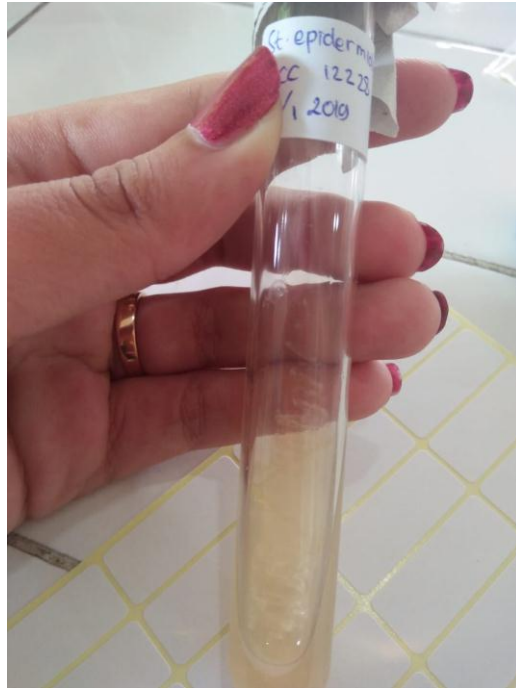
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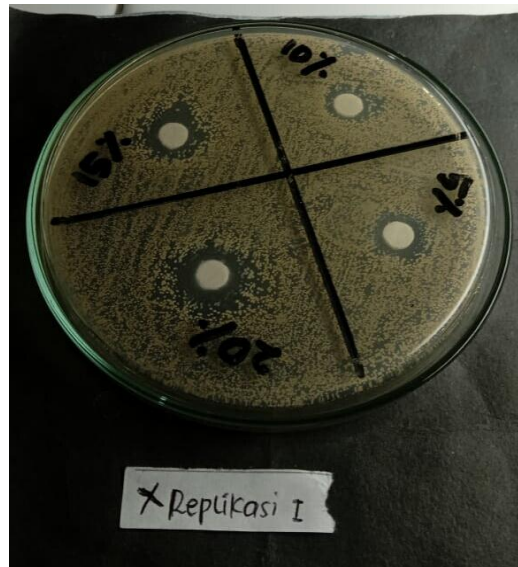
Lampiran 1. Standart *Mc Farland*



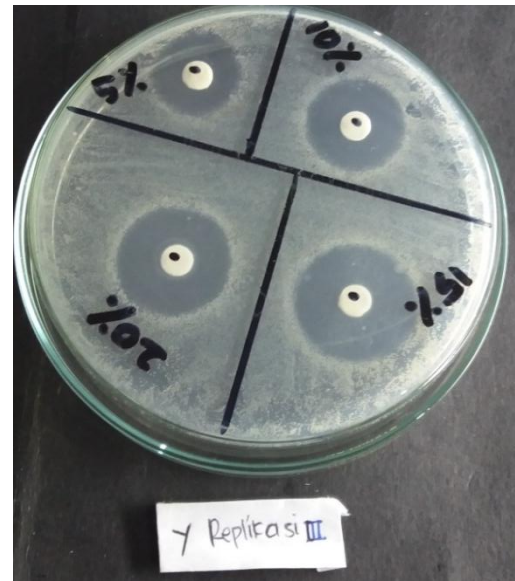
Lampiran 2. Bakteri *Staphylococcus epidermidis* ATCC 12228



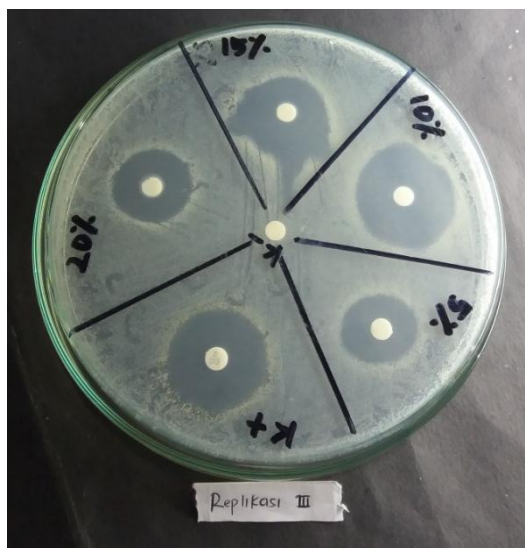
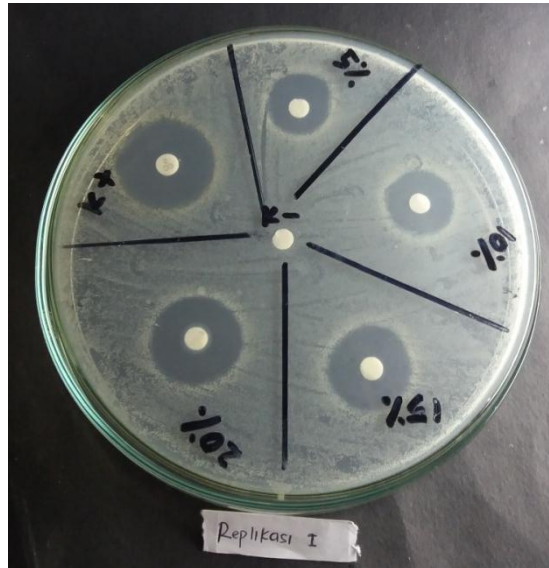
Lampiran 3. Hasil uji aktivitas antibakteri dengan metode difusi pada sampel merk "X"



Lampiran 4. Hasil uji aktivitas antibakteri dengan metode difusi pada sampel merk "Y"



Lampiran 5. Hasil uji aktivitas antibakteri dengan metode difusi pada sampel merk "Z"



One-Sample Kolmogorov-Smirnov Test

		Konsentrasi	Sampel	Daya Hambat
N		42	42	42
Normal Parameters ^{a,b}	Mean	2.43	2.36	17.10
	Std. Deviation	1.107	1.186	9.071
	Absolute	.174	.190	.118
Most Extreme Differences	Positive	.174	.190	.092
	Negative	-.173	-.135	-.118
Kolmogorov-Smirnov Z		1.130	1.230	.763
Asymp. Sig. (2-tailed)		.155	.097	.605

a. Test distribution is Normal.

b. Calculated from data.

Between-Subjects Factors

		Value Label	N
Konsentrasi	1	5%	11
	2	10%	11
	3	15%	11
	4	20%	9
Sampel	1	MerkX	12
	2	MerkY	12
	3	MerkZ	12
	4	Klindamisin	3
	5	Aquadest	3

Descriptive Statistics

Dependent Variable: Daya Hambat

Konsentrasi	Sampel	Mean	Std. Deviation	N
5%	MerkX	7.33	.577	3
	MerkY	15.00	.000	3
	MerkZ	16.00	5.292	3
	Klindamisin	30.00	.	1
	Aquadest	.00	.	1
	Total	13.18	8.060	11
10%	MerkX	8.00	1.732	3
	MerkY	18.67	1.155	3
	MerkZ	21.67	9.609	3
	Klindamisin	30.00	.	1
	Aquadest	.00	.	1
	Total	15.91	9.772	11
15%	MerkX	8.33	1.528	3
	MerkY	24.33	1.155	3
	MerkZ	22.33	7.506	3
	Klindamisin	30.00	.	1
	Aquadest	.00	.	1
	Total	17.73	10.219	11
20%	MerkX	15.00	.000	3
	MerkY	27.00	1.732	3
	MerkZ	25.67	1.155	3
	Total	22.56	5.790	9
	MerkX	9.67	3.393	12
Total	MerkY	21.25	5.011	12
	MerkZ	21.42	6.748	12
	Klindamisin	30.00	.000	3
	Aquadest	.00	.000	3
	Total	17.10	9.071	42

Levene's Test of Equality of Error Variances^a

Dependent Variable: Daya Hambat

F	df1	df2	Sig.
2.869	17	24	.009

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + Konsentrasi + Sampel +
Konsentrasi * Sampel

Tests of Between-Subjects Effects

Dependent Variable: Daya Hambat

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2994.952 ^a	17	176.174	11.166	.000
Intercept	8204.055	1	8204.055	519.975	.000
Konsentrasi	360.395	3	120.132	7.614	.001
Sampel	2441.749	4	610.437	38.690	.000
Konsentrasi * Sampel	96.534	10	9.653	.612	.789
Error	378.667	24	15.778		
Total	15648.000	42			
Corrected Total	3373.619	41			

a. R Squared = .888 (Adjusted R Squared = .808)

1. Konsentrasi

Dependent Variable: Daya Hambat

Konsentrasi	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
5%	13.667	1.376	10.827	16.507
10%	15.667	1.376	12.827	18.507
15%	17.000	1.376	14.160	19.840
20%	22.556 ^a	1.324	19.823	25.288

2. Sampel

Dependent Variable: Daya Hambat

Sampel	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
MerkX	9.667	1.147	7.300	12.033
MerkY	21.250	1.147	18.883	23.617
MerkZ	21.417	1.147	19.050	23.783
Klindamisin	30.000 ^a	2.293	25.267	34.733
Aquadest	1.045E-013 ^a	2.293	-4.733	4.733

a. Based on modified population marginal mean.

3. Konsentrasi * Sampel

Dependent Variable: Daya Hambat

Konsentrasi	Sampel	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
5%	MerkX	7.333	2.293	2.600	12.066
	MerkY	15.000	2.293	10.267	19.733
	MerkZ	16.000	2.293	11.267	20.733
	Klindamisin	30.000	3.972	21.802	38.198
	Aquadest	-1.142E-013	3.972	-8.198	8.198
10%	MerkX	8.000	2.293	3.267	12.733
	MerkY	18.667	2.293	13.934	23.400
	MerkZ	21.667	2.293	16.934	26.400
	Klindamisin	30.000	3.972	21.802	38.198
	Aquadest	-1.178E-013	3.972	-8.198	8.198
15%	MerkX	8.333	2.293	3.600	13.066
	MerkY	24.333	2.293	19.600	29.066
	MerkZ	22.333	2.293	17.600	27.066
	Klindamisin	30.000	3.972	21.802	38.198
	Aquadest	1.449E-013	3.972	-8.198	8.198
20%	MerkX	15.000	2.293	10.267	19.733
	MerkY	27.000	2.293	22.267	31.733
	MerkZ	25.667	2.293	20.934	30.400
	Klindamisin	. ^a	.	.	.
	Aquadest	. ^a	.	.	.

a. This level combination of factors is not observed, thus the corresponding population marginal mean is not estimable.

Post Hoc

Multiple Comparisons

Dependent Variable: Daya Hambat

Tukey HSD

(I) Sampel	(J) Sampel	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
MerkX	MerkY	-11.58*	1.622	.000	-16.36	-6.81
	MerkZ	-11.75*	1.622	.000	-16.53	-6.97
	Klindamisin	-20.33*	2.564	.000	-27.89	-12.78
	Aquadest	9.67*	2.564	.008	2.11	17.22
MerkY	MerkX	11.58*	1.622	.000	6.81	16.36
	MerkZ	-.17	1.622	1.000	-4.94	4.61
	Klindamisin	-8.75*	2.564	.018	-16.30	-1.20
	Aquadest	21.25*	2.564	.000	13.70	28.80
MerkZ	MerkX	11.75*	1.622	.000	6.97	16.53
	MerkY	.17	1.622	1.000	-4.61	4.94
	Klindamisin	-8.58*	2.564	.020	-16.14	-1.03
	Aquadest	21.42*	2.564	.000	13.86	28.97
Klindamisin	MerkX	20.33*	2.564	.000	12.78	27.89
	MerkY	8.75*	2.564	.018	1.20	16.30
	MerkZ	8.58*	2.564	.020	1.03	16.14
	Aquadest	30.00*	3.243	.000	20.45	39.55
Aquadest	MerkX	-9.67*	2.564	.008	-17.22	-2.11
	MerkY	-21.25*	2.564	.000	-28.80	-13.70
	MerkZ	-21.42*	2.564	.000	-28.97	-13.86
	Klindamisin	-30.00*	3.243	.000	-39.55	-20.45

Based on observed means.

The error term is Mean Square(Error) = 15.778.

*. The mean difference is significant at the .05 level.

Daya HambatTukey HSD^{a,b,c}

Sampel	N	Subset			
		1	2	3	4
Aquadest	3	.00			
MerkX	12		9.67		
MerkY	12			21.25	
MerkZ	12			21.42	
Klindamisin	3				30.00
Sig.		1.000	1.000	1.000	1.000

Means for groups in homogeneous subsets are displayed.

Based on observed means.

The error term is Mean Square(Error) = 15.778.

a. Uses Harmonic Mean Sample Size = 5.455.

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.