

Hasil Uji Data Statistik SPSS Versi 26

1. Uji Normalitas dan Homogenitas

a. Uji Normalitas

Tests of Normality						
Log	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
	,106	48	,200 [*]	,936	48	,012

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

a. Lilliefors Significance Correction

Berdasarkan hasil uji normalitas menggunakan uji Shapiro-Wilk menunjukkan bahwa data Jumlah Koloni (p=0,012) yang menunjukkan data tidak terdistribusi normal. Peneliti melakukan transformasi data logaritmik, namun distribusi tetap tidak normal sehingga analisis dilanjutkan menggunakan uji nonparametrik.

b. Uji Homogenitas

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Jumlah Koloni Bakteri	Based on Mean	17,813	5	42	,000
	Based on Median	12,781	5	42	,000
	Based on Median and with adjusted df	12,781	5	28,184	,000
	Based on trimmed mean	17,301	5	42	,000

Berdasarkan hasil uji homogenitas varians menggunakan metode *Levene's test* diperoleh nilai signifikansi pada *Based on Mean* sebesar 0,00. Karena nilai signifikansi lebih kecil dari 0,05 ($p < 0,05$), maka dapat disimpulkan bahwa varians data antar kelompok tidak homogen.

2. Uji Friedman's Two-Way Analysis of Variance

Related-Samples Friedman's Two-Way Analysis of Variance by Ranks Summary

Total N	48
Test Statistic	86,261
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	,000

Pairwise Comparison Friedman

Pairwise Comparisons

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. ^a
Jenis Bakteri-Kelompok	-1,167	,204	-5,715	,000	,000
Jenis Bakteri-Jumlah Koloni Bakteri	-,667	,204	-3,266	,001	,003
Kelompok-Jumlah Koloni Bakteri	-1,833	,204	-8,981	,000	,000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is ,05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Wilcoxon Signed Ranked Test

Test Statistics^a

	Jenis Bakteri - Jumlah Koloni Bakteri	Jumlah Koloni Bakteri - Kelompok
Z	-6,031 ^b	-6,031 ^c
Asymp. Sig. (2-tailed)	,000	,000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

3. Uji Post Hoc

a. Uji Bonferoni

Multiple Comparisons

Dependent Variable: Jumlah Koloni Bakteri

		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval		
(I) Kelompok	(J) Kelompok				Lower Bound	Upper Bound	
Bonferroni	K1 (2 gram)	K2 (4 gram)	62,625 [*]	17,609	,014	7,82	117,43
		K3 (6 gram)	111,125 [*]	17,609	,000	56,32	165,93
		K4 (8 gram)	166,125 [*]	17,609	,000	111,32	220,93
		K- (negatif)	108,125 [*]	17,609	,000	53,32	162,93
		K+ (positif)	-78,125 [*]	17,609	,001	-132,93	-23,32
	K2 (4 gram)	K1 (2 gram)	-62,625 [*]	17,609	,014	-117,43	-7,82
		K3 (6 gram)	48,500	17,609	,130	-6,31	103,31
		K4 (8 gram)	103,500 [*]	17,609	,000	48,69	158,31
		K- (negatif)	45,500	17,609	,200	-9,31	100,31
		K+ (positif)	-140,750 [*]	17,609	,000	-195,56	-85,94
	K3 (6 gram)	K1 (2 gram)	-111,125 [*]	17,609	,000	-165,93	-56,32
		K2 (4 gram)	-48,500	17,609	,130	-103,31	6,31
		K4 (8 gram)	55,000 [*]	17,609	,049	,19	109,81
		K- (negatif)	-3,000	17,609	1,000	-57,81	51,81
		K+ (positif)	-189,250 [*]	17,609	,000	-244,06	-134,44
	K4 (8 gram)	K1 (2 gram)	-166,125 [*]	17,609	,000	-220,93	-111,32
		K2 (4 gram)	-103,500 [*]	17,609	,000	-158,31	-48,69
		K3 (6 gram)	-55,000 [*]	17,609	,049	-109,81	-,19
		K- (negatif)	-58,000 [*]	17,609	,030	-112,81	-3,19
		K+ (positif)	-244,250 [*]	17,609	,000	-299,06	-189,44
	K- (negatif)	K1 (2 gram)	-108,125 [*]	17,609	,000	-162,93	-53,32
		K2 (4 gram)	-45,500	17,609	,200	-100,31	9,31
		K3 (6 gram)	3,000	17,609	1,000	-51,81	57,81
		K4 (8 gram)	58,000 [*]	17,609	,030	3,19	112,81
		K+ (positif)	-186,250 [*]	17,609	,000	-241,06	-131,44
	K+ (positif)	K1 (2 gram)	78,125 [*]	17,609	,001	23,32	132,93
		K2 (4 gram)	140,750 [*]	17,609	,000	85,94	195,56
		K3 (6 gram)	189,250 [*]	17,609	,000	134,44	244,06
		K4 (8 gram)	244,250 [*]	17,609	,000	189,44	299,06
		K- (negatif)	186,250 [*]	17,609	,000	131,44	241,06

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

b. Uji Duncan

Jumlah Koloni Bakteri

			Subset for alpha = 0.05				
	Kelompok	N	1	2	3	4	5
Duncan ^a	K4 (8 gram)	8	133,63				
	K3 (6 gram)	8		188,63			
	K- (negatif)	8		191,63			
	K2 (4 gram)	8			237,13		
	K1 (2 gram)	8				299,75	
	K+ (positif)	8					377,88
	Sig.		1,000	,866	1,000	1,000	1,000

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 8,000.