7 ANEXOS

7.1 ANEXO I: COMPOSICIÓN DE MEDIOS DE CULTIVO EMPLEADOS EN LAS DETERMINACIONES MICROBIOLÓGICAS.

Tabla 7. 1. Composición (g/L) del Agar Plate Count (PCA).

Peptona de caseína	5.0 g
Extracto de levadura	2,5 g
Dextrosa	1,0 g
Agar	15,0 g
pH	7.0 ± 0.2

Tabla 7. 2. Composición (g/L) del caldo Tryptic Soy (TSB).

Peptona de caseína (digerido pancreático de caseína)	17,0
Peptona de soja (digerido péptico de harina de soja)	3,0
Glucosa (dextrosa)	2,5
Cloruro sódico	5,0
Fosfato dipotásico de hidrógeno	2,5
pH	7.3 ± 0.2

Tabla 7. 3. Composición (g/L) del Agar Triptone Bile X-glucoronide (TBX).

Peptona	20,00
Sales biliares No. 3	1,50
X-β-D-glucurónido	0,075
Agar-agar	10,00
pH	7.2 ± 0.2

7.2 ANEXO II: RECUENTOS MICROBIANOS A LAS DIFERENTES CONCENTRACIONES DE ESTUDIO.

Tabla 7. 4. Ácido caprílico libre

Concentración (Mm)	Log UFC	SD
0,1	6,61	0,00
0,5	7,21	0,00
1	4,45	2,01
5	0,00	0,00
10	0,00	0,00
20	0,00	0,00
30	0,00	0,00
40	0,00	0,00
50	0,00	0,00

Tabla 7. 5. Ácido caprílico anclado

Concentración Sólido (Mm)	Log UFC/mL	SD
500	7,10357574	0,00
1000	7,09145356	0,00
5000	7,00888814	0,00
10000	6,2191122	0,53
15000	5,38	2,46
20000	5,05	1,16

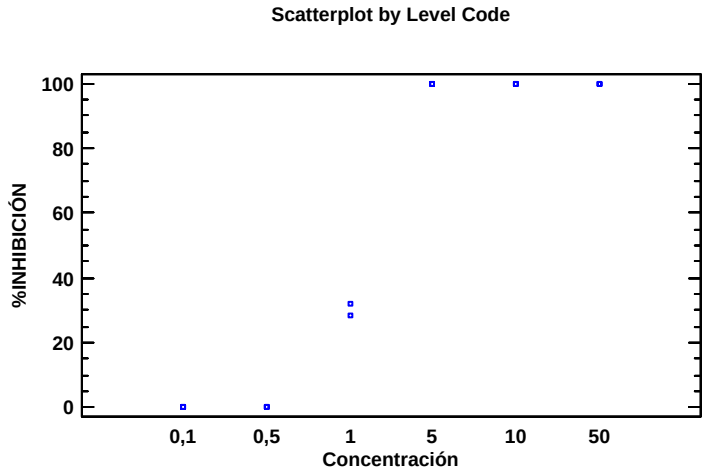
7.3 ANEXO III: RESULTADOS DEL ANÁLISIS ESTADÍSTICO

One-Way ANOVA - %INHIBICIÓN by Concentración

Dependent variable: %INHIBICIÓN
Factor: Concentración

Number of observations: 12
Number of levels: 6

The StatAdvisor
This procedure performs a one-way analysis of variance for %INHIBICIÓN. It constructs various tests and graphs to compare the mean values of %INHIBICIÓN for the 6 different levels of Concentración. The F-test in the ANOVA table will test whether there are any significant differences amongst the means. If there are, the Multiple Range Tests will tell you which means are significantly different from which others. If you are worried about the presence of outliers, choose the Kruskal-Wallis Test which compares medians instead of means. The various plots will help you judge the practical significance of the results, as well as allow you to look for possible violations of the assumptions underlying the analysis of variance.



Summary Statistics for %INHIBICIÓN

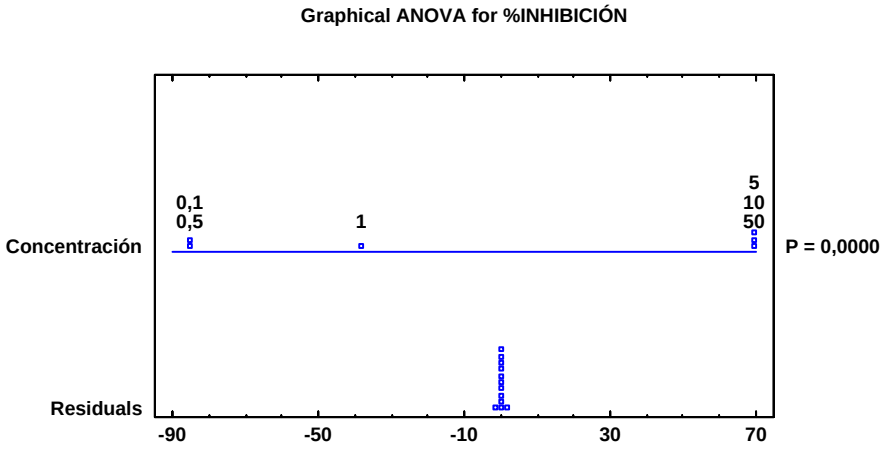
Concentración	*Count*	*Average*	*Standard deviation*	*Coeff. of variation*	*Minimum*	*Maximum*	*Range*
0,1	2	0	0	%	0	0	0
0,5	2	0	0	%	0	0	0
1	2	30,155	2,43952	8,08993%	28,43	31,88	3,45
5	2	100,0	0	0%	100,0	100,0	0
10	2	100,0	0	0%	100,0	100,0	0
50	2	100,0	0	0%	100,0	100,0	0
Total	12	55,0258	48,1385	87,4835%	0	100,0	100,0

Concentración	*Stnd. skewness*	*Stnd. kurtosis*
0,1		
0,5		
1		
5		
10		
50		

Total	-0,209998	-1,56542

The StatAdvisor
This table shows various statistics for %INHIBICIÓN for each of the 6 levels of Concentración. The one-way analysis of variance is primarily intended to compare the means of the different levels, listed here under the Average column. Select Means Plot from the list of Graphical Options to display the means graphically.

WARNING: There is more than a 3 to 1 difference between the smallest standard deviation and the largest. This may cause problems since the analysis of variance assumes that the standard deviations at all levels are equal. Select Variance Check from the list of Tabular Options to run a formal statistical test for differences among the sigmas. You may want to consider transforming the values of %INHIBICIÓN to remove any dependence of the standard deviation on the mean.



ANOVA Table for %INHIBICIÓN by Concentración

Source	*Sum of Squares*	*Df*	*Mean Square*	*F-Ratio*	*P-Value*
Between groups	25484,5	5	5096,91	5138,66	0,0000
Within groups	5,95125	6	0,991875		
Total (Corr.)	25490,5	11			

The StatAdvisor
The ANOVA table decomposes the variance of %INHIBICIÓN into two components: a between-group component and a within-group component. The F-ratio, which in this case equals 5138,66, is a ratio of the between-group estimate to the within-group estimate. Since the P-value of the F-test is less than 0,05, there is a statistically significant difference between the mean %INHIBICIÓN from one level of Concentración to another at the 95,0% confidence level. To determine which means are significantly different from which others, select Multiple Range Tests from the list of Tabular Options.

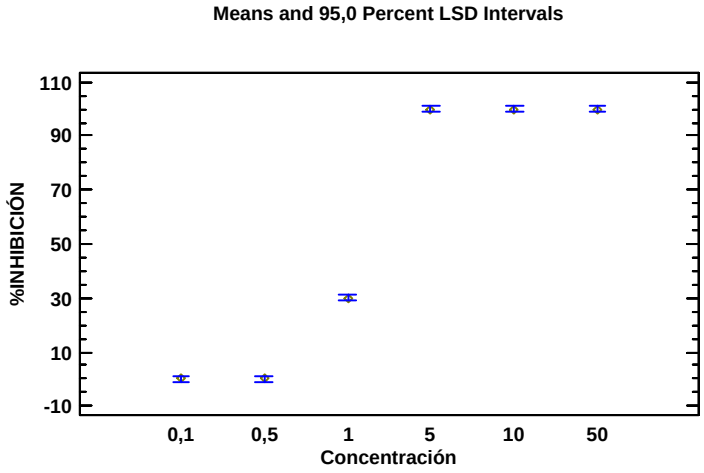
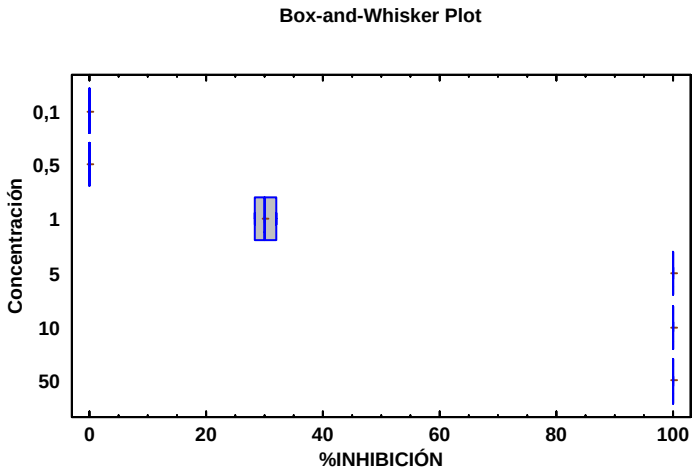


Table of Means for %INHIBICIÓN by Concentración with 95,0 percent LSD intervals

			Stnd. error		
Concentración	*Count*	*Mean*	*(pooled s)*	*Lower limit*	*Upper limit*
0,1	2	0	0,704228	-1,21848	1,21848
0,5	2	0	0,704228	-1,21848	1,21848
1	2	30,155	0,704228	28,9365	31,3735
5	2	100,0	0,704228	98,7815	101,218
10	2	100,0	0,704228	98,7815	101,218
50	2	100,0	0,704228	98,7815	101,218
Total	12	55,0258			

The StatAdvisor

This table shows the mean %INHIBICIÓN for each level of Concentración. It also shows the standard error of each mean, which is a measure of its sampling variability. The standard error is formed by dividing the pooled standard deviation by the square root of the number of observations at each level. The table also displays an interval around each mean. The intervals currently displayed are based on Fisher's least significant difference (LSD) procedure. They are constructed in such a way that if two means are the same, their intervals will overlap 95,0% of the time. You can display the intervals graphically by selecting Means Plot from the list of Graphical Options. In the Multiple Range Tests, these intervals are used to determine which means are significantly different from which others.



Multiple Range Tests for %INHIBICIÓN by Concentración

Method: 95,0 percent LSD

Concentración	*Count*	*Mean*	*Homogeneous Groups*
0,5	2	0	X
0,1	2	0	X
1	2	30,155	X
50	2	100,0	X
10	2	100,0	X
5	2	100,0	X

Contrast	*Sig.*	*Difference*	*+/- Limits*
0,1 - 0,5		0	2,43696
0,1 - 1	*	-30,155	2,43696
0,1 - 5	*	-100,0	2,43696
0,1 - 10	*	-100,0	2,43696
0,1 - 50	*	-100,0	2,43696
0,5 - 1	*	-30,155	2,43696
0,5 - 5	*	-100,0	2,43696
0,5 - 10	*	-100,0	2,43696
0,5 - 50	*	-100,0	2,43696
1 - 5	*	-69,845	2,43696
1 - 10	*	-69,845	2,43696
1 - 50	*	-69,845	2,43696
5 - 10		0	2,43696
5 - 50		0	2,43696
10 - 50		0	2,43696

* denotes a statistically significant difference.

The StatAdvisor

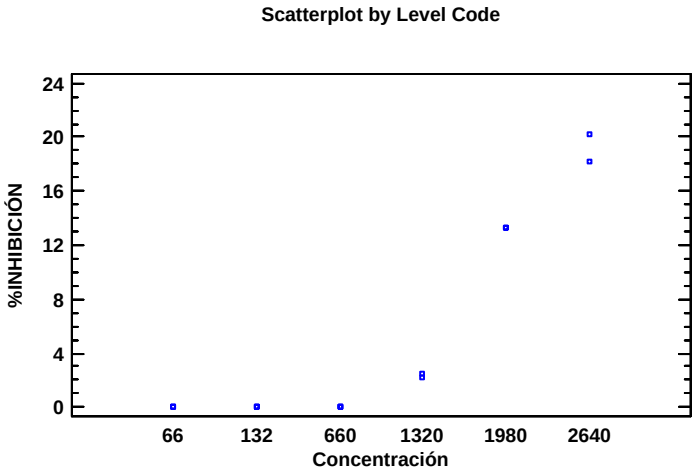
This table applies a multiple comparison procedure to determine which means are significantly different from which others. The bottom half of the output shows the estimated difference between each pair of means. An asterisk has been placed next to 11 pairs, indicating that these pairs show statistically significant differences at the 95,0% confidence level. At the top of the page, 3 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. The method currently being used to discriminate among the means is Fisher's least significant difference (LSD) procedure. With this method, there is a 5,0% risk of calling each pair of means significantly different when the actual difference equals 0.

One-Way ANOVA - %INHIBICIÓN by Concentración

Dependent variable: %INHIBICIÓN
Factor: Concentración

Number of observations: 12
Number of levels: 6

The StatAdvisor
This procedure performs a one-way analysis of variance for %INHIBICIÓN. It constructs various tests and graphs to compare the mean values of %INHIBICIÓN for the 6 different levels of Concentración. The F-test in the ANOVA table will test whether there are any significant differences amongst the means. If there are, the Multiple Range Tests will tell you which means are significantly different from which others. If you are worried about the presence of outliers, choose the Kruskal-Wallis Test which compares medians instead of means. The various plots will help you judge the practical significance of the results, as well as allow you to look for possible violations of the assumptions underlying the analysis of variance.



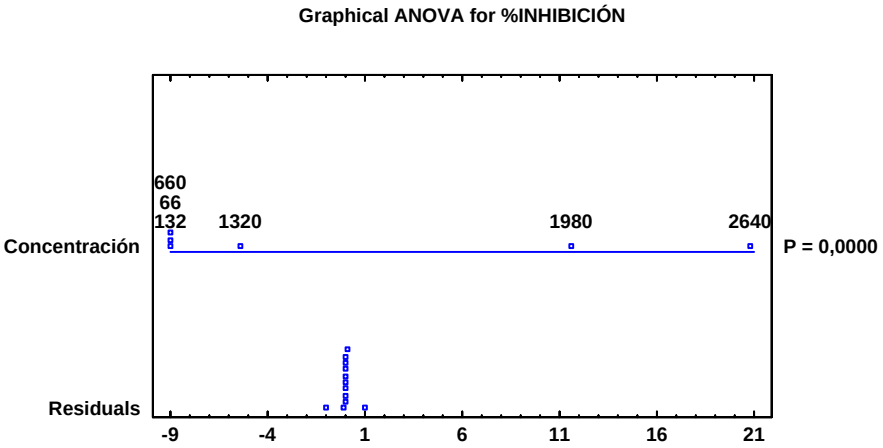
Summary Statistics for %INHIBICIÓN

Concentración	*Count*	*Average*	*Standard deviation*	*Coeff. of variation*	*Minimum*	*Maximum*	*Range*
66	2	0	0	%	0	0	0
132	2	0	0	%	0	0	0
660	2	0	0	%	0	0	0
1320	2	2,33	0,141421	6,06959%	2,23	2,43	0,2
1980	2	13,29	0	0%	13,29	13,29	0
2640	2	19,21	1,41421	7,36186%	18,21	20,21	2,0
Total	12	5,805	7,97609	137,4%	0	20,21	20,21

Concentración	*Stnd. skewness*	*Stnd. kurtosis*
66		
132		
660		
1320		
1980		
2640		
Total	1,36177	-0,646188

The StatAdvisor
This table shows various statistics for %INHIBICIÓN for each of the 6 levels of Concentración. The one-way analysis of variance is primarily intended to compare the means of the different levels, listed here under the Average column. Select Means Plot from the list of Graphical Options to display the means graphically.

WARNING: There is more than a 3 to 1 difference between the smallest standard deviation and the largest. This may cause problems since the analysis of variance assumes that the standard deviations at all levels are equal. Select Variance Check from the list of Tabular Options to run a formal statistical test for differences among the sigmas. You may want to consider transforming the values of %INHIBICIÓN to remove any dependence of the standard deviation on the mean.



ANOVA Table for %INHIBICIÓN by Concentración

Source	*Sum of Squares*	*Df*	*Mean Square*	*F-Ratio*	*P-Value*
Between groups	697,778	5	139,556	414,52	0,0000
Within groups	2,02	6	0,336667		
Total (Corr.)	699,798	11			

The StatAdvisor

The ANOVA table decomposes the variance of %INHIBICIÓN into two components: a between-group component and a within-group component. The F-ratio, which in this case equals 414,522, is a ratio of the between-group estimate to the within-group estimate. Since the P-value of the F-test is less than 0,05, there is a statistically significant difference between the mean %INHIBICIÓN from one level of Concentración to another at the 95,0% confidence level. To determine which means are significantly different from which others, select Multiple Range Tests from the list of Tabular Options.

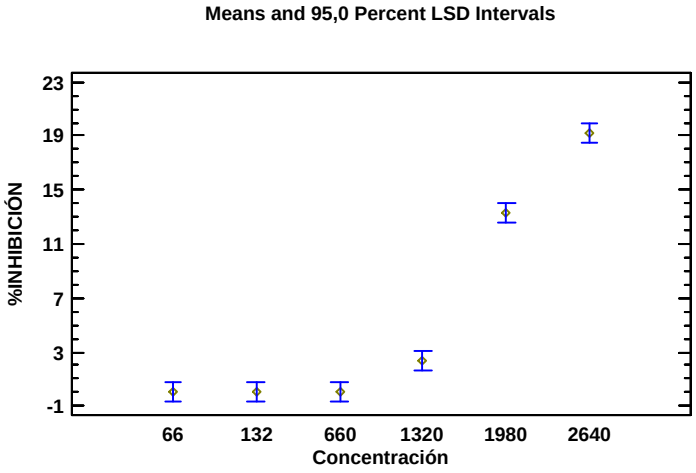
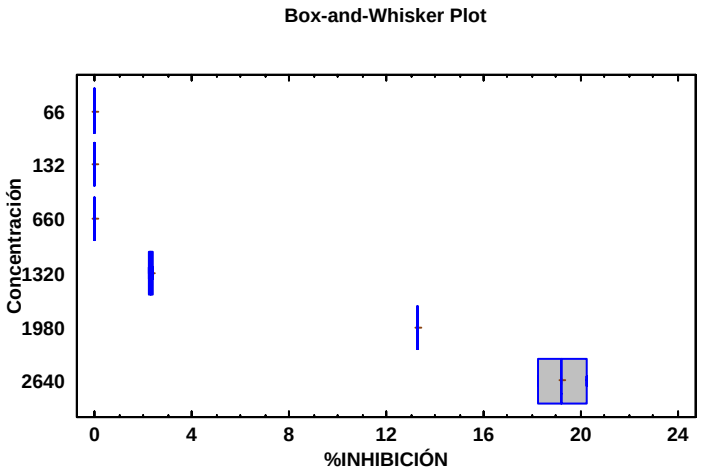


Table of Means for %INHIBICIÓN by Concentración with 95,0 percent LSD intervals

			Stnd. error		
Concentración	*Count*	*Mean*	*(pooled s)*	*Lower limit*	*Upper limit*
66	2	0	0,410284	-0,709887	0,709887
132	2	0	0,410284	-0,709887	0,709887
660	2	0	0,410284	-0,709887	0,709887
1320	2	2,33	0,410284	1,62011	3,03989
1980	2	13,29	0,410284	12,5801	13,9999
2640	2	19,21	0,410284	18,5001	19,9199
Total	12	5,805			

The StatAdvisor

This table shows the mean %INHIBICIÓN for each level of Concentración. It also shows the standard error of each mean, which is a measure of its sampling variability. The standard error is formed by dividing the pooled standard deviation by the square root of the number of observations at each level. The table also displays an interval around each mean. The intervals currently displayed are based on Fisher's least significant difference (LSD) procedure. They are constructed in such a way that if two means are the same, their intervals will overlap 95,0% of the time. You can display the intervals graphically by selecting Means Plot from the list of Graphical Options. In the Multiple Range Tests, these intervals are used to determine which means are significantly different from which others.



Multiple Range Tests for %INHIBICIÓN by Concentración

Method: 95,0 percent LSD

Concentración	*Count*	*Mean*	*Homogeneous Groups*
132	2	0	X
66	2	0	X
660	2	0	X
1320	2	2,33	X
1980	2	13,29	X
2640	2	19,21	X

Contrast	*Sig.*	*Difference*	*+/- Limits*
66 - 132		0	1,41977
66 - 660		0	1,41977
66 - 1320	*	-2,33	1,41977
66 - 1980	*	-13,29	1,41977
66 - 2640	*	-19,21	1,41977
132 - 660		0	1,41977
132 - 1320	*	-2,33	1,41977
132 - 1980	*	-13,29	1,41977
132 - 2640	*	-19,21	1,41977
660 - 1320	*	-2,33	1,41977
660 - 1980	*	-13,29	1,41977
660 - 2640	*	-19,21	1,41977
1320 - 1980	*	-10,96	1,41977
1320 - 2640	*	-16,88	1,41977
1980 - 2640	*	-5,92	1,41977

* denotes a statistically significant difference.

The StatAdvisor

This table applies a multiple comparison procedure to determine which means are significantly different from which others. The bottom half of the output shows the estimated difference between each pair of means. An asterisk has been placed next to 12 pairs, indicating that these pairs show statistically significant differences at the 95,0% confidence level. At the top of the page, 4 homogenous groups are identified using columns of X's. Within each column, the levels containing X's form a group of means within which there are no statistically significant differences. The method currently being used to discriminate among the means is Fisher's least significant difference (LSD) procedure. With this method, there is a 5,0% risk of calling each pair of means significantly different when the actual difference equals 0.