

## **APÉNDICE D**

### **Formato para evaluación sensorial**

Formato utilizado para realizar la evaluación sensorial de los diferentes sistemas de tofu elaborados a diferentes concentraciones con antimicrobianos, tales como: (KS, BNA, KS+BNA) y el sistema control (sin antimicrobiano), usando como agente coagulante al ácido acético.

BOLETA DE EVALUACION SENSORIAL. Escala hedónica estructurada

Nombre: \_\_\_\_\_ Fecha: \_\_\_\_\_

Producto: **Tofu firme natural**

Pruebe por favor las muestras, e indique su nivel de agrado (marcando con el código de cada muestra) en la escala que mejor describe su reacción para cada uno de los atributos.

<b>Puntuación</b>	<b>Atributo</b>	<b>Color</b>	<b>Textura</b>	<b>Sabor</b>	<b>Aceptabilidad General</b>
9	Me gusta muchísimo				
8	Me gusta mucho				
7	Me gusta moderadamente				
6	Me gusta poco				
5	No me gusta ni me disgusta				
4	Me disgusta poco				
3	Me disgusta moderadamente				
2	Me disgusta mucho				
1	Me disgusta muchísimo				

Comentarios

GRACIAS

**Tabla 37. Puntuación de la evaluación sensorial en escala hedónica estructurada de los diferentes sistemas de tofu elaborados**

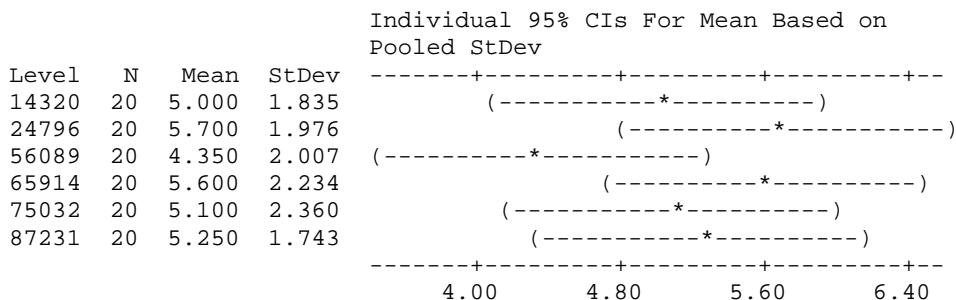
56089	Control
14320	Benzoato 500 ppm
65914	Benzoato 1000 ppm
87231	Sorbato 500 ppm
75032	Sorbato 1000 ppm
24796	Sorbato+Benzoato (500+500) ppm

**Resultados de la Evaluación sensorial, mediante un ANOVA.**

**One-way ANOVA: Color versus Muestras**

Source	DF	SS	MS	F	P
Muestras	5	23.57	4.71	1.14	0.346
Error	114	473.10	4.15		
Total	119	496.67			

S = 2.037    R-Sq = 4.74%    R-Sq(adj) = 0.57%

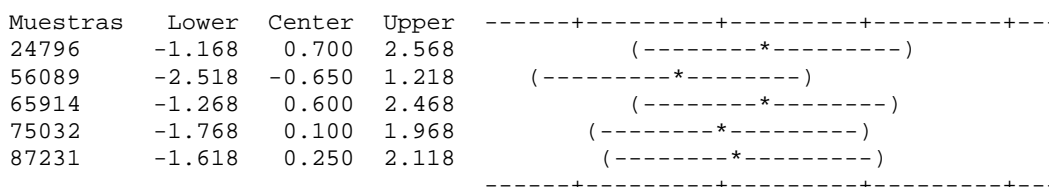


Pooled StDev = 2.037

Tukey 95% Simultaneous Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Individual confidence level = 99.55%

Muestras = 14320 subtracted from:



-2.0      0.0      2.0      4.0

Muestras = 24796 subtracted from:

Muestras	Lower	Center	Upper	
56089	-3.218	-1.350	0.518	(-----*-----)
65914	-1.968	-0.100	1.768	(-----*-----)
75032	-2.468	-0.600	1.268	(-----*-----)
87231	-2.318	-0.450	1.418	(-----*-----)

-----+-----+-----+-----+-----+-----  
-2.0      0.0      2.0      4.0

Muestras = 56089 subtracted from:

Muestras	Lower	Center	Upper	
65914	-0.618	1.250	3.118	(-----*-----)
75032	-1.118	0.750	2.618	(-----*-----)
87231	-0.968	0.900	2.768	(-----*-----)

-----+-----+-----+-----+-----+-----  
-2.0      0.0      2.0      4.0

Muestras = 65914 subtracted from:

Muestras	Lower	Center	Upper	
75032	-2.368	-0.500	1.368	(-----*-----)
87231	-2.218	-0.350	1.518	(-----*-----)

-----+-----+-----+-----+-----+-----  
-2.0      0.0      2.0      4.0

Muestras = 75032 subtracted from:

Muestras	Lower	Center	Upper	
87231	-1.718	0.150	2.018	(-----*-----)

-----+-----+-----+-----+-----+-----  
-2.0      0.0      2.0      4.0

Fisher 95% Individual Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

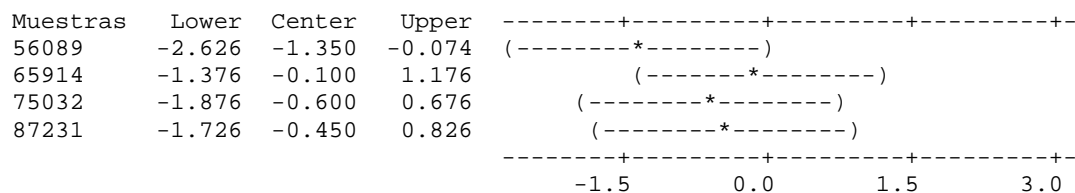
Simultaneous confidence level = 64.04%

Muestras = 14320 subtracted from:

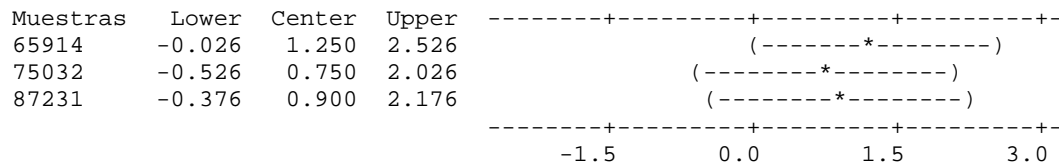
Muestras	Lower	Center	Upper	
24796	-0.576	0.700	1.976	(-----*-----)
56089	-1.926	-0.650	0.626	(-----*-----)
65914	-0.676	0.600	1.876	(-----*-----)
75032	-1.176	0.100	1.376	(-----*-----)
87231	-1.026	0.250	1.526	(-----*-----)

-----+-----+-----+-----+-----+-----  
-1.5      0.0      1.5      3.0

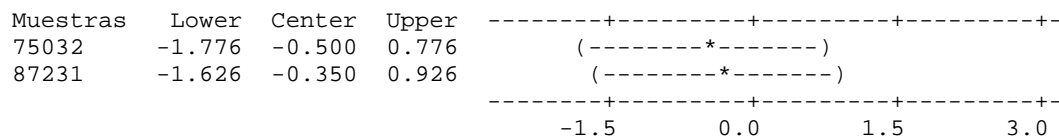
Muestras = 24796 subtracted from:



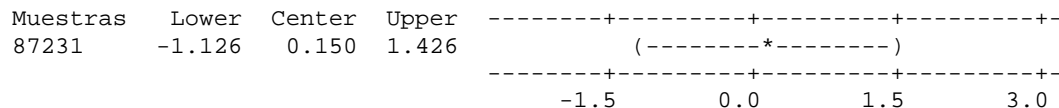
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



Muestras = 75032 subtracted from:

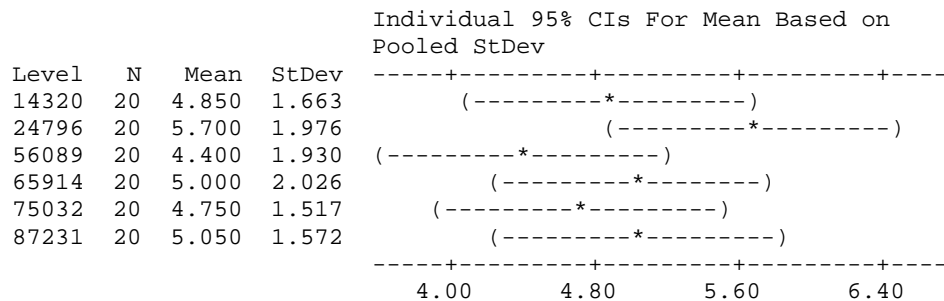


## Residual Plots for Color

### One-way ANOVA: Textura versus Muestras

Source	DF	SS	MS	F	P
Muestras	5	18.54	3.71	1.15	0.336
Error	114	366.25	3.21		
Total	119	384.79			

S = 1.792    R-Sq = 4.82%    R-Sq(adj) = 0.64%

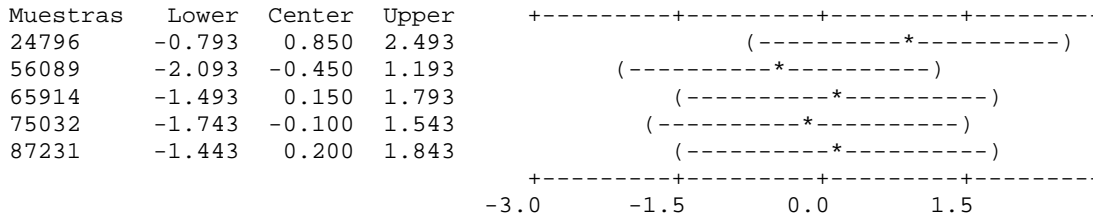


Pooled StDev = 1.792

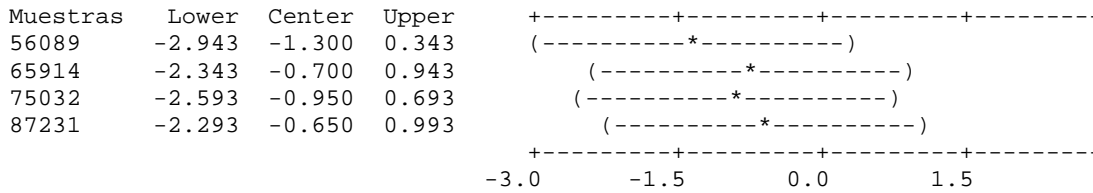
Tukey 95% Simultaneous Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Individual confidence level = 99.55%

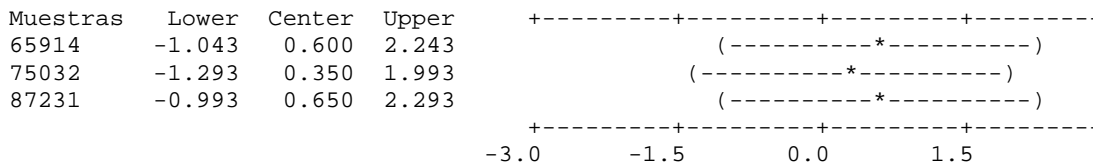
Muestras = 14320 subtracted from:



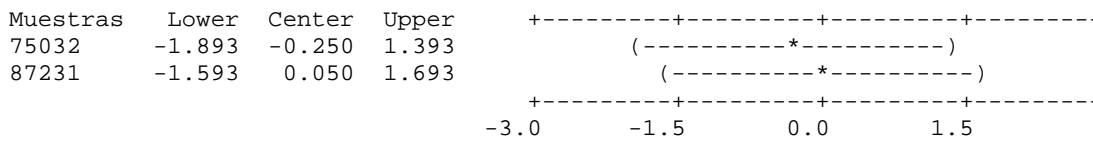
Muestras = 24796 subtracted from:



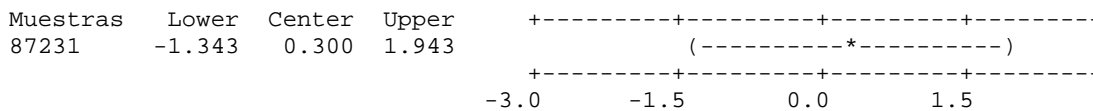
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



Muestras = 75032 subtracted from:

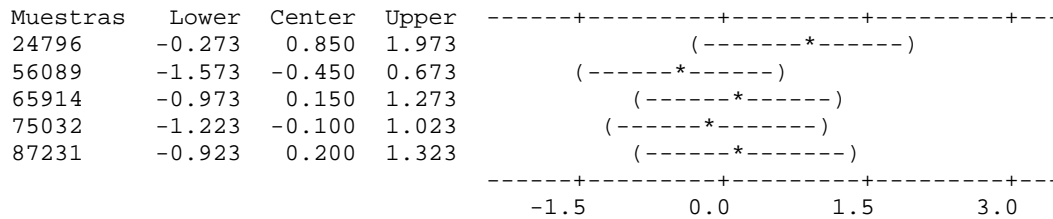


Fisher 95% Individual Confidence Intervals

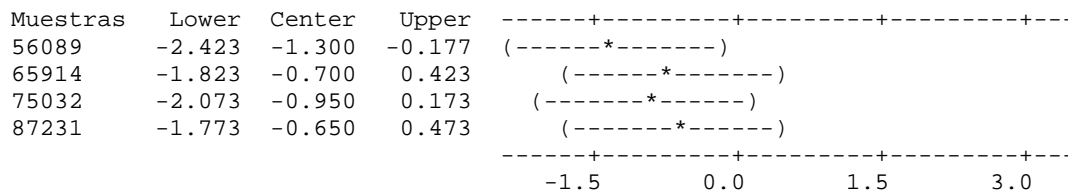
All Pairwise Comparisons among Levels of Muestras

Simultaneous confidence level = 64.04%

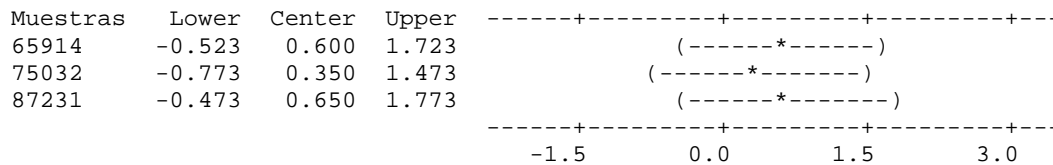
Muestras = 14320 subtracted from:



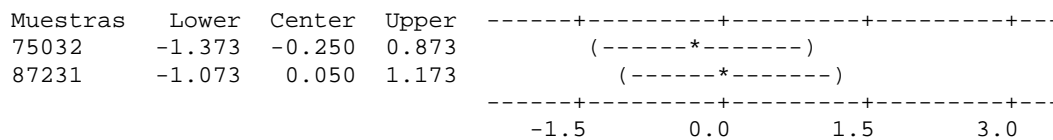
Muestras = 24796 subtracted from:



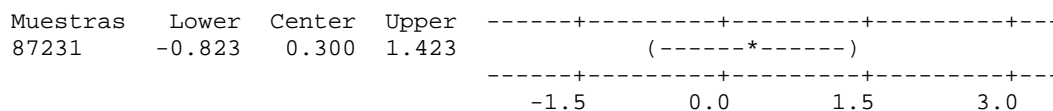
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



Muestras = 75032 subtracted from:

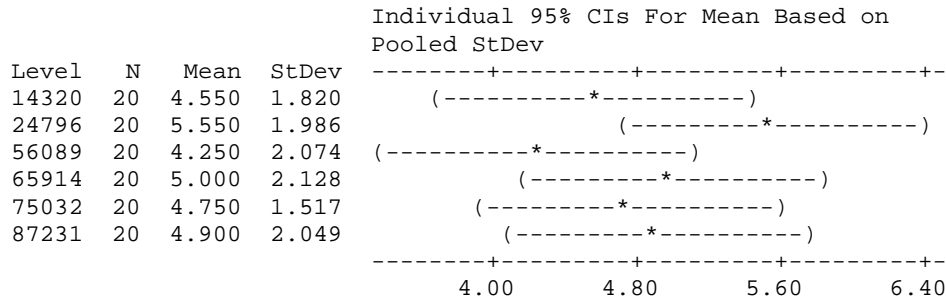


## Residual Plots for Textura

## One-way ANOVA: Sabor versus Muestras

Source	DF	SS	MS	F	P
Muestras	5	19.47	3.89	1.03	0.401
Error	114	429.20	3.76		
Total	119	448.67			

S = 1.940 R-Sq = 4.34% R-Sq(adj) = 0.14%

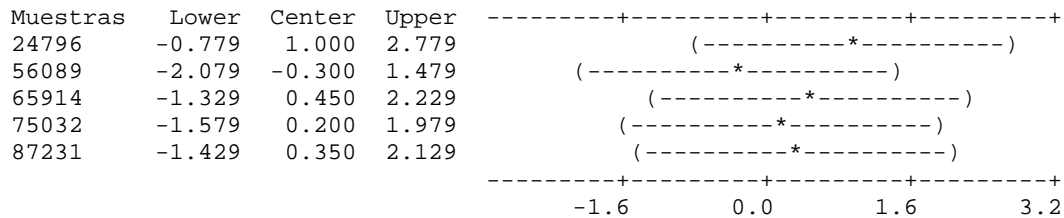


Pooled StDev = 1.940

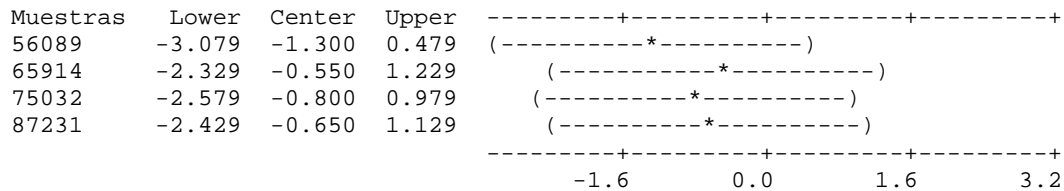
Tukey 95% Simultaneous Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Individual confidence level = 99.55%

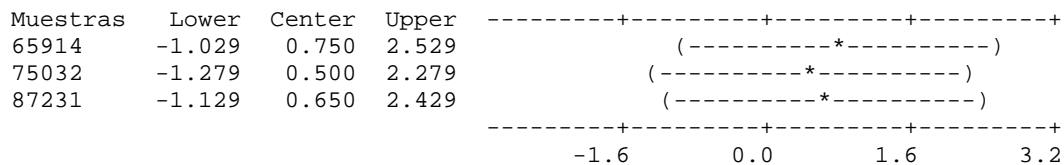
Muestras = 14320 subtracted from:



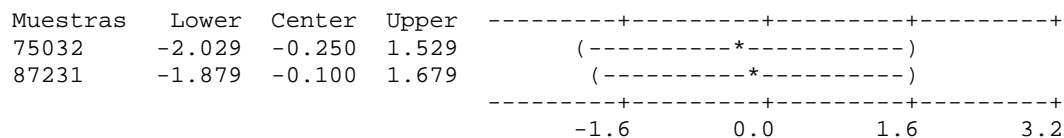
Muestras = 24796 subtracted from:



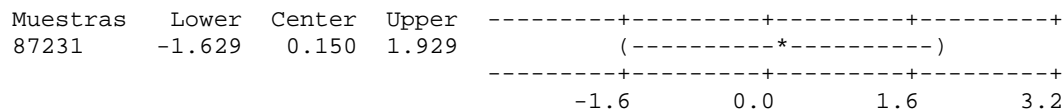
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



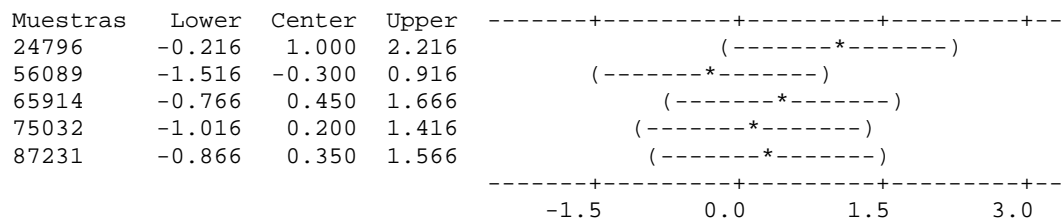
Muestras = 75032 subtracted from:



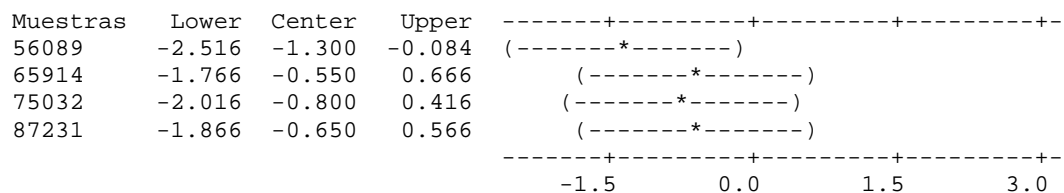
Fisher 95% Individual Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Simultaneous confidence level = 64.04%

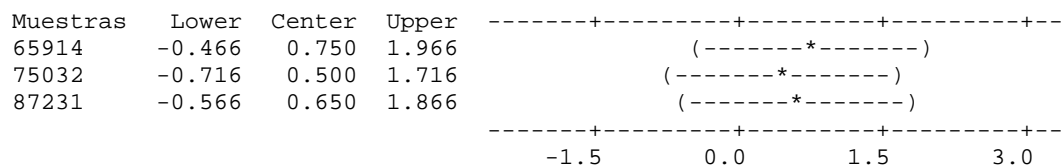
Muestras = 14320 subtracted from:



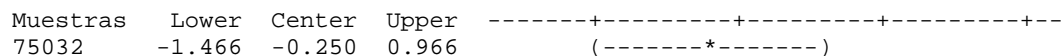
Muestras = 24796 subtracted from:



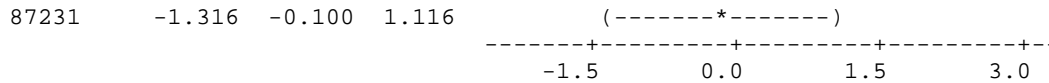
Muestras = 56089 subtracted from:



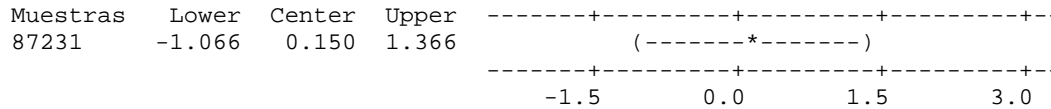
Muestras = 65914 subtracted from:







Muestras = 75032 subtracted from:

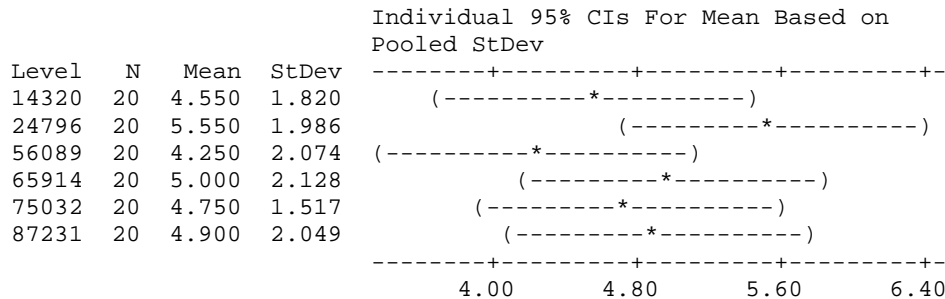


### Residual Plots for Sabor

#### One-way ANOVA: Sabor versus Muestras

Source	DF	SS	MS	F	P
Muestras	5	19.47	3.89	1.03	0.401
Error	114	429.20	3.76		
Total	119	448.67			

S = 1.940 R-Sq = 4.34% R-Sq(adj) = 0.14%

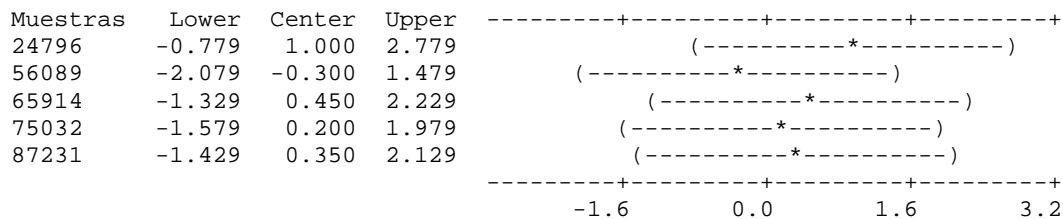


Pooled StDev = 1.940

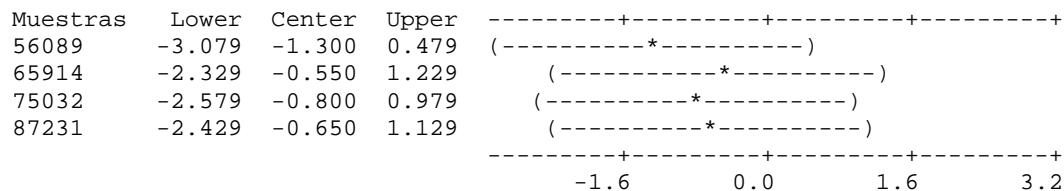
Tukey 95% Simultaneous Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Individual confidence level = 99.55%

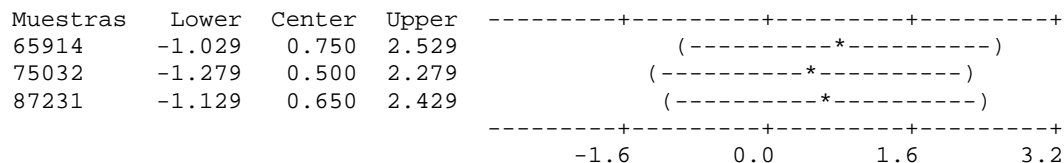
Muestras = 14320 subtracted from:



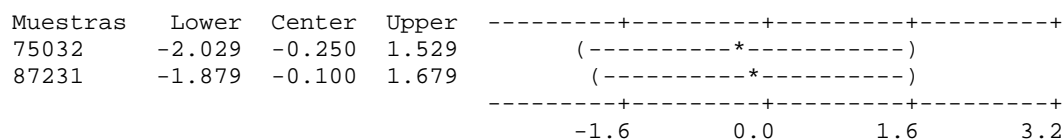
Muestras = 24796 subtracted from:



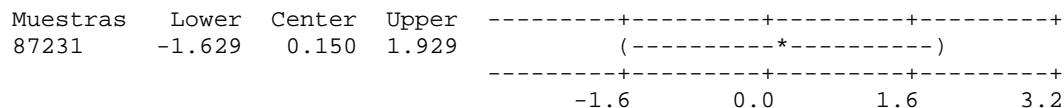
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



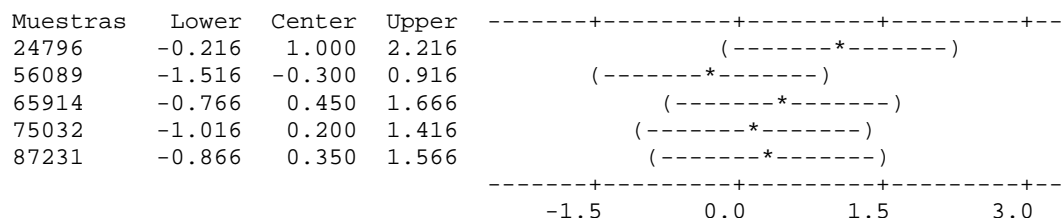
Muestras = 75032 subtracted from:



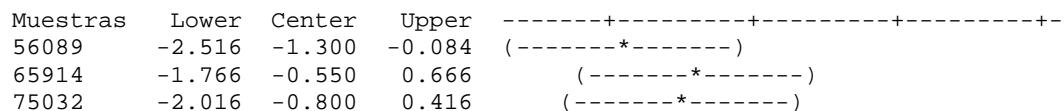
Fisher 95% Individual Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Simultaneous confidence level = 64.04%

Muestras = 14320 subtracted from:



Muestras = 24796 subtracted from:

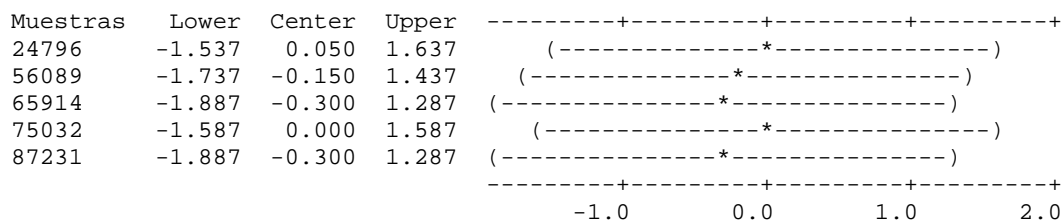




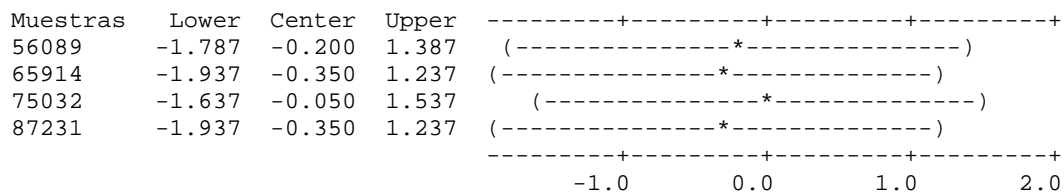
Tukey 95% Simultaneous Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Individual confidence level = 99.55%

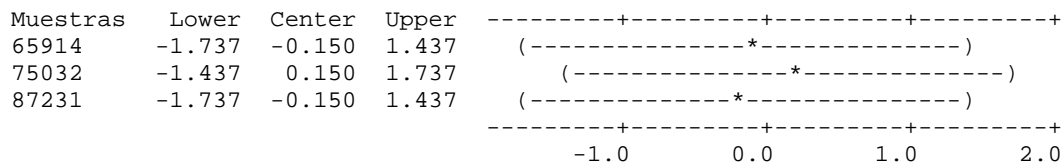
Muestras = 14320 subtracted from:



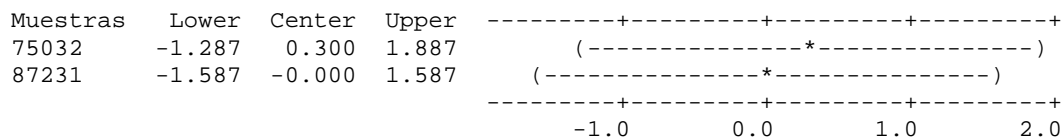
Muestras = 24796 subtracted from:



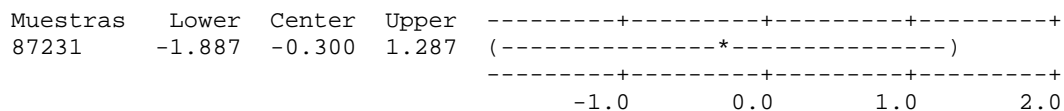
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



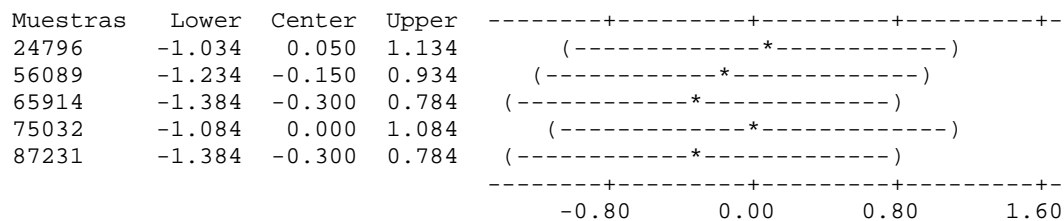
Muestras = 75032 subtracted from:



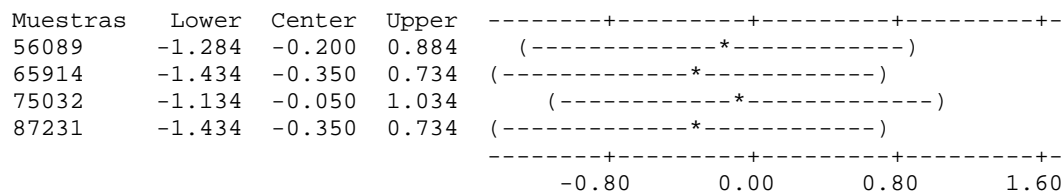
Fisher 95% Individual Confidence Intervals  
All Pairwise Comparisons among Levels of Muestras

Simultaneous confidence level = 64.04%

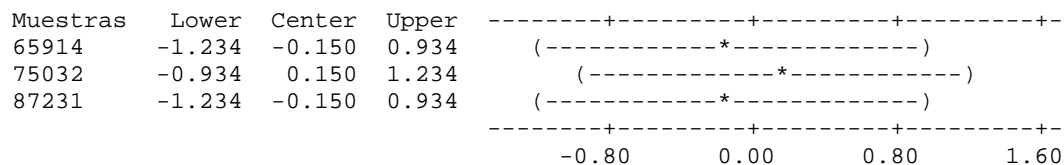
Muestras = 14320 subtracted from:



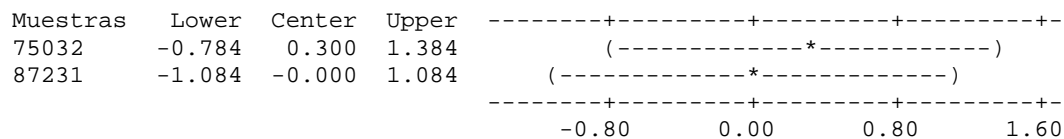
Muestras = 24796 subtracted from:



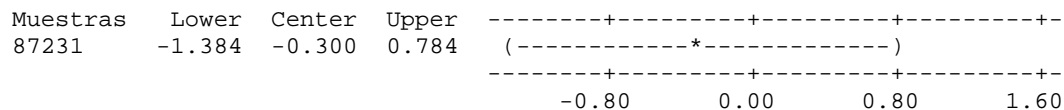
Muestras = 56089 subtracted from:



Muestras = 65914 subtracted from:



Muestras = 75032 subtracted from:



Residual Plots for Accept.General