

## One-way ANOVA: Control, Ag, Zn0, Ag/Zno

### Method

Null hypothesis	All means are equal
Alternative hypothesis	Not all means are equal
Significance level	$\alpha = 0.05$

*Equal variances were assumed for the analysis.*

### Factor Information

Factor	Levels	Values
Factor	4	Control, Ag, Zn0, Ag/Zno

### Analysis of Variance

Source	DF	Seq SS	Contribution	Adj SS	Adj MS	F-Value	P-Value
Factor	3	1.92727E+12	94.41%	1.92727E+12	6.42422E+11	247.65	0.000
Error	44	1.14141E+11	5.59%	1.14141E+11	2594105114		
Total	47	2.04141E+12	100.00%				

### Model Summary

S	R-sq	R-sq(adj)	PRESS	R-sq(pred)
50932.4	94.41%	94.03%	1.35837E+11	93.35%

### Means

Factor	N	Mean	StDev	95% CI
Control	12	650000	73855	(620368, 679632)
Ag	12	246875	33763	(217243, 276507)
Zn0	12	462500	58387	(432868, 492132)
Ag/Zno	12	128125	19310	(98493, 157757)

*Pooled StDev = 50932.4*

### Tukey Pairwise Comparisons

#### Grouping Information Using the Tukey Method and 95% Confidence

Factor	N	Mean	Grouping
Control	12	650000	A
Zn0	12	462500	B
Ag	12	246875	C
Ag/Zno	12	128125	D

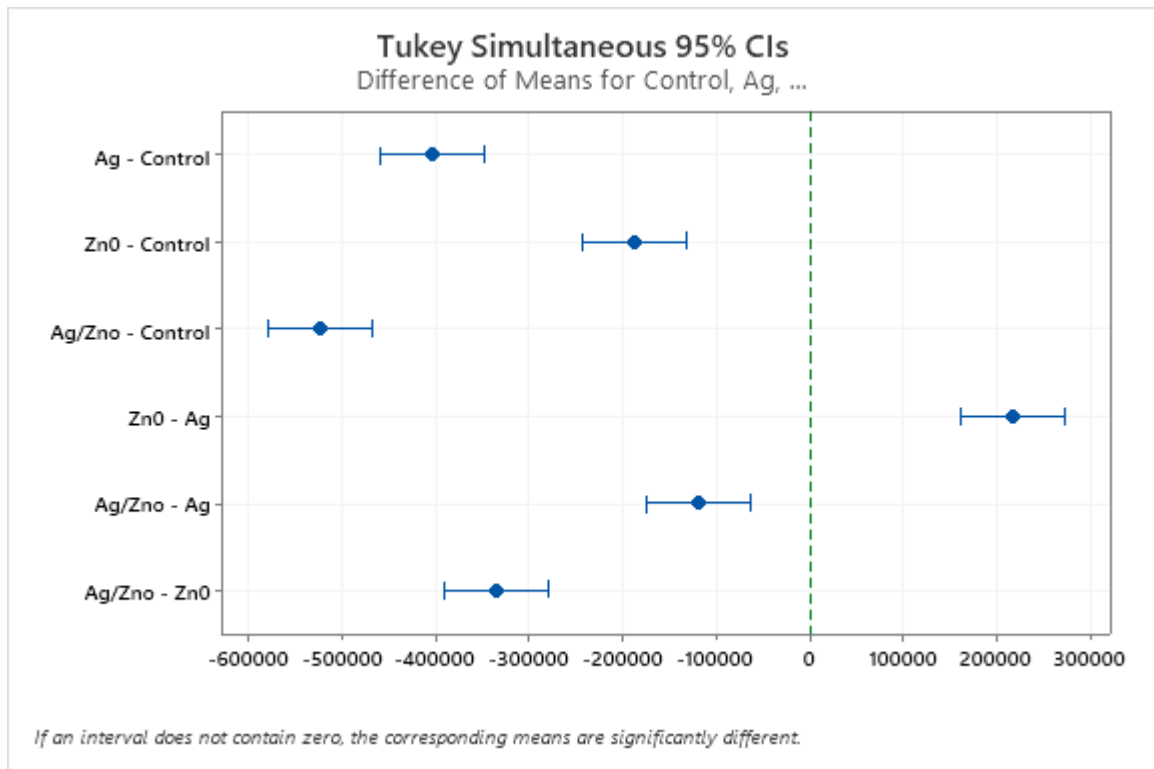
*Means that do not share a letter are significantly different.*

### Tukey Simultaneous Tests for Differences of Means

Difference of Levels	Difference of Means	SE of Difference	95% CI	T-Value	Adjusted P-Value
----------------------	---------------------	------------------	--------	---------	------------------

Ag - Control	-403125	20793	(-458702, -347548)	-19.39	0.000009902
Zn0 - Control	-187500	20793	(-243077, -131923)	-9.02	0.000009902
Ag/Zno - Control	-521875	20793	(-577452, -466298)	-25.10	0.000009902
Zn0 - Ag	215625	20793	(160048, 271202)	10.37	0.000009902
Ag/Zno - Ag	-118750	20793	(-174327, -63173)	-5.71	0.000014989
Ag/Zno - Zn0	-334375	20793	(-389952, -278798)	-16.08	0.000009902

Individual confidence level = 98.95%



## Fisher Pairwise Comparisons

### Grouping Information Using the Fisher LSD Method and 95% Confidence

Factor	N	Mean	Grouping
Control	12	650000	A
Zn0	12	462500	B
Ag	12	246875	C
Ag/Zno	12	128125	D

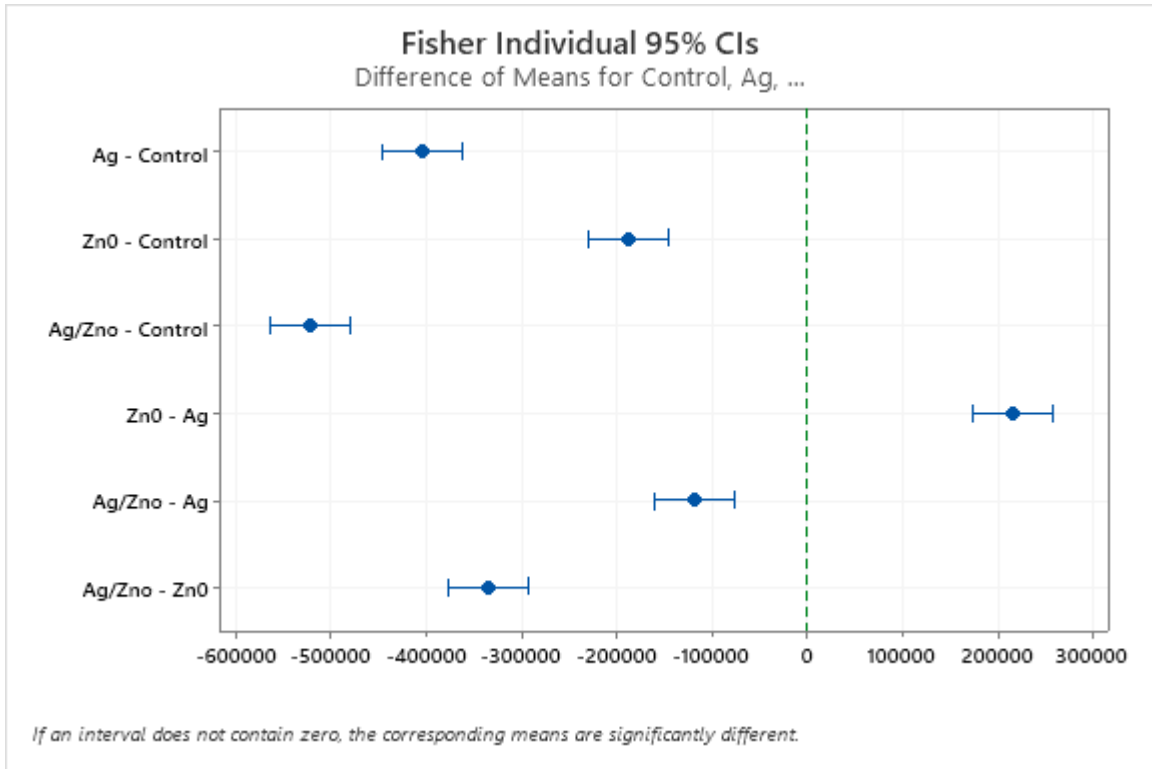
Means that do not share a letter are significantly different.

### Fisher Individual Tests for Differences of Means

Difference of Levels	Difference of Means	SE of Difference	95% CI	T-Value	Adjusted P-Value
Ag - Control	-403125	20793	(-445031, -361219)	-19.39	0.000
Zn0 - Control	-187500	20793	(-229406, -145594)	-9.02	0.000

Ag/Zno - Control	-521875	20793	(-563781, -479969)	-25.10	0.000
Zn0 - Ag	215625	20793	(173719, 257531)	10.37	0.000
Ag/Zno - Ag	-118750	20793	(-160656, -76844)	-5.71	0.000
Ag/Zno - Zn0	-334375	20793	(-376281, -292469)	-16.08	0.000

Simultaneous confidence level = 80.20%



### Dunnett Multiple Comparisons with a Control

#### Grouping Information Using the Dunnett Method and 95% Confidence

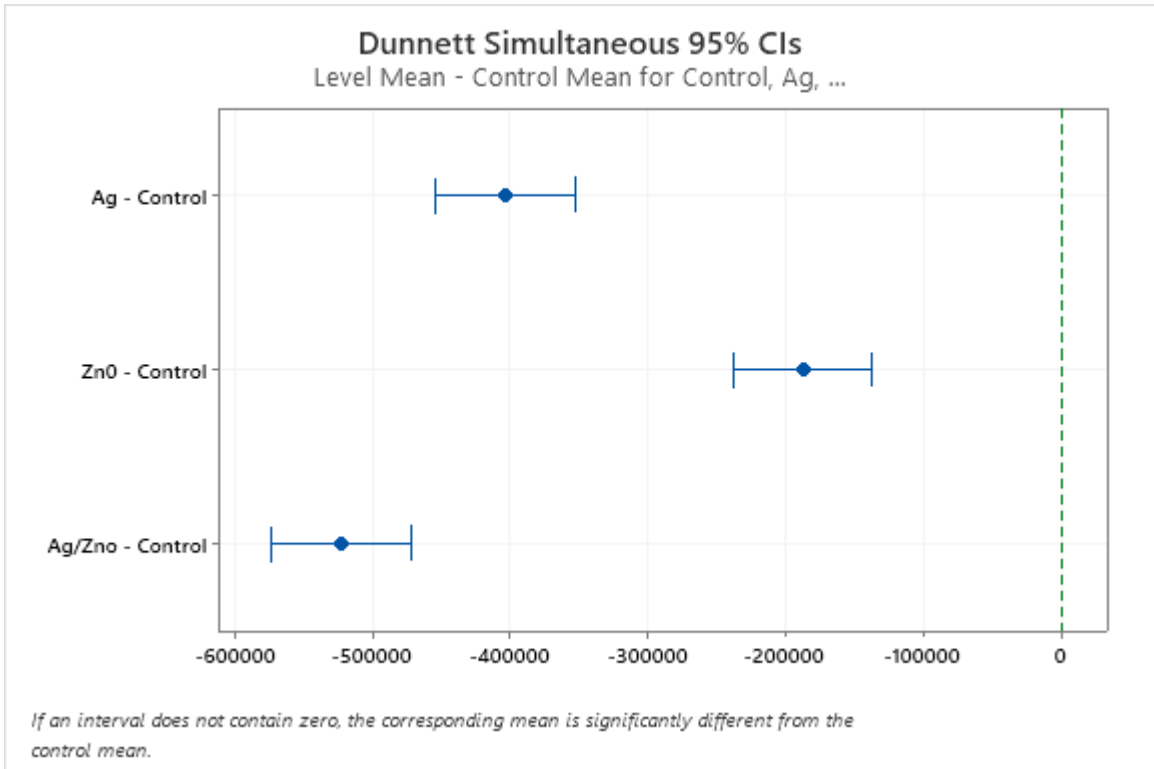
Factor	N	Mean	Grouping
Control	12	650000	A
(control)			
Zn0	12	462500	
Ag	12	246875	
Ag/Zno	12	128125	

Means not labeled with the letter A are significantly different from the control level mean.

#### Dunnett Simultaneous Tests for Level Mean - Control Mean

Difference of Levels	Difference of Means	SE of Difference	95% CI	T-Value	Adjusted P-Value
Ag - Control	-403125	20793	(-453713, -352537)	-19.39	0.000
Zn0 - Control	-187500	20793	(-238088, -136912)	-9.02	0.000
Ag/Zno - Control	-521875	20793	(-572463, -471287)	-25.10	0.000

Individual confidence level = 98.09%

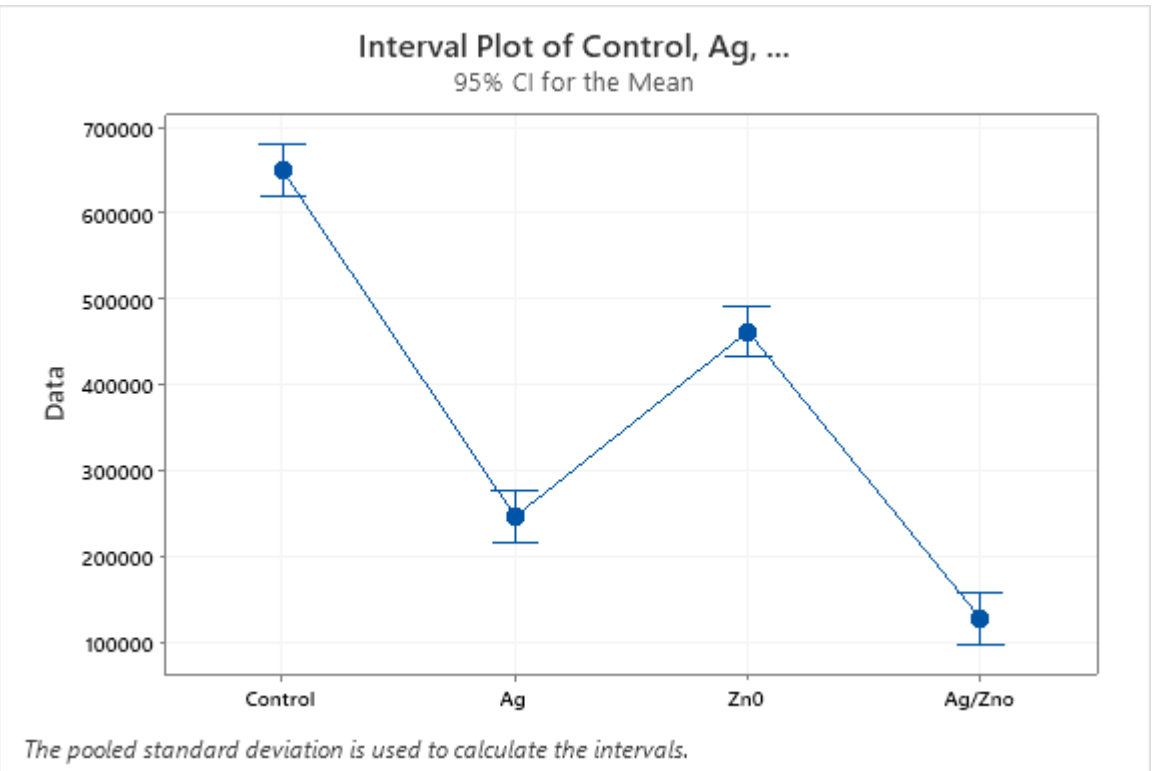
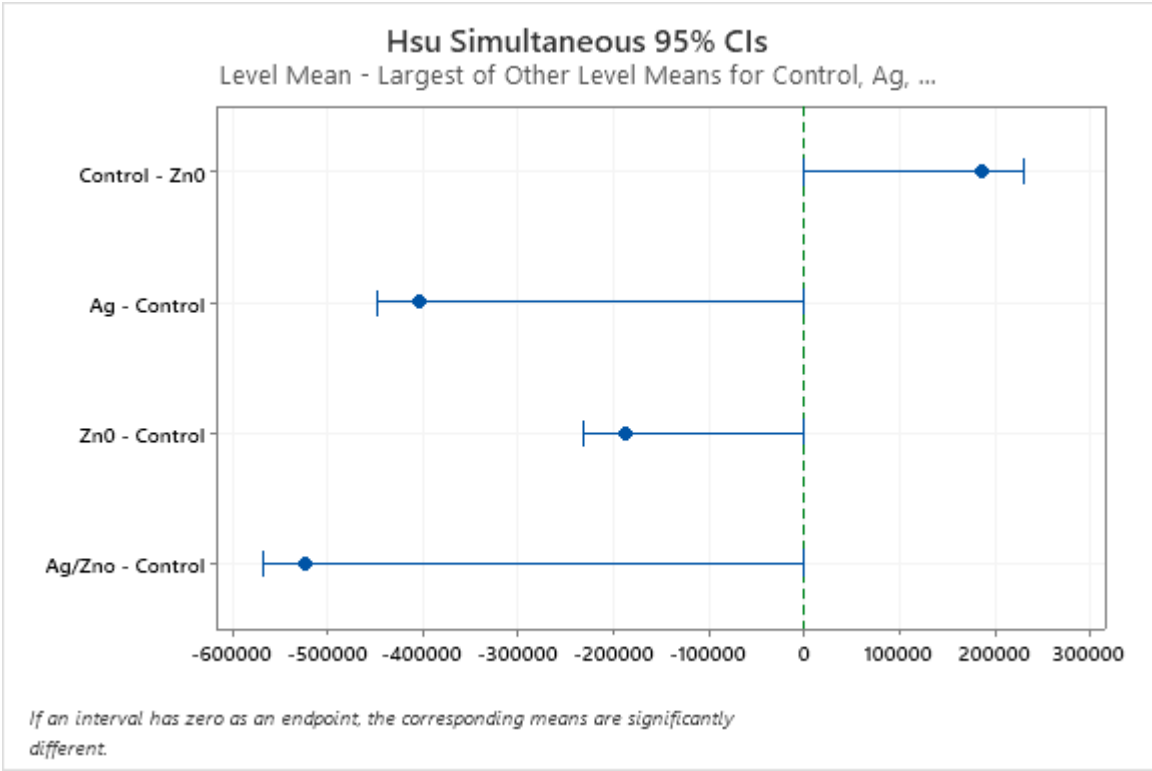


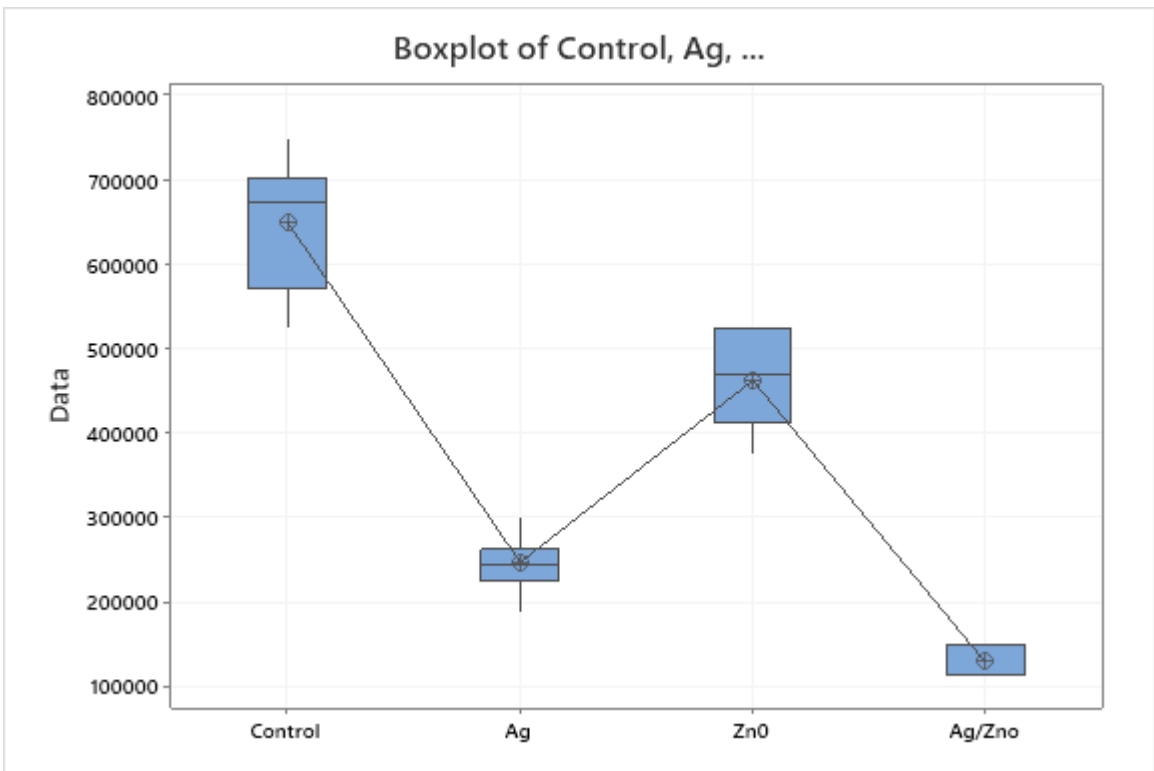
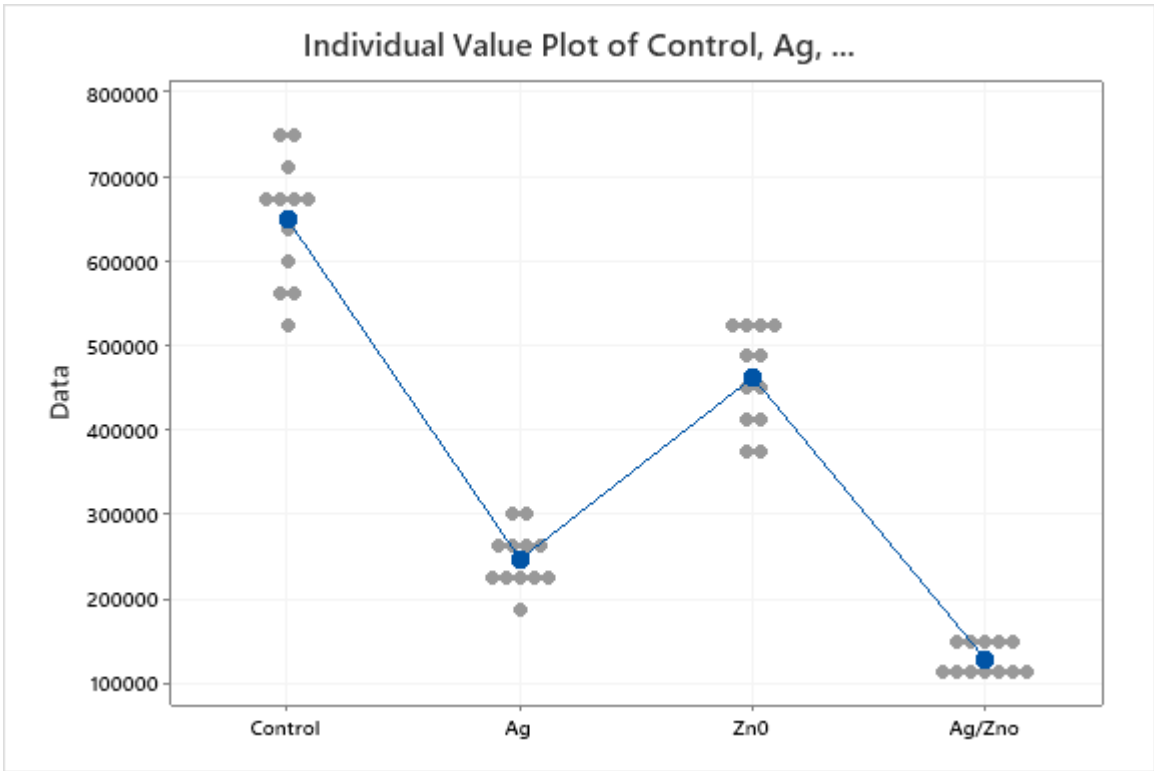
### Hsu Multiple Comparisons with the Best (MCB)

### Hsu Simultaneous Tests for Level Mean - Largest of Other Level Means

<b>Difference of Levels</b>	<b>Difference of Means</b>	<b>SE of Difference</b>	<b>95% CI</b>	<b>T-Value</b>	<b>Adjusted P-Value</b>
Control - Zn0	187500	20793	(0, 231573)	9.02	0.000
Ag - Control	-403125	20793	(-447198, 0)	-19.39	0.000
Zn0 - Control	-187500	20793	(-231573, 0)	-9.02	0.000
Ag/Zno - Control	-521875	20793	(-565948, 0)	-25.10	0.000

Individual confidence level = 96.03%





**Histogram**  
(responses are Control, Ag, ...)

