

Assignment 9: ANOVA

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1 Problem 1

1.1 a.

Using JMP software:

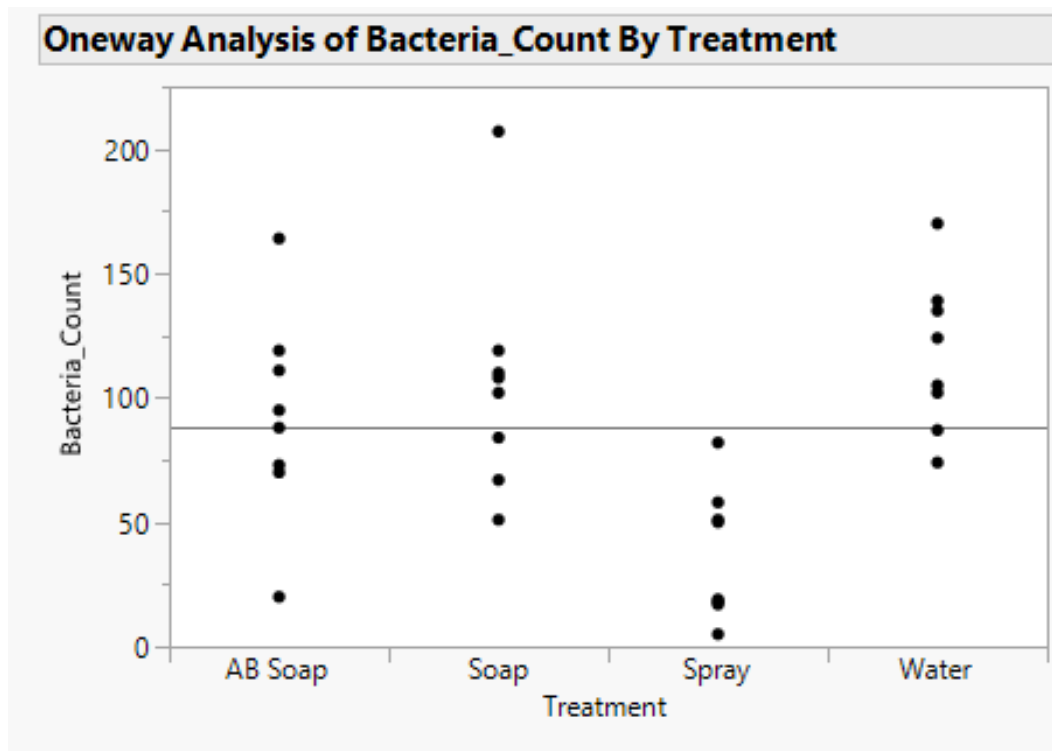


Figure 1: Data Distribution

Null Hypothesis: H_0 : No mean differs
Alternative Hypothesis: H_a : At least one mean differs

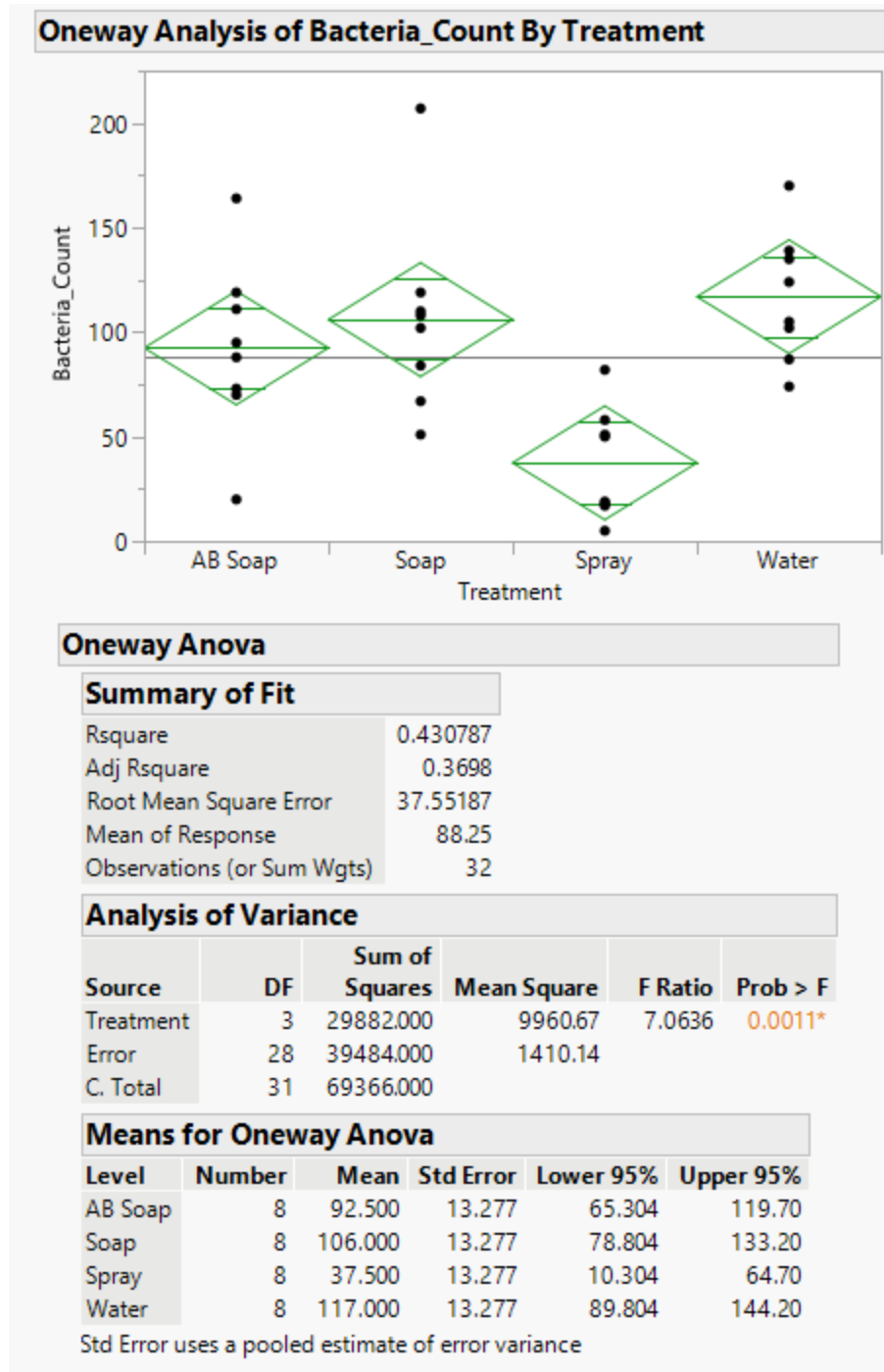


Figure 2: ANOVA analysis and table

F statistic: 7.0636 p Value: 0.0011

Since p value is less than 0.05, we can reject the null hypothesis, and say that at least one mean differs from the rest.

1.2 b.

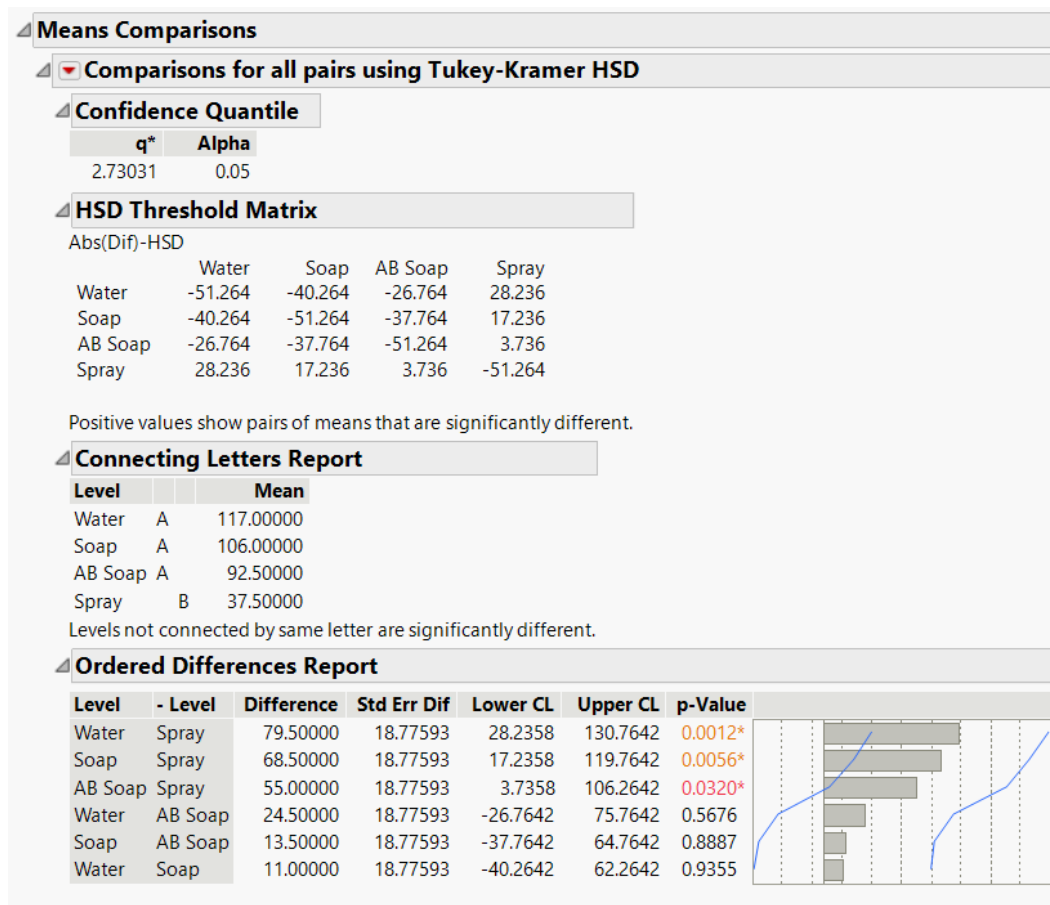


Figure 3: ANOVA analysis and table

From the figure, 'Spray' washing method differs from the others.

2 Problem 2

2.1 c.

Using JMP software:

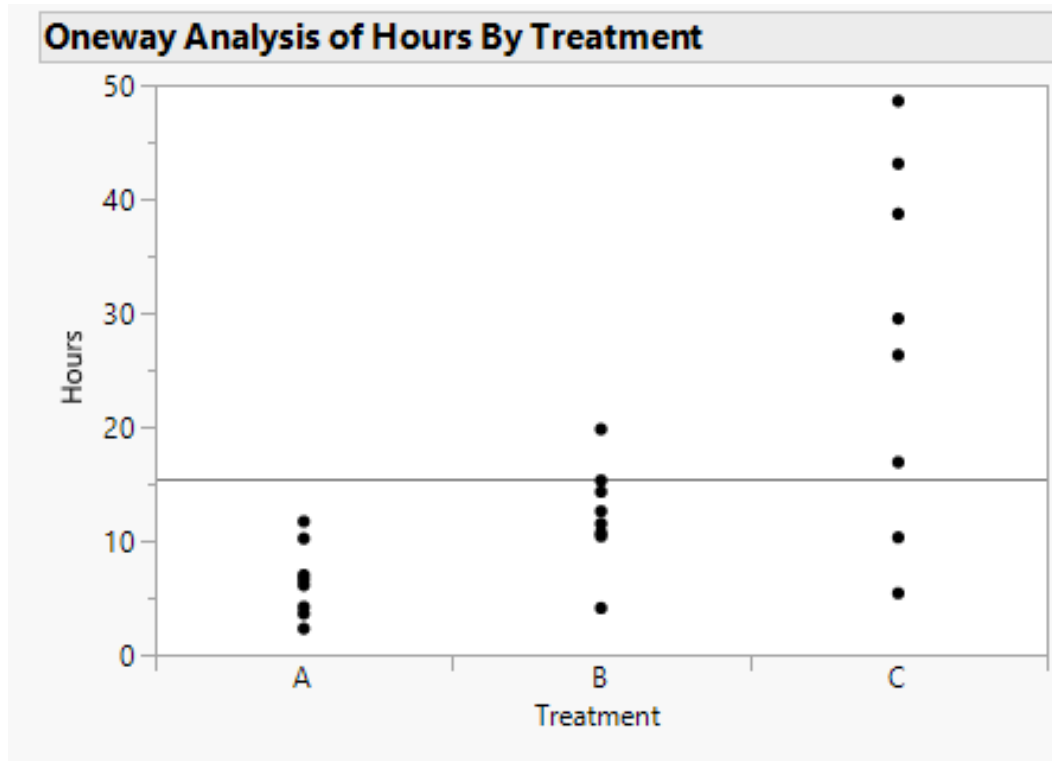


Figure 4: Data Distribution

Null Hypothesis: H_0 : No mean differs
Alternative Hypothesis: H_a : At least one mean differs

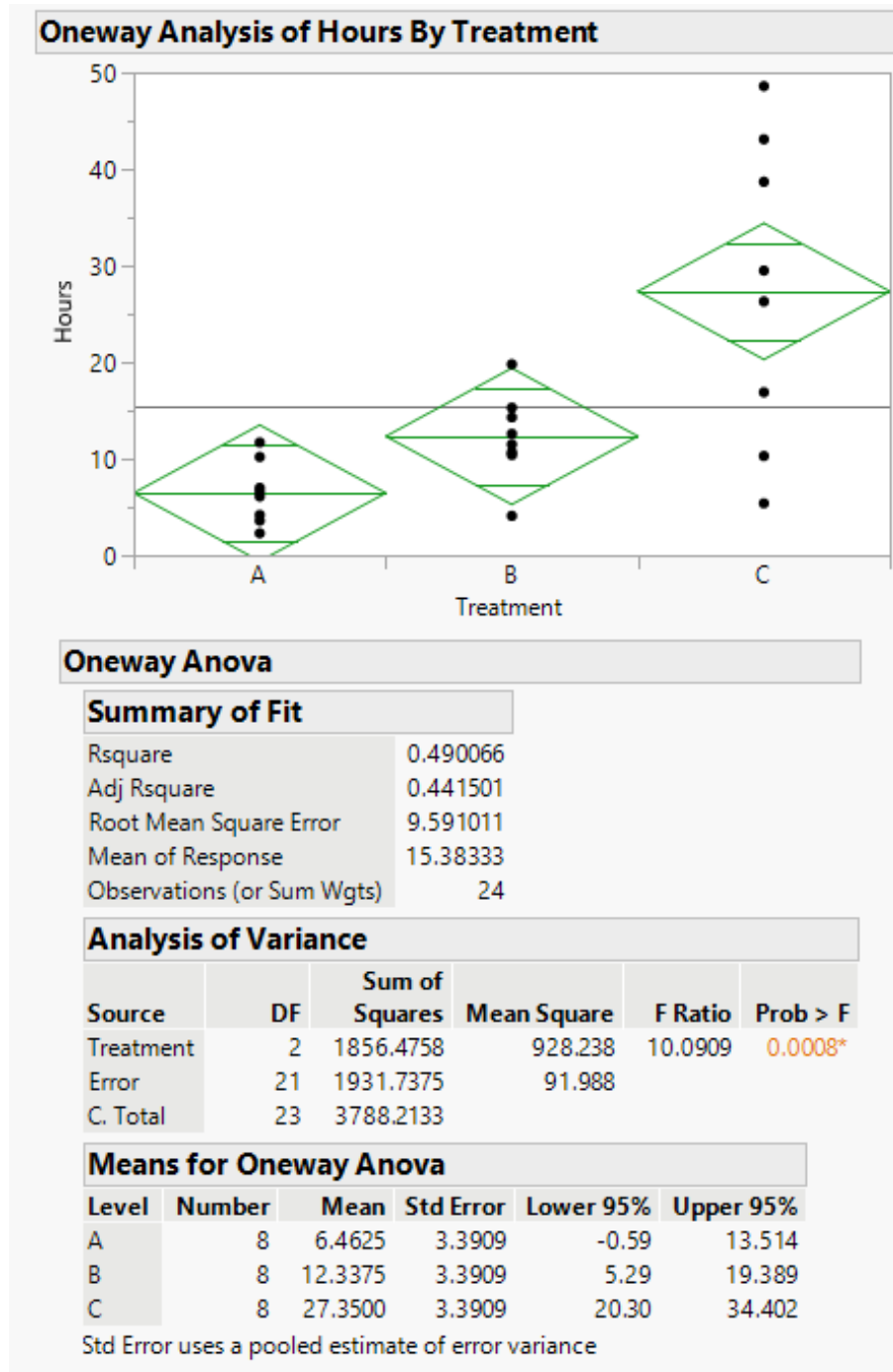


Figure 5: ANOVA analysis and table

F statistic: 10.0909 p Value: 0.0008

Since p value is less than 0.05, we can reject the null hypothesis, and say that at least one mean differs from the rest.

2.2 d.

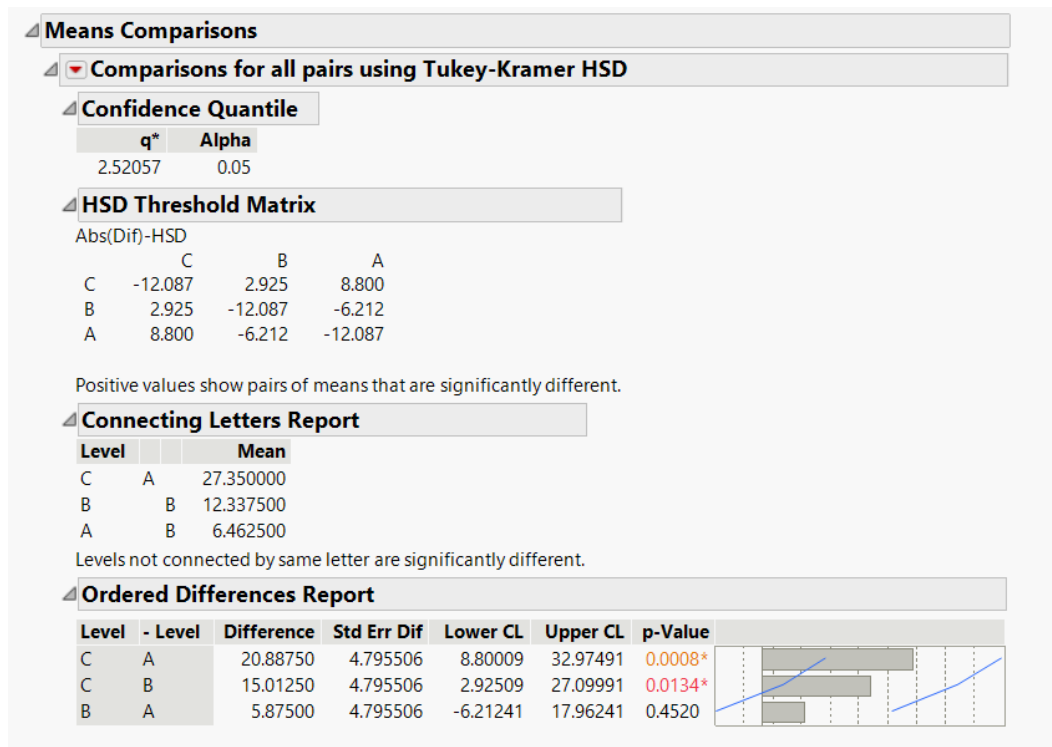


Figure 6: ANOVA analysis and table

From the figure, 'C' Treatment differs from the others.