

Practice: Conducting an Equivalence Test

In this practice, you conduct an equivalence test for the metal parts pilot data, which are in the file **Metal Parts Pilot.jmp**. The target is 40 hundredths of an inch. A difference of 0.5 hundredths of an inch from the target would be of practical importance to you.

1. Conduct an equivalence test with a 0.95 confidence level.

Hint: Use **Analyze, Distribution**, and select **Equivalence Test** from the red triangle for the analysis. The hypothesized mean is 40, and the Difference Considered Practically Zero is 0.5.

2. What can you conclude from the confidence interval and the equivalence region?

The upper end of the confidence interval falls outside the equivalence region. From this graph, you can conclude that the mean thickness is not practically equivalent to the target.

3. What can you conclude based on the results of the two hypothesis tests?

Only one of the two hypothesis tests is significant. The test for the upper bound of the equivalence region is not significant. You cannot conclude that the mean is practically equivalent to 40 at the significance level of 0.05, based on your sample of 20 parts.

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