You are on a team that is improving the yield of a chemical manufacturing process. The yield must be greater than 80%. In this practice, you use only a histogram to explore the distribution of yield values for 90 batches of a chemical.

1. Open the file **Chemical Manufacturing.jmp** in the course data folder.
2. Use **Analyze**, **Distribution** to create a histogram for **Yield**. Select the **Histograms Only** box before running the analysis.
    a. Describe the shape of the distribution.
    b. Describe the spread of the distribution.
    c. Describe the centering of the distribution.
    d. Based on the histogram alone, is your company meeting the specification for yield (> 80%)?

Solution:

e. The distribution is mounded in shape and is symmetric.
f. The minimum value is around 70 or 75, and the maximum around 90 or 95.
g. The center of the distribution is at approximately 82 or 83.
h. Many of the yields are below 80%, so the specification is not being consistently met.

3. Save the script to the data table, and then close the **Distribution** analysis window.

Solution:

To save the script, use the top red triangle next to **Distributions**, **Save Script**, **To Data Table...**

Go to the data table and click the green triangle to run the script and re-create the analysis.

4. Run the script to re-create the analysis. Did the script produce the same analysis?

Solution:

The script should produce the same analysis.

5. Close the **Distribution** analysis, save the data table with a new name, and close the file.

Solution:

Analysis windows remain open until you close them. Use **File** and then **Save As** to save the data table with a new name. This file will be saved in your course files folder. Note that, in future practices, you can choose whether to save your work. Keep in mind that data tables and your analysis windows stay open until you close them.

Hide Solution