Recall that you are on a team that is improving the yield of a chemical manufacturing process. The yield for a batch must be greater than 80%.

In this practice, you generate and interpret histograms and box plots for **Yield**, and one other continuous variable, **Carbamate Amount**.

1. Open the file **Chemical Manufacturing.jmp**, in the course data folder.

2. Use **Analyze**, **Distribution** to create a histogram and box plot for **Yield** and **Carbamate Amount**. Note that **Carbamate Amount** is grouped with other continuous variables. To see the individual variables in this group, click the gray icon next to **Carbamate Amount Etc.**.

3. Describe the shape of the histogram for **Yield**.

    Solution:

    The histogram is mounded in shape and appears symmetric.

4. Look at the box plot for **Yield**. There are three points that are flagged as potential outliers. What should you do about these three observations?

    Solution:

    Consider the operating range for this variable. Are these three values extreme? Are these typical values? If you are concerned about these values, you should ask questions and investigate. But if they are typical values for this characteristic, then you might not need to do anything.

5. Describe the shape of the distribution for **Carbamate Amount**.

    Solution:

    The distribution of **Carbamate Amount** appears to be uniform. There is no dominant peak or mound.

6. The box plot for **Carbamate Amount** has a wide box (a wide interquartile range) and short whiskers. Why?

    Solution:

    The IQR for **Carbamate Amount** is wide because the data are not symmetric and mounded in shape. The data are spread across the range of possible values.

Hide Solution