Density

Density is defined as mass per unit volume. It is a physical property of a substance and therefore can be used as a means of identification. Other examples of physical properties include melting points, boiling points, color, and water solubility. All are means of identification as well as a way to determine the purity of a substance.

A glass company has hired your team of scientists. Their quality control department would like to use a density test as a means to test the quality of the glass produced by their manufacturing division. Since production schedules will be involved, the density test needs to be quick as well as accurate.

Your job is to devise two methods of determining the density of the glass. You need to use the equipment available in the lab. You will then compare the two methods and recommend the method that you feel is the most accurate and efficient.

Obtain a sample of the glass and devise two methods. The following questions may help as you plan your work.

1. What is density?

2. What needs to be measured in order to calculate the density?

3. What methods can be used to determine the factors that are used to calculate density?

Once you have planned your work and performed the necessary tests, decide which method you feel is more accurate as well as efficient considering a quality control environment. Give support of your chosen method.