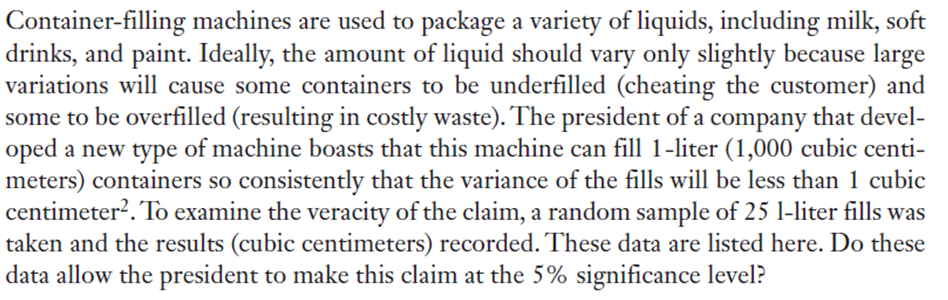
**Chapter 11**

**Hypothesis Testing for Population Variance (**

Hypothesis testing for population variance is conducted using chi-squared distribution, provided the underlying population is normally distributed.

Consider the example below:



First convert the sample variance to a chi-squared statistic:



*df* = *n* – 1

Compare the to the chi-squared critical value that has a area to the right at *df* = *n* – 1.

Interval Estimation

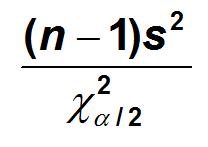
Estimate the value of at 95% confidence.

To compute this, find two chi-squared critical values – one that has an area of on its left and one that has an area of on its right.

Let the chi-squared critical value with on its right be denoted as

Let the chi-squared critical value with on its left be denoted as

Lower Confidence Limit (LCL) :



Upper Confidence Limit (UCL):

