Sensometric tests are useful for deciding if there exists a perceivable sensory difference between two or more products. The tests can be divided into two main groups – first for determining the existence of a difference based on a known and specified sensory attribute, and second for determination when the variance in the sensory attribute is not known. In this thesis we deal with sensometric tests from the first group and describe the contrast in the statistical approach of a test method that evaluates two samples and a test method evaluating more samples at once. Particularly, within the paired comparison test the calculations are based on the binomial distribution, whereas for the ranking test, statistical methods working with the ranks of random samples are used. To illustrate the process of a sensometric test, we execute a paired comparison test, and we show how a good test method for a given problem is chosen.