

Triangle taste test

SOP

Laboratory: Biotechnology

Location: GI, RM 129

SOP prepared by: R. Sanders and B. Wolfe

Last Revision: 8/30/2024

Background: Sensory science is used to analyze foods for improvements in the food industry. Sensory science can investigate how individuals react to how a product looks, tastes, texture, smells or sounds. A triangle sensory test allows researchers to distinguish if there is any sensory difference between two items. Items to be tested are labeled in a code and presented to the test participants in random arrangements of 3threes. The common order of samples are used: AAB, ABA, BAA, BBA, BAB and ABB. Once the participants taste each sample, they are asked to distinguish the one that is different. This type of test must be controlled and not include any bias or distractions that might affect the participants' decisions.

Safety: Determine that the participant has no known food allergies to ingredients in the samples.

Materials

Sample A

Sample B

Preference taste ballot

Triangle taste test placemat

Water

Plastic cups

Procedure

1. Working in pairs, each team member must receive a Triangle taste test card from the instructor and a Triangle taste test ballot. Make sure to write the test card number on the ballot to keep track of sample order.
2. Number three plastic cups 1-3.
3. Using a graduated cylinder or serological pipette, measure 20 mL of samples and place into appropriately labeled plastic cups based on the arrangement given on the card.
 - a. For example, if card reads AAB, then add 20mL of sample A to cup #1, add 20mL of sample A to cup #2 and add 20mL of sample B to cup #3.
4. Once cups are in arrangement per the card, give the samples to your partner to taste the samples going from left to right. Remind tasters to not drink all the sample at once, in case they need to go back and sample again.
5. Panelists need to cleanse their pallet by drinking water in between each sample.
6. Record which sample tasted different from the other two samples on the taste ballot.
7. Scientists are usually satisfied with 95% significance of the selected sample as in the preference taste test. Since getting correct responses with the triangle taste test may be difficult (depending on how similar the samples taste), 80% significance may be the best outcome and is reported. See table below to compare your results to those of your classmates.

This document may be reproduced for educational purposes, but it may not be reposted or distributed without crediting GrowNextGen and the Ohio Soybean Council and soybean checkoff.

Number of Testers ≈	Number of correct responses (choosing sample that is different) needed for 80% significance	Number of correct responses (choosing sample that is different) needed 95% significance
6	4	5
8	5	6
10	6	7
12	6	8
15	8	9
20	9	11
25	11	13
30	13	15
35	15	17
40	17	19

Taken from: Taste This! developed by *Fighting with Food*, SEPA NIH Grant