Australian Standard®

Sensory analysis of foods

Method 2.5: Specific methods—'A—not A' test

PREFACE

This Standard was prepared by the Standards Australia Committee on Sensory Examination of Food and is technically equivalent to International Standard ISO 8588 *Sensory analysis—Methodology—'A—not A' test.* The style and presentation of the International Standard has been modified to accord with the AS 2542 format.

METHOD

1 SCOPE This Standard sets out a method for the 'A—not A' test for use in the sensory analysis of foods.

NOTES:

1 The 'A—not A' test is used to determine whether test samples in a series are the same as, or different from, a reference sample.

2 The test is particularly useful where there are slight variations in appearance of test samples which would preclude the use of a test involving direct comparison with reference sample 'A', such as in the triangle test.

3 The test is applicable where the time interval between presentation of samples needs to be controlled, e.g., to overcome problems with lingering after-taste.

4 The test is useful for determining the sensitivity of an assessor to a particular stimulus.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
2542 Sensory analysis of foods
2542.1.1 Part 1.1: General guide to methodology—General requirements
2542.3 Part 3: Glossary of terms

3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 2542.3 apply.

4 PRINCIPLE The assessor first evaluates and becomes acquainted with reference sample 'A'. A series of samples is then presented, of which some are identical with reference sample 'A' and some are test samples 'not A'. For each sample in the series, the assessor is required to determine whether it is the same as 'A' or whether it is different, i.e., 'not A'.

The 'A—not A' test is a *forced choice* test, in which the assessor must state whether each test sample is the same as, or different from, reference sample 'A'.

5 APPARATUS The apparatus shall be selected by the test supervisor in accordance with the principles laid down in AS 2542.1.1.

6 GENERAL TEST REQUIREMENTS

6.1 Testing area Conditions in the testing area shall be in accordance with principles laid down in AS 2542.1.1, and shall not influence or impair the judgment of samples by assessors.

6.2 Assessors

6.2.1 *Qualifications, selection, aptitude* Qualifications, aptitude and selection of assessors shall be in accordance with the principles laid down in AS 2542.1.1.

6.2.2 *Number of assessors* The number of assessors shall be chosen by the test supervisor in accordance with the aim and purpose of the test, and at the required significance level.

7 PROCEDURE

7.1 Preparation of reference sample 'A' and test samples

7.1.1 *Quantity* The quantity of each product prepared for the test shall be representative of the product, and sufficient to provide an adequate number of samples for the test panel.

7.1.2 *Presentation* Samples shall be prepared in identical fashion (same apparatus, same quantities), and the method of presentation shall not prejudice the assessment.

7.1.3 *Temperature of samples* Temperature of the samples shall be specified and recorded, and shall be the same for all samples throughout the test.

NOTE: It is customary to present samples at a temperature at which the product is usually consumed.

7.1.4 *Coding* Vessels containing the test samples shall be identified by a random code, e.g., by three-digit random numbers. Usually the coding of the samples is changed for each test.

7.2 Test technique

7.2.1 *Evaluation of reference sample 'A'* At the start of the test the assessors are presented with reference sample 'A' so that they may familiarize themselves with it. It may be desirable to hold a preliminary discussion between assessors and test supervisor on the test and the nature of the samples, provided that this discussion cannot bias the assessors' judgments.

After evaluation of reference sample 'A', the assessors usually no longer have access to 'A' as a reference while evaluating the series of test samples (see Clause 7.2.2).

NOTE: There are variations of the 'A—not A' test which allow:

(a) Initial evaluation of samples of both 'A' and 'not A'.

(b) Availability of reference sample 'A' throughout the test.

7.2.2 *Evaluation of test series* After familiarization with reference sample 'A', the assessors shall evaluate a series of samples in accordance with the following requirements:

(a) All the 'not A' samples in a series shall be of the same food product, i.e., different test products shall not be mixed.

NOTE: There is a variation of the 'A—not A' test which permits the presentation of 'not A' samples of the same product type but which are themselves different.

(b) A series may contain different numbers of samples of 'A' and 'not A', but in a test each assessor shall receive the identical series (i.e., containing the same respective number of 'A' and 'not A' samples).

(c) The order of presentation of the 'A' and 'not A' samples shall be random, and the order shall be different for each assessor.

(d) According to the nature of the sample, it may be necessary, in order to avoid effects of sensory adaptation, to present successive samples in the series with a specified time interval between each sample.

(e) The assessors shall evaluate each sample in the order presented and, before testing the next sample, record on the answer form provided whether the sample is 'A' or 'not A'.

NOTE: Specimen answer forms are illustrated in Appendix A.

8 INTERPRETATION OF RESULTS At the end of the test, in its simplest form, the responses from the assessors are tabulated in a classical 2×2 table containing 'A' and 'not A' results as follows:

TABLE 1

RECORDED RESULTS

The assessor identifies	Sample presented		Total
	'A'	'not A'	
'A'	n_{11}	n_{12}	$n_{1.}$
'not A'	n_{21}	n_{22}	$n_{2.}$
Total	$n.1$	$n_{.2}$	$n_{..}$