



Sensory analysis

Part 2.4: Methodology—Duo-trio test



This Australian Standard® was prepared by Committee FT-022, Sensory Analysis of Food. It was approved on behalf of the Council of Standards Australia on 18 November 2014. This Standard was published on 17 December 2014.

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- Australian Chamber of Commerce and Industry
 - Australian Institute of Food Science and Technology
 - Australian Society of Cosmetic Chemists
 - Brewers Association of Australia and New Zealand
 - Deakin University
 - Defence Science and Technology Organisation
 - Department of Agriculture, Fisheries and Forestry, Qld
 - Food Technology Association of Australia
 - National Association of Testing Authorities Australia
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This Standard was issued in draft form for comment as DR AS 2542.2.4:2014.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Australian Standard[®]

Sensory analysis

Part 2.4: Methodology—Duo-trio test

Originated as AS 2542.2.4—1988.
Previous edition 2005.
Third edition AS 2542.2.4:2014.

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Published by SAI Global Limited under licence from Standards Australia Limited, GPO Box 476, Sydney, NSW 2001, Australia

ISBN 978 1 74342 923 5

PREFACE

This Standard was prepared by Standards Australia Committee FT-022, Sensory Analysis of Food, to supersede AS 2542.2.4—2005, *Sensory analysis, Method 2.4: Specific methods—Duo-trio test*.

The objective of this Standard is to provide a procedure for determining whether a perceptible sensory difference or similarity exists between samples of two products. The method is applicable whether a difference exists in a single sensory attribute or in several attributes.

This Standard is identical with, and has been reproduced from ISO 10399:2004, *Sensory analysis—Methodology—Duo-trio test*.

In reference to Table A.1 the exact p level for α can be calculated using binomial statistics. For example, using Microsoft Excel, the p value for $\alpha = 1 - \text{BINOMDIST}(x - 1, n, 1/2, \text{true})$ for x correct responses from n panellists.

In reference to Table A.2, the exact p level for β can be calculated using binomial statistics. For example, using Microsoft Excel, the p value for $\beta = \text{BINOMDIST}(x, n, p_d + (1 - p_d) * (1/2), \text{TRUE})$ for x correct responses from n panellists and $p_d =$ maximum allowable proportion of discriminators expressed as decimal, i.e. 10% = 0.10. Note that for similarity testing you accept the null hypothesis of no difference with 100 (1 - β)% confidence.

Hence, if the p value (for β) is equal to 0.05, you conclude that the two samples are similar with 95% confidence.

As this Standard is reproduced from an International Standard, the following applies:

- (a) In the source text ‘This International Standard’ should read ‘this Australian Standard’.
- (b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian Standards, as follows:

| <i>Reference to International Standard</i> | <i>Australian Standard</i> |
|--|------------------------------|
| ISO | AS |
| 5492 Sensory analysis—Vocabulary | 2542 Sensory analysis |
| | 2542.3 Part 3: Vocabulary |

Only normative references that have been adopted as Australian Standards have been listed.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the annex to which they apply. A ‘normative’ annex is an integral part of a Standard, whereas an ‘informative’ annex is only for information and guidance.

CONTENTS

| | | |
|------------|--|-----------|
| 1 | Scope..... | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions..... | 2 |
| 4 | Principle | 2 |
| 5 | General test conditions and requirements..... | 3 |
| 6 | Assessors | 3 |
| 6.1 | Qualification | 3 |
| 6.2 | Number of assessors..... | 4 |
| 7 | Procedure..... | 4 |
| 8 | Analysis and interpretation of results | 5 |
| 8.1 | When testing for a difference | 5 |
| 8.2 | When testing for similarity | 5 |
| 9 | Test report..... | 6 |
| 10 | Precision and bias | 6 |
| | Annex A (normative) Tables | 7 |
| | Annex B (informative) Examples..... | 12 |
| | Bibliography | 19 |

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