AS 2542.1.1—2005

Australian Standard™

Sensory analysis

Part 1.1: General guide to methodology—Types of test

This Australian Standard was prepared by Committee FT-022, Sensory Analysis. It was approved on behalf of the Council of Standards Australia on 16 September 2005.
This Standard was published on 12 October 2005.

The following are represented on Committee FT-022:

Australian Associated Brewers
Australian Food and Grocery Council
Australian Institute of Food Science and Technology Limited
Australian Paint Manufacturers' Federation
Australian Society of Cosmetic Chemists
Australian Wine and Brandy Corporation
Department of Primary Industries and Fisheries Queensland
Food Science Australia
Food Technology Association of Victoria
National Association of Testing Authorities Australia
RMIT University

This Standard was issued in draft form for comment as DR 05330.

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Originated as AS 2542.1.1—1984 and AS 2542.1.2—1984.
AS 2542.1.1—1984 and AS 2542.1.2—1984 amalgamated and designated AS 2542.1.1—2005.

Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 6941 1

PREFACE

This Standard was prepared by the Standards Australia Committee FT-022, Sensory Analysis, to supersede AS 2542.1.1—1984, *Sensory analysis of foods*, Part 1: *General guide to methodology—General requirements* and AS 2542.1.2—1984, *Sensory analysis of foods*, Part 2: *General guide to methodology—Types and choice of test*.

Since the time these Standards were written, the use of sensory analysis methods has extended to many non-food products including personal care, pharmaceutical and textile products, for example. Therefore the Standards needed to be revised to reflect this extension to non-food products.

In addition, sensory analysis methods have been more widely used as market research tools in recent times and the Standards needed to be revised to reflect this. The use of sensory analysis methods with panels of analytical assessors to draw conclusions about samples of product evaluated differs from the use of sensory analysis methods with samples of target consumers to infer conclusions about a total population of consumers. Therefore the Standards needed to be revised to reflect the differences in use of analytical and consumers panels.

The scope of the Standard has been extended to cover consumer analysis and the title has changed. Other parts of the AS 2542, *Sensory analysis of foods* series of Standards will follow suit on revision.

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FOREWORD

Sensory analysis is concerned with obtaining information about the sensory attributes of products such as appearance, flavour, texture and other functional attributes that are important in the usage of the product. Products are submitted to assessors who are asked to examine the samples and answer specific questions about one or more sensory attributes according to the objectives of the investigation.

There are two broad approaches covered by sensory analysis—

(a) analytical approach; and

(b) consumer approach.

Analytical sensory analysis is conducted in sensory laboratories and uses selected and expert assessors.

Consumer sensory analysis is a tool using consumers (naive assessors) who represent a defined target market, and is conducted in a range of defined environments.

Analytical sensory analysis is performed by people, not instruments, and because of the subjective nature of the tests, the results are influenced by human physiological and psychological factors. To minimize bias (i.e. maximize internal validity) and make the overall test result as valid as possible, the tests are designed on a statistical basis and are conducted in such a way that perceptions are influenced as little as possible by extraneous factors. The aim in analytical sensory analysis is to get the panel of selected, expert or trained assessors to act as a reliable measuring instrument excluding any reference to issues of acceptability measures.

Consumer sensory analysis is not focused on minimizing environmental biases, rather the focus is on maximizing external validity or more like ‘real life’. The primary focus in consumer sensory analysis, is to collect spontaneous responses from consumers about products and its acceptability.

It is essential that the type of test is appropriate for the purpose, a standardized procedure is followed using an appropriate number of the desired assessors, and results subjected to appropriate statistical analysis and interpretation.

STANDARDS AUSTRALIA

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1 SCOPE

This Standard describes in general terms the factors that need to be considered in carrying out sensory analysis of products. These factors include: testing location, test apparatus sample preparation, sample presentation and assessors.

NOTE: The most important considerations in sensory testing are experimental design, and physiological and psychological aspects. These aspects are covered in greater depth in AS 2542.1.3 and in the AS 2542.2 series.

This Standard sets out the various types of test used in sensory analysis. The application and use of the specific test methods described in the AS 2542.2 series are discussed.

This Standard recognizes that there are two extreme applications of sensory analysis. The application of this Standard deals with the two extremes and any combinations should be justified by the purpose of the test.

The two extremes are: the analytical analysis and consumer analysis.

The analytical approach should be used when the focus is to measure the product and the sampling frame is the population of the products.

The consumer approach should be used when the focus is to measure the consumer opinion or hedonics and the sampling frame is the population of target consumer.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS		
2542	Sensory analysis of foods	
2542.1.3	Method 1.3:	General guide to methodology—Selection of assessors
2542.2	Part 2:	Specific methods (series)
2542.3	Part 3:	Glossary of terms

3 DEFINITIONS

For definitions of terms relating to sensory analysis, see AS 2542.3.

4 TESTING LOCATION

4.1 Analytical analysis

The aim should be to allow the assessors to perform their task free from distractions in a neutral and generally comfortable environment. The testing area should be separate from the sample preparation area and it should be kept free of odours from such things as cooking, cleaning materials, cosmetics and tobacco. Lighting should be kept constant throughout the test.