



Australian Government

MSL975005 Conduct sensory analysis

Release: 1

MSL975005 Conduct sensory analysis

Modification History

Release 1. Supersedes and is equivalent to MSL975005A Conduct sensory analysis

Application

This unit of competency covers the ability to set up and coordinate sensory analysis and assess the results obtained from a routine sensory analysis.

This unit of competency is applicable to laboratory technicians and technical officers working in the food industry. Although a supervisor may not always be present, the technician will follow standard operating procedures (SOPs) that will clearly describe the scope of permitted practice in modifying testing procedures and for communicating results to people outside of the laboratory.

While no specific licensing or certification requirements apply to this unit at the time of publication, laboratory operations are governed by relevant legislation, regulations and/or external accreditation requirements. Local requirements should be checked.

Pre-requisite Unit

Nil

Competency Field

Testing

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1	Select panellists/individuals for sensory analysis	1.1	Perform initial screening of potential panellists/individuals based on the testing brief
		1.2	Use information to select suitable people
		1.3	Analyse and report the results used to establish a panel
2	Prepare	2.1	Prepare panellists for sensory analysis

	panellists for sensory analysis	2.2	Conduct any training required to detect test characteristics
		2.3	Instruct panellists on recording and reporting requirements of test data
3	Prepare samples for sensory analysis	3.1	Prepare reference samples to be used for the sensory analysis specification
		3.2	Prepare evaluation samples to sensory analysis specification
		3.3	Apply food safety procedures in the preparation and presentation of samples
		3.4	Identify and report on any defects or abnormalities in samples
4	Conduct routine sensory analysis	4.1	Select appropriate test materials for the information required
		4.2	Ensure tests are conducted according to workplace procedures
		4.3	Analyse data
		4.4	Report on process and results in accordance with workplace procedures
5	Evaluate and report findings	5.1	Assess the possible effects of group attributes
		5.2	Review reliability of results for group bias
		5.3	Complete all relevant documentation and present findings
6	Maintain a safe work environment	6.1	Use established work practices to ensure personal safety and that of other personnel
		6.2	Minimise the generation of waste and environmental impacts

- 6.3 Ensure the safe collection of laboratory waste for subsequent disposal
- 6.4 Care for and store equipment and reagents as required

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Standards, codes, procedures and/or workplace requirements

Standards, codes, procedures and/or workplace requirements include the latest version of one or more of:

- Australian and international standards covering the requirements for the competence of testing and calibration laboratories, laboratory safety and quality management
- national work health and safety (WHS) standards and codes of practice, and national measurement regulations and guidelines
- industry-specific Australian Standards covering sensory analysis, assessing odour and taint, and assessing modifications to the flavour of foodstuffs due to packaging
- workplace documents, such as SOPs; quality and equipment manuals; calibration and maintenance schedules; material safety data sheets (MSDS) and safety procedures; material, production and product specifications; production and laboratory schedules; workplace recording and reporting procedures; and waste minimisation and safe disposal procedures
- sampling plans and procedures (labelling, preparation, storage, transport and disposal)
- test procedures (validated and authorised), and sensory analysis criteria

Samples

Samples include one or more of:

- raw materials, ingredients, final products, packaging materials, and materials which come in contact with the product

- materials at stages of production
- process aids and adjuncts

Tests

Tests are performed to:

- determine sample appearance, texture, aroma and flavour

Testing methods

Testing methods include, but are not limited to, one or more of:

- triangular test, duo-trio test, ranking test, paired comparison test and blending test
- flavour profile
- threshold analysis
- discriminative testing, descriptive testing and affective testing

The results obtained from the sensory analysis

The results obtained from the sensory analysis are applied to one or more of:

- marketing studies
- purchasing requirements
- quality assurance at various stages of production
- quality control and troubleshooting
- research and development of new products
- customer returns
- product recalls

WHS and environmental management requirements

WHS and environmental management requirements include:

- complying with WHS and environmental management requirements at all times, which may be imposed through state/territory or federal legislation. These requirements must not be compromised at any time
- applying standard precautions relating to the potentially hazardous nature of samples
- accessing and applying current industry understanding of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health, where relevant

Unit Mapping Information

Release 1. Supersedes and is equivalent to MSL975005A Conduct sensory analysis

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>

Assessment Requirements for MSL975005 Conduct sensory analysis

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Performance Evidence

Evidence of competence in this unit must satisfy all of the requirements of the elements and performance criteria, and include demonstration of:

- setting up and coordinating at least one (1) sensory analysis
- selecting appropriate test procedures
- developing and using questionnaires
- preparing evaluation samples by dosing or processing
- ensuring samples are in a suitable condition for analysis
- performing initial screening of panellists and determining their suitability
- selecting suitable panellists
- conducting training required to detect test characteristics
- communicating effectively with panellists who have diverse cultural and social backgrounds
- thoroughly analysing routine sensory analysis data and evaluating the results
- recording and reporting the significance of results, including the discussion of any errors and/or unexpected variation to appropriate personnel
- following workplace safety procedures.

Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- anatomy, physiology and functions of taste and smell
- the primary flavour characteristics of sweet/sour, umamic and bitter/salty
- interaction of sensory activity, such as the interaction between taste and smell, and effect of temperature on samples
- associated characteristics of mouth feel and appearance
- consumer research methods
- information used to select suitable panellists, such as:
 - workplace procedures, including selection criteria
 - whether people have been trained or not
 - information from an initial screening questionnaire
 - availability
 - characteristics of unsuitable people, such as smokers
 - sources of bias

- principles of descriptive, discriminative and affective sensory analysis methods
- principles of effective control of the sensory testing environment, such as conditions that can dull sensitivity
- attributes of panellists which could affect the results, such as:
 - age, gender and ethnicity
 - smoking
 - medications
 - qualifications and trained/untrained
 - random panel
 - cultural food preferences/food styles
- likely causes of variation in results and their control
- work health and safety(WHS) and environment requirements.

Assessment Conditions

- Judgment of competence must be based on holistic assessment of the evidence. Assessment methods must confirm consistency of performance over time, rather than a single assessment event.
- This unit of competency is to be assessed in the workplace or a simulated workplace environment. A simulated workplace environment must reflect realistic operational workplace conditions that cover all aspects of workplace performance, including the environment, task skills, task management skills, contingency management skills and job role environment skills.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Knowledge evidence may be collected concurrently with performance evidence or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept in each case).
- This unit of competency may be assessed with:
 - MSL925001 Analyse data and report results
- Holistic assessment methods include:
 - review of written reports, which include an analysis of findings from sensory tests, conducted by the candidate
 - observation of candidate conducting panel tests
 - responses to market scenarios and/or case studies
 - written/oral questions to assess required knowledge.
- Access is required to samples, instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
 - statistical data sheets and charts, logbooks and scientific calculators
 - relevant ISO Standards and Australian Standards

- a sensory evaluation panel room and group of panellists.
- Assessors must satisfy the assessor competency requirements that are in place at the time of the assessment as set by the VET regulator.
- The assessor must demonstrate both technical competence and currency.
- Technical competence can be demonstrated through:
 - relevant VET or other qualification/Statement of Attainment AND/OR
 - relevant workplace experience.
- Currency can be demonstrated through:
 - performing the competency being assessed as part of current employment OR
 - having consulted with a laboratory about performing the competency being assessed within the last twelve months.

Links

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