



**Australian Government**

# **Assessment Requirements for MSL963001 Operate basic handblowing equipment**

**Release: 1**

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## Modification History

Release 1. Supersedes and is equivalent to MSL963001A Operate basic handblowing equipment

## Performance Evidence

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

- selecting appropriate grades of glass and preparing them for use
- safely operating handblowing equipment to produce at least three (3) examples of basic glasswork
- using basic bench/hand glasswork techniques and equipment to fabricate at least three (3) items of general glass apparatus involving:
  - cutting, heating, bending, shaping, sealing and related glassworking techniques
  - maintaining temperature and stress parameters and safe working pressures
- making and grinding at least two (2) components, such as stopcocks, that meet specifications
- storing glass appropriately
- starting up, setting up, shutting down and maintaining equipment in accordance with work instructions
- optimising of equipment operating parameters
- reporting atypical results and problems to appropriate personnel according to workplace procedures
- completing workplace documentation accurately and communicating work results
- maintaining work area, equipment and tools in accordance with workplace procedures.

## Knowledge Evidence

Must provide evidence that demonstrates knowledge of:

- composition and nature of glass types
- basic chemical and physical concepts relating to properties and behaviour of glass
- critical material properties and appropriate glassworking parameters
- function and correct use of apparatus, safe start-up and shutdown procedures
- pre-heating procedures
- basic theory of re-entry angles and stress points
- set-up and annealing/conditioning process
- relationship of temperature and temporary and permanent stress
- pre-annealing, annealing and post-annealing processes
- potential quality problems, including:
  - temperature and strain problems
  - devitrification
  - non-uniform thickness of seals or joints
  - equipment problems
  - poor optics, distortion, excessive breakage, non-uniform break pattern, incorrect cross bend, excessive bow, scratches and poor glass shape
  - loss of utilities
- relevant hazards, work health and safety (WHS) and environment requirements.

## Assessment Conditions

- Judgement 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. The timeframe must allow for assessment of operation under all normal and a range of abnormal conditions.
- 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).
- Holistic assessment methods include:
  - inspection of glasswork and workplace documentation completed by the candidate
  - review of candidate's work outputs over a period of time to assess accuracy, consistency and timeliness
  - feedback from supervisors and/or customers
  - observation of the candidate safely operating basic handblowing equipment
  - oral or written questioning about properties of glass, fabrication techniques, quality problems and safe work procedures.
- Access is required to instruments, equipment, materials, workplace documentation, procedures and specifications associated with this unit, including, but not limited to:
  - a scientific glassblowing facility, appropriate safety equipment, materials and safe work procedures, and fabrication methods
  - bench burner, hand torch, micro torch and ribbon burner, gas supplies and gas economiser
  - hand tools, such as carbon paddles and mandrels, range of forceps, glass tubing gauges, angle setting jigs, calipers, glass support rollers, brass shapers, carbon rods, glass knife, stainless steel gauze, vernier calipers and other measuring tools, and strain viewer, dydinium glasses and polariscope
  - glassworking lathe, mechanical glass cutters and saws, and mechanical glass grinding equipment
  - annealing oven
  - measuring and recording equipment.
- 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**

MSA Training Package Implementation Guides - <http://mskills.org.au/training-packages/info/>