

<b>UNIT CODE</b>	<b>SISCAQU015</b>
<b>UNIT TITLE</b>	<b>Test pool water quality</b>
<b>APPLICATION</b>	<p>This unit describes the performance outcomes, skills and knowledge required to complete pool water tests and visual inspections, record test data and inspection results, and promptly report any irregularities for corrective action.</p> <p>This unit applies to public aquatic facilities including those operated by commercial, not-for-profit, community and government organisations.</p> <p>It has particular application to aquatic technical operators, but can apply to other individuals working at different levels of responsibility. All would be guided by manufacturer instructions, and organisational monitoring schedules and testing procedures.</p> <p>The skills in this unit must be applied in accordance with Commonwealth and State or Territory legislation, Australian standards and industry codes of practice.</p> <p>No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.</p>
<b>PREREQUISITE UNIT</b>	Nil
<b>COMPETENCY FIELD</b>	Aquatics
<b>UNIT SECTOR</b>	Community Recreation
<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b>
<i>Elements describe the essential outcomes</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Conduct pool water tests and visual inspections.	<p>1.1 Complete periodic pool water tests according to organisational monitoring schedules.</p> <p>1.2 Collect water samples using testing equipment and resources suited to purpose of water quality test, and according to manufacturer instructions and organisational safety practices.</p> <p>1.3 Complete regular visual inspections of pool and water to identify water quality issues and contamination incidents.</p> <p>1.4 Clear and report contamination promptly according to organisational incident response procedures.</p>

2. Record and report test data and inspection results.	2.1 Record accurate pool water test data and visual inspection results according to organisational procedures. 2.2 Identify and promptly report pool water test and visual inspection irregularities to appropriate personnel for corrective action. 2.3 Update pool water monitoring log according to organisational procedures.
<b>FOUNDATION SKILLS</b>	
<i>Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.</i>	
<b>SKILLS</b>	<b>DESCRIPTION</b>
Reading skills to:	<ul style="list-style-type: none"> <li>■ interpret potentially unfamiliar and complex manufacturer instructions.</li> </ul>
Writing skills to:	<ul style="list-style-type: none"> <li>■ use fundamental sentence structure to complete forms and basic reports that require factual information.</li> </ul>
Oral communication skills to:	<ul style="list-style-type: none"> <li>■ provide clear and succinct information to others about water quality irregularities and contamination incidents.</li> </ul>
Numeracy skills to:	<ul style="list-style-type: none"> <li>■ extract, interpret, and record sometimes complex numerical data, symbols and abbreviations involving degrees, volume, percentages and ratios in manufacturer instructions, monitoring schedules and record keeping documents</li> <li>■ interpret, use and record temporal data, including minutes, hours, days and weeks.</li> </ul>
Planning and organising skills to:	<ul style="list-style-type: none"> <li>■ schedule time into day-to-day activities to complete monitoring activities as part of a logical and time-efficient work flow.</li> </ul>
<b>UNIT MAPPING INFORMATION</b>	Supersedes and is not equivalent to SISCAQU001 Test pool water quality
<b>LINKS</b>	Companion Volume Implementation Guide

<b>TITLE</b>	Assessment Requirements for SISCAQU015 Test pool water quality
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<b>PERFORMANCE EVIDENCE</b>	<p>Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:</p> <ul style="list-style-type: none"> <li>■ correctly interpret pool water monitoring schedules and follow manufacturer instructions to complete the following:             <ul style="list-style-type: none"> <li>○ three pool water tests, at different times, for one of the following types of disinfectant:                 <ul style="list-style-type: none"> <li>● free chlorine, combined chlorine and total chlorine (where chlorine is used at the facility), or</li> <li>● free chlorine, combined chlorine and total chlorine plus cyanuric acid tests (where cyanuric acid is used with chlorine as a stabiliser at the facility), or</li> <li>● free bromine and total bromine (where bromine is used at the facility)</li> </ul> </li> <li>○ three pool water tests, at different times, for each of the following:                 <ul style="list-style-type: none"> <li>● pH</li> <li>● total alkalinity</li> <li>● calcium hardness</li> <li>● total dissolved solids</li> <li>● temperature</li> </ul> </li> </ul> </li> <li>■ complete accurate records of all water testing activities</li> <li>■ visually inspect pool water on two occasions and according to actual incidents or simulations:             <ul style="list-style-type: none"> <li>○ identify two different types of water contamination</li> <li>○ respond by manually clearing the contamination, and report the incident for further corrective action.</li> </ul> </li> </ul>
<b>KNOWLEDGE EVIDENCE</b>	<p>Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:</p> <ul style="list-style-type: none"> <li>■ organisational procedures for:             <ul style="list-style-type: none"> <li>○ testing and recording pool water data</li> <li>○ reporting and responding to water quality irregularities and contamination incidents</li> </ul> </li> <li>■ organisational:             <ul style="list-style-type: none"> <li>○ role responsibilities, boundaries and reporting lines for pool water monitoring and corrective action</li> <li>○ work health and safety practices for testing pool water quality</li> </ul> </li> <li>■ an overview of the relevant state, territory or local government public health regulations for maintaining pool water quality:             <ul style="list-style-type: none"> <li>○ the overarching health related purpose of pool water testing for public aquatic facilities</li> <li>○ types of tests that must be completed by the pool operator, and record keeping requirements</li> <li>○ water quality guideline and advisory documents that are available and how these are used by aquatic operators</li> </ul> </li> <li>■ different types of pools, water types and locations, and relevant types of chemical pool water tests:             <ul style="list-style-type: none"> <li>○ free chlorine, combined chlorine and total chlorine</li> <li>○ cyanuric acid</li> <li>○ free bromine and total bromine</li> <li>○ pH</li> <li>○ total alkalinity</li> <li>○ calcium hardness</li> <li>○ total dissolved solids</li> </ul> </li> </ul>

- for each of the above listed chemical pool water tests:
  - their purpose
  - typical periodic schedules
  - equipment, resources and techniques used to collect samples
- microbiological tests completed on pool water:
  - common types of microbiological tests completed:
    - [heterotrophic colony count \(HCC\)](#)
    - [Escherichia coli \(E. coli\)](#)
    - [Pseudomonas aeruginosa](#)
  - typical periodic schedules
  - equipment, resources and techniques used to collect microbiological samples
  - relevant state, territory or local government jurisdictional requirements for microbiological samples to be collected only by a designated authority
- temperature of pool water:
  - maximum temperature allowed by regulations
  - equipment and techniques used to test pool water temperature
  - relationship with other pool water parameters
- the meaning of operational monitoring of pool water quality and the differences between automated and manual monitoring
- the meaning of verification monitoring, how this particularly applies to microbiological testing, and the role of external laboratories
- visual inspections completed on pools and water:
  - typical periodic schedules
  - parts of the pool typically inspected
  - types of water quality irregularities that can be visually observed including turbidity and how turbidity meters are used
- common types of pool water contamination incidents, risks to health, and typical immediate responses that are required to manually clear the contamination:
  - faecal incident soft stool (diarrhoea)
  - faecal incident formed stool
  - vomit
  - environmental: animal droppings, sand, soil, leaves, grass
- formats and inclusions of:
  - organisational pool water monitoring schedules
  - manufacturer instructions for pool water testing equipment and resources
  - pool water test and visual inspection records, incident reports and how to complete these.

<b>ASSESSMENT CONDITIONS</b>	<p>Skills must be demonstrated in an aquatic facility with an operating indoor or outdoor pool used by members of the public. Facilities can include those operated by commercial, not-for-profit, community and government organisations.</p> <p>Assessment must ensure use of:</p> <ul style="list-style-type: none"> <li>■ pool water testing equipment and resources, and manufacturer instructions</li> <li>■ pool water monitoring schedules</li> <li>■ template pool water test and visual inspection records and incident reports</li> <li>■ organisational procedures for: <ul style="list-style-type: none"> <li>○ testing and recording pool water data</li> <li>○ reporting and responding to water quality irregularities and contamination incidents.</li> </ul> </li> </ul> <p>Assessors must:</p> <ul style="list-style-type: none"> <li>■ satisfy the Standards for Registered Training Organisations requirements for assessors, and</li> <li>■ have a collective period of at least two years' experience working in public pool water maintenance, where they have applied the skills and knowledge covered in this unit of competency; the two years' experience can incorporate full and part time experience.</li> </ul>
<b>LINKS</b>	Companion Volume Implementation Guide