Qualification Specification

HABC Level 2 Award in Legionella Awareness (QCF)

Qualification Number: 600/7034/1
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Introduction
This Qualification Specification is designed to outline all you need to know in order to offer this qualification in your centre. If you have any further questions, please contact your Account Manager.

Qualification Details
The HABC Level 2 Award in Legionella Awareness (QCF) has been accredited by the regulators of England and Wales (Ofqual and the Welsh Government) and is part of the Qualifications and Credit Framework (QCF).

It is supported by Proskills, the Sector Skills Council for the Process and Manufacturing industry.

Key facts
- **QAN:** 600/7034/1
- **Learning Aim Reference:** 60070341
- **Guided learning hours (GLH):** 8
- **Credit Value:** 2
- **Assessment Method:** Multiple-choice examination

Qualification Overview
This qualification is designed for learners who work in environments where legionella growth is a risk. It aims to raise awareness in order to prevent waterborne disease caused by legionella bacteria.

This qualification covers the health effects of Legionnaires' Disease, the control measures that should be in place to prevent it as well as the consequences for not complying with relevant legislation. In addition, this qualification contains specialist units covering the risks associated with either cooling towers and evaporative condensers or hot and cold water systems.

It contains two pathways which should be relevant to the learner’s workplace:

- **Pathway 1**  
  Cooling towers and evaporative condensers
- **Pathway 2**  
  Hot and cold water systems

Entry Requirements
There are no prerequisites for this qualification.

Qualification Structure
This qualification is made up of mandatory and optional units which have been split into two pathways.

- **Unit 1:** Principles of legionella awareness
- **Unit 2:** Understanding the risks associated with legionella in cooling towers and evaporative condensers
- **Unit 3:** Understanding the risks associated with legionella in hot and cold water systems
Pathway 1: Cooling towers and evaporative condensers

Unit 1: Principles of legionella awareness
Unit 2: Understanding the risks associated with legionella in cooling towers and evaporative condensers

Pathway 2: Hot and cold water systems

Unit 1: Principles of legionella awareness
Unit 3: Understanding the risks associated with legionella in hot and cold water systems

Full details of all units are contained at the end of this specification.

Assessment Guidance
The units within this qualification are each assessed by multiple-choice examination. The table below outlines the number of questions to appear on each examination:

<table>
<thead>
<tr>
<th>Unit title</th>
<th>Number of questions</th>
<th>Pass mark</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principles of legionella awareness</td>
<td>15</td>
<td>10 / 15</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Understanding the risks associated with legionella in cooling towers and evaporative condensers</td>
<td>12</td>
<td>8 / 12</td>
<td>30 minutes</td>
</tr>
<tr>
<td>Understanding the risks associated with legionella in hot and cold water systems</td>
<td>12</td>
<td>8 / 12</td>
<td>30 minutes</td>
</tr>
</tbody>
</table>

Following the assessment, a list of results will be provided to the centre Contacts stating whether learners have passed or failed. Certificates for those who are successful will be dispatched for distribution by the centre Contacts.

Age ranges
These qualifications are approved for delivery to the age ranges 16+.

Geographical Coverage
These qualifications are suitable for learners in England, Wales or Northern Ireland.

Tutor Requirements
HABC require that Nominated Tutors have teaching experience and either hold a qualification or have experience in the relevant subject area.

Suitable subject area qualifications may include:
- Degree or Dip HE in a related subject such as: Chemistry, Microbiology
- HNC/D in a related subject (as outlined above)
- Other HABC approved qualifications

Nominated tutors may be approved for each pathway separately.

Where applicants do not hold the above qualifications, the required experience for each pathway are outlined
Pathway 1: Cooling Towers and Evaporative Condensers

It is recommended that nominated tutors should have a minimum of 5 years’ experience in the water treatment industry together with a training qualification/experience.

Pathway 2: Hot and Cold Water Systems

It is recommended that nominated tutors have a minimum of 3 years’ experience in facilities management (or similar role) within industries that deal with risk of legionella (such as the leisure industry) together with a training qualification/experience.

Suitable teaching qualifications include:

- HABC Level 3 International Award in Delivering Training (ADT)
- Level 3 or 4 PTLLS or above
- Diploma or Certificate in Education
- Bachelors or Masters Degree in Education
- City and Guilds Teachers Certificate or equivalent
- Level 3 or 4 NVQ in Training and/or Development
- Professional Trainers Certificate
- Proof of at least 30 hours of training in any subject

All Tutors, regardless of the pathway they are applying to teach, will be assessed on an individual basis. Applicants should be prepared to provide statements of competence and/or a verifiable teaching history of Legionella Awareness/Management qualifications as well as references, if deemed to be required.

Nominated Tutors should also be able to demonstrate relevant experience and knowledge in a work context and provide evidence of engagement with the subject field and continuing professional development.

Reasonable Adjustments and Special Considerations

HABC have measures in place for learners that require additional support. Please see the HABC Reasonable Adjustments Policy.

ID requirements

All learners must be instructed to bring photographic identification to the assessment to be checked by the invigilator/assessor. This instruction should be given ahead of the course/assessment when the learner registers and/or with any pre-course materials.

It is the responsibility of the centre to have systems in place to ensure that the person taking an examination/assessment is indeed the person they are purporting to be. All centres are therefore required to ensure that each learner’s photographic identification is checked before they are allowed to undertake the examination/assessment and write the type of photo identification provided by each learner on the Learner List under “Identification Provided”. HABC will accept the following as proof of a learner’s identity:

- Valid passport (any nationality)
- Signed UK photo card driving licence
- Valid warrant card issued by HM Forces, Police
- Other photographic ID card, e.g. employee ID card (must be current employer), student ID card, travel card.

For more information on learner ID requirements, please refer to section 8 of the HABC Examination and Invigilation Regulations contained within the Core Manual.
Progression

Progression routes could include:-

- Level 3 Award in Legionella Control for Responsible Persons (QCF)
- Level 3 Award in Health and Safety in the Workplace (QCF)
- Level 3 Award in Risk Assessment (QCF)

Useful Websites

- http://www.proskills.co.uk/
- http://www.hse.gov.uk/
Appendix 1: Rules of Combination

The HABC Level 2 Award in Legionella Awareness (QCF) qualification contains three pathways. Details of the rules of combination associated with each pathway are listed below.

PATHWAY 1:
HABC Level 2 Award in Legionella Awareness (Cooling Towers and Evaporative Condensers) (QCF)
Learners must achieve all units in this group:

<table>
<thead>
<tr>
<th>Unit reference</th>
<th>Unit Title</th>
<th>Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/504/4585</td>
<td>Principles of legionella awareness</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>A/504/6221</td>
<td>Understanding the risks associated with legionella in cooling towers and evaporative condensers</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

PATHWAY 2:
HABC Level 2 Award in Legionella Awareness (Hot and Cold Water Systems) (QCF)
Learners must achieve all units in this group:

<table>
<thead>
<tr>
<th>Unit reference</th>
<th>Unit Title</th>
<th>Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>L/504/4585</td>
<td>Principles of legionella awareness</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>F/504/6222</td>
<td>Understanding the risks associated with legionella in hot and cold water systems</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Appendix 2: All Units

Unit 1: Principles of Legionella Awareness

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>The learner will</td>
<td>The learner can</td>
</tr>
<tr>
<td>1. Understand the health effects of Legionnaires’ Disease</td>
<td>1.1 Summarise the history of Legionnaires’ Disease</td>
</tr>
<tr>
<td></td>
<td>1.2 Describe the typical symptoms of Legionnaires’ Disease</td>
</tr>
<tr>
<td></td>
<td>1.3 Describe the conditions required for legionella bacteria to grow</td>
</tr>
<tr>
<td></td>
<td>1.4 Identify the groups of people most commonly at risk</td>
</tr>
<tr>
<td></td>
<td>1.5 Describe the methods of transmission and infection</td>
</tr>
<tr>
<td>2. Understand how legislation and codes of practice can support the management of legionella bacteria</td>
<td>2.1 Identify legislation and codes of practice relating to the management of legionella bacteria</td>
</tr>
<tr>
<td></td>
<td>2.2 Outline key roles and responsibilities associated with the management of legionella</td>
</tr>
<tr>
<td></td>
<td>2.3 Identify the consequences for non-compliance with legislation and codes of practice</td>
</tr>
<tr>
<td>3. Understand how to control the risks of legionella bacteria</td>
<td>3.1 Outline the process of risk management</td>
</tr>
<tr>
<td></td>
<td>3.2 Explain the importance of staff training and assessment</td>
</tr>
<tr>
<td></td>
<td>3.3 Explain the importance of an annual review</td>
</tr>
</tbody>
</table>
Unit Content

LO1: Understand the health effects of Legionnaires’ Disease

- The history of Legionnaires’ Disease:
  - A description of the first identified outbreak in Philadelphia
  - How the fact that people outside the hotel caught the disease is relevant to sites today

- The typical symptoms of Legionnaires’ Disease:
  - Initial symptoms of fever, chills, headache and muscle pain
  - Dry non-productive cough and severe breathing difficulties
  - Confusion, delirium, diarrhoea and vomiting
  - The difference between Legionnaires’ Disease and Pontiac Fever

- The conditions required for legionella bacteria to grow:
  - Temperatures between 20°C and 50°C
  - The presence of biofilm or other microorganisms
  - Stationary and stagnant water
  - How legionella bacteria multiply
  - How legionella multiply within hosts in the natural environment

- The groups of people most commonly at risk:
  - Men
  - The elderly
  - Smokers
  - Individuals with compromised immune systems
  - Why some people are more susceptible
  - How it is difficult to prevent individuals physically being exposed to the risk

- The methods of transmission and infection:
  - Inhalation of contaminated aerosols
  - Inhalation of drop nuclei
  - How using this knowledge we can try and avoid the transmission of the disease

LO2: Understand how legislation and codes of practice can support the management of legionella bacteria

- Legislation and codes of practice relating to the management of legionella bacteria:
  - A description of the background to ACoP L8
  - The difference between the Approved Code of Practice and the Guidance
  - Its relationship with The Health and Safety at Work Act, COSHH and RIDDOR

- The key roles and responsibilities associated with the management of legionella:
  - Duty Holder
  - Responsible Person
  - Nominated Deputies
  - Operators
• Contractors

• The consequences for non-compliance with legislation and codes of practice
  o The approach of the HSE when investigating an outbreak
  o How failing to comply with the ACoP section alone can lead to a prosecution
  o Improvement notices

LO3: Understand how to control the risks of legionella bacteria

• The process of risk management:
  o The principles of a legionella risk assessment

• The importance of staff training and assessment:
  o the requirements for competent staff
  o Knowledge and training (both formal and hands-on training)
  o the importance of individuals understanding their roles

• The importance of an annual review:
  o the requirements for reviewing the entire control scheme on an annual basis
    including:
    ▪ structure
    ▪ competence of staff
    ▪ control scheme
    ▪ records
    ▪ control in last twelve months
Unit 2: Understanding the risks associated with legionella in cooling towers and evaporative condensers

Unit number: A/504/6221
Credit: 1
GLH: 4
Level: 2

Learning Outcomes

<table>
<thead>
<tr>
<th>The learner will</th>
<th>Assessment Criteria</th>
</tr>
</thead>
</table>
| **1. Understand the risks associated with legionella in cooling towers and evaporative condensers** | **1.1** Outline how cooling towers and evaporative condensers operate  
**1.2** Describe the factors that contribute to the risk within cooling towers and evaporative condensers |
| **2. Know how to control the risk of legionella in cooling towers and evaporative condensers** | **2.1** Explain the requirement for routine monitoring  
**2.2** Describe how to carry out routine chemical testing  
**2.3** Describe how to carry out routine physical checks  
**2.4** State the requirements for carrying out legionella testing  
**2.5** Explain the requirements for cleaning and disinfection |

Unit Content

**LO1: Understand the risks associated with legionella in cooling towers and evaporative condensers**

- How cooling towers and evaporative condensers operate:
  - The principle of latent heat of evaporation using alcohol
  - How a tower/condenser uses the principle of latent heat of evaporation to work
  - The individual parts of tower/condenser

- The factors that contribute to the risk within cooling towers and evaporative condensers:
  - why a tower/condenser poses a risk:
    - Generation of aerosols
    - Distribution of aerosols
    - Temperature
    - Nutrients
    - Contamination
LO2: Know how to control the risk of legionella in cooling towers and evaporative condensers

- The requirement for routine monitoring:
  - Checks required on a weekly and monthly basis
  - How these checks contribute towards controlling the risk factors within a system

- How to carry out routine chemical testing
  - Weekly chemical checks required on site with an explanation of:
    - limits of each test
    - pit falls
    - and how to correct control
  - Recording of results
  - Remedial actions

- How to carry out routine physical checks
  - Weekly physical checks required on site
  - Recording of results
  - Remedial actions

- The requirements for carrying out legionella testing
  - Process and limitations of legionella testing
  - Interpretation of results
  - Course of action in response to a positive result

- The requirements for cleaning and disinfection
  - How to carry out the clean of a tower
  - The minimum frequency
  - The circumstances under which additional cleans are required
Unit 3: Understanding the risks associated with legionella in hot and cold water systems

Unit number: F/504/6222
Credit: 1
GLH: 4
Level: 2

<table>
<thead>
<tr>
<th>Learning Outcomes</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The learner will</strong></td>
<td><strong>The learner can</strong></td>
</tr>
</tbody>
</table>
| 1. Understand the risks associated with legionella in hot and cold water systems | 1.1 Outline how hot and cold water systems operate  
1.2 Describe the factors that contribute to the risk within hot and cold water systems |
| 2. Know how to control the risk of legionella in hot and cold water systems | 2.1 Explain the requirement for routine monitoring  
2.2 Describe how to carry out routine checks  
2.3 State the requirements for carrying out legionella testing  
2.4 Explain the requirements for cleaning and disinfection |

Unit Content

LO1: Understand the risks associated with legionella in hot and cold water systems

- How hot and cold water systems operate:
  - Why their design and method of operation can cause systems to present a risk

- The factors that contribute to the risk within hot and cold water systems:
  - Why systems pose a risk, including:
    - generation of aerosols  
    - stagnant conditions  
    - low use of systems  
    - temperature of operation  
    - nutrients  
    - contamination  
  - How removing parts of the system, and controlling the operation of the system, can be used to minimise and control the risk factors, including the need for routine checks
LO2: Know how to control the risk of legionella in hot and cold water systems

- The requirement for routine monitoring:
  - Which checks are required on a weekly and monthly basis
  - How they contribute towards controlling the risk factors within a system

- How to carry out routine checks:
  - Weekly physical (and chemical) checks required on site
  - Quarterly physical (and chemical) checks and tasks required on site
  - Six-monthly physical (and chemical) checks and tasks required on site
  - Annual physical (and chemical) checks and tasks required on site
  - Where these checks need to be conducted
  - The limits of for each test:
    - pit falls
    - how to correct control

- The requirements for carrying out legionella testing
  - The process and limitations of legionella testing
  - Interpretation of results
  - The course of action in response to a positive result

- The requirements for cleaning and disinfection
  - Carrying out the clean of a system
  - The frequency and the circumstances under which additional cleans are required