

ICTQual AB



Qualification Specification

ICTQual AB Level 1 Award in H₂S Safety



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ICTQual AB's

Level 1 Award in H2S Safety

Contents

ICTQual AB Level 1 Award in Confined Space Entry 2

About ICTQual AB's..... 2

Course Overview..... 2

Certification Framework.....4

Entry Requirements.....4

Qualification Structure4

Centre Requirements5

Support for Candidates7

Assessment7

Unit Descriptors8 to 14

Qualification Specification about

ICTQual AB Level 1 Award in H2S Safety

About ICTQual AB's

ICTQual AB is a distinguished awarding body based in the United Kingdom, dedicated to fostering excellence in education, training, and skills development. Committed to global standards, ICTQual AB's provides internationally recognized qualifications that empower individuals and organizations to thrive in an increasingly competitive world. Their offerings span diverse industries, including technical fields, health and safety, management, and more, ensuring relevance and adaptability to modern workforce needs.

ICTQual AB's delivers high-quality educational solutions through a network of Approved Training Centres worldwide. Their robust standards and innovative teaching methodologies equip learners with practical knowledge and skills for personal and professional growth. With a mission to inspire lifelong learning and drive positive change, ICTQual AB's continuously evolves its programs to stay ahead of industry trends and technological advancements.

Course Overview

The ICTQual AB Level 1 Award in H2S Safety is designed to give learners basic knowledge and awareness of hydrogen sulfide (H₂S) gas and the risks it presents in the workplace. This qualification focuses on simple facts, routine procedures, and safe working practices for environments where H₂S may be present. Learners will understand where H₂S is commonly found and how exposure can affect health and safety. The course introduces basic control measures, warning signs, and emergency actions that must be followed under guidance. It supports learners in selecting and using relevant safety information and carrying out routine tasks responsibly. This qualification is suitable for individuals working under supervision in industries such as oil and gas, petrochemicals, and wastewater management. By completing this award, learners can recognize simple hazards, follow instructions correctly, and contribute to maintaining a safe and controlled working environment.

Aims

The aim of this qualification is to help learners understand the basic hazards of hydrogen sulfide gas and follow simple safety procedures to reduce risk. It supports learners in carrying out routine work activities safely and responsibly while recognizing when H₂S may pose a danger and knowing how to respond appropriately under supervision.

Objectives

- ✓ By completing this qualification, learners will be able to:
- ✓ Recognize what hydrogen sulfide (H₂S) is and where it may be found
- ✓ Identify basic health and safety risks associated with H₂S exposure
- ✓ Follow simple and routine H₂S safety procedures
- ✓ Use basic safety information and warning signs correctly
- ✓ Identify whether safety actions taken have been effective
- ✓ Respond to simple H₂S-related problems under guidance
- ✓ Take responsibility for completing safety tasks as directed

Targeted Audience

This qualification is suitable for:

- ✓ Entry-level workers in oil and gas, petrochemical, wastewater, and related industries
- ✓ New employees working in environments where H₂S may be present
- ✓ Support staff and site operatives with limited prior safety training
- ✓ Individuals requiring basic H₂S awareness to meet workplace safety requirements

Certification Framework

Qualification title	ICTQual AB Level 1 Award in H2S Safety
Course ID	HSE0006
Total Qualification Time	10
Guided Learning Hours	5
Grading Type	Pass / Fail
Competency Evaluation Assessment	Coursework / Assignments / Verifiable Experience The assessment and verification process for ICTQual AB's qualifications involves two key stages: Internal Assessment and Verification: ✓ Conducted by the staff at the Approved Training Centre (ATC) to ensure learners meet the required standards through continuous assessments. ✓ Internal Quality Assurance (IQA) is carried out by the centre's IQA staff to validate the assessment process. External Quality Assurance: ✓ Managed by ICTQual AB's verifiers, who periodically review the centre's assessment and IQA processes. Verifies that assessments are conducted to the required standards and ensures consistency across centres

Entry Requirements

The ICTQual Level 1 Award in H2S Safety course welcomes participants from diverse backgrounds who meet specific entry requirements aimed at ensuring a conducive learning environment and optimal engagement.

- ✓ Participants must be at least 18 years old to enroll in the course.
- ✓ A fundamental understanding of reading, writing, and basic arithmetic is required. This ensures that participants can comprehend course materials and instructions, and complete any written assessments or practical tasks.
- ✓ Participants should be in good health and physically capable of wearing personal protective equipment (PPE) such as respirators or gas masks. This is crucial for participating in practical sessions that simulate real-life scenarios involving H2S.
- ✓ While not a strict requirement, having some experience in industries where H2S is present (such as oil and gas, petrochemicals, or wastewater management) can be beneficial. This prior knowledge helps participants relate course content to their work environment.
- ✓ Proficiency in the language of instruction is essential. Participants should be able to understand and communicate effectively in the language used for teaching the course to grasp the technical terms and safety protocols discussed.

Qualification Structure

This qualification comprises 6 mandatory units. Candidates must successfully complete all mandatory units to achieve the qualification.

Mandatory Units	
Unit Ref#	Unit Title
HSE0006-01	Introduction to Hydrogen Sulfide (H ₂ S)
HSE0006-02	Health Risks and Symptoms of H ₂ S Exposure
HSE0006-03	Detection and Monitoring of H ₂ S
HSE0006-04	Safety Procedures and Emergency Response
HSE0006-05	Personal Protective Equipment (PPE)
HSE0006-06	Legislative and Regulatory Requirements

Centre Requirements

To ensure quality training delivery, centres must adhere to the following standards:

1. Centre Approval

- ✓ Centres must be formally approved by ICTQual AB's before delivering this qualification.
- ✓ Approval involves a review of facilities, policies, and staff qualifications.

2. Qualified Staff

- ✓ **Tutors:** Must hold a Level 4 or higher qualification in a relevant safety or technical field such as Occupational or Industrial Health & Safety, Construction or Industrial Safety, H₂S Safety, Hazardous Atmosphere Monitoring, Permit-to-Work systems, or equivalent recognised safety certifications.
- ✓ **Assessors:** Must hold a recognized assessor qualification (e.g., CAVA, AVRA) or equivalent)
- ✓ **Internal Quality Assurers (IQAs):** Must hold a recognized IQA qualification (e.g. Level 4 Award in the IQA and Level 4 Certificate in Leading the IQA) and experience to oversee assessment standards.

3. Learning Facilities

Centre must offer:

- ✓ Private study areas and internet-enabled workspaces (for blended or physical delivery)
- ✓ Academic and pastoral support for learners
- ✓ Administrative support must be available to manage enrolment, tracking, and learner queries efficiently

4. Health and Safety Compliance

- ✓ All training facilities must comply with health and safety regulations.
- ✓ Centres must conduct regular risk assessments for practical activities.

5. Learning Resources

- ✓ **Course Materials:** Approved textbooks, study guides, and digital content must align with the qualification standards.
- ✓ **Assessment Tools:** Templates and guidelines must be provided to ensure standardized evaluation processes.
- ✓ **E-Learning Support:** Centres offering online or blended learning must implement an effective Learning Management System (LMS).

6. Assessment and Quality Assurance

- ✓ Centres must ensure assessments meet ICTQual AB's competency standards.
- ✓ Internal quality assurance (IQA) must be conducted to maintain consistency.
- ✓ External verifiers from ICTQual AB's will review assessment and training practices.

7. Learning Support

- ✓ **Qualification Guidance:** Support for coursework and assignments.
- ✓ **Career Pathway Assistance:** Information on progression opportunities in sustainability and energy sectors.
- ✓ **Accessibility Support:** Accommodations for learners with disabilities or language barriers.

8. Policies and Compliance

Centres must uphold the following policies in accordance with ICTQual AB's standards:

- ✓ Equality, Diversity, and Inclusion Policy.
- ✓ Health and Safety Policy.
- ✓ Safeguarding and Learner Protection Policy.
- ✓ Complaints and Appeals Procedure.
- ✓ Data Protection and Confidentiality Policy.

9. Reporting Requirements

- Centres must provide ICTQual AB's with regular reports on learner registrations, progress, and certification outcomes.
- Assessment records must be maintained for external auditing and quality assurance purposes.

Support for Candidates

Centres should ensure that materials developed to support candidates:

- ✓ Facilitate tracking of achievements as candidate's progress through the learning outcomes and assessment criteria.
- ✓ Include information on how and where ICTQual AB's policies and procedures can be accessed.
- ✓ Provide mechanisms for Internal and External Quality Assurance staff to verify and authenticate evidence effectively.

This approach ensures transparency, supports candidates' learning journeys, and upholds quality assurance standards.

Assessment

This qualification is competence-based, requiring candidates to demonstrate proficiency as defined in the qualification units. The assessment evaluates the candidate's skills, knowledge, and understanding against the set standards. Key details include:

1. Assessment Process:

- ✓ Must be conducted by an experienced and qualified assessor.
- ✓ Candidates compile a portfolio of evidence that satisfies all learning outcomes and assessment criteria for each unit.

2. Types of Evidence:

- ✓ Observation reports by the assessor.
- ✓ Assignments, projects, or reports.
- ✓ Professional discussions.
- ✓ Witness testimonies.
- ✓ Candidate-produced work.
- ✓ Worksheets.
- ✓ Records of oral and written questioning.
- ✓ Recognition of Prior Learning (RPL).

3. Learning Outcomes and Assessment Criteria:

- ✓ **Learning Outcomes:** Define what candidates should know, understand, or accomplish upon completing the unit.
- ✓ **Assessment Criteria:** Detail the standards candidates must meet to demonstrate that the learning outcomes have been achieved.

This framework ensures rigorous and consistent evaluation of candidates' competence in line with the qualification's objectives.

Unit Descriptors

HSE0006-01- Introduction to Hydrogen Sulfide (H₂S)

This unit provides learners with basic knowledge of hydrogen sulfide (H₂S), including what it is, where it is commonly found, and why it is dangerous. Learners will become aware of simple facts, properties, and sources of H₂S in the workplace. The unit supports recognition of hazards during routine work activities.

Learning Outcome:

Assessment Criteria:

- | | |
|---|--|
| 1. Understand the basic properties and characteristics of hydrogen sulfide (H₂S). | 1.1 State that H ₂ S is a gas with no color.
1.2 Identify the "rotten egg" smell of H ₂ S at low levels.
1.3 Mention that H ₂ S is heavier than air and settles in low areas. |
| 2. Identify common sources and environments where H₂S may be present. | 2.1 Name one natural source, like a volcano or swamp.
2.2 Identify one industrial source, like oil wells or sewers.
2.3 List one place on a farm where H ₂ S is found, such as manure pits. |
| 3. Describe the physical and chemical properties of H₂S, including its smell, color, and states under various conditions. | 3.1 State that H ₂ S can easily catch fire (flammable).
3.2 Identify that H ₂ S can dissolve in liquids like water or oil.
3.3 Explain that H ₂ S can cause metal pipes to rust or weaken (corrosion). |
| 4. Recognize the industrial processes and natural occurrences that can produce H₂S. | 4.1 State that the rotting of plants and waste produces H ₂ S.
4.2 Identify gas processing plants as a place where H ₂ S is removed.
4.3 Name paper mills or tanning factories as industries that create H ₂ S. |

HSE0006-02- Health Risks and Symptoms of H2S Exposure

This unit introduces the basic health risks associated with hydrogen sulfide exposure. Learners will identify common symptoms of H2S exposure and understand how it can affect the body. The unit focuses on recognizing early warning signs and reporting concerns under guidance to prevent harm during routine work tasks.

Learning Outcome:	Assessment Criteria:
1. Explain how hydrogen sulfide affects human health.	1.1 Identify that breathing in H2S is the main way it enters the body. 1.2 State that H2S stops the body from using oxygen. 1.3 Identify that H2S can irritate the eyes, nose, and throat.
2. Identify the short-term and long-term health effects of H2S exposure.	2.1 List two quick effects, like coughing or a headache. 2.2 State that very high levels can cause instant unconsciousness. 2.3 Identify a long-term effect, like feeling tired or losing memory.
3. Recognize the early warning signs and symptoms of H2S poisoning.	3.1 Identify "loss of smell" as a sign that gas levels are rising. 3.2 List dizziness or blurred vision as a warning sign. 3.3 Recognize a dry or sore throat as an early symptom. 3.4 Understand exposure stages and symptoms at different levels.
4. Understand the stages of H2S exposure and the corresponding symptoms at different concentration levels.	4.1 State the symptoms of low-level exposure (e.g., eye stinging). 4.2 State the symptoms of medium-level exposure (e.g., extreme sleepiness). 4.3 State the danger of high-level exposure (e.g., heart failure).

HSE0006-03- Detection and Monitoring of H2S

This unit provides basic awareness of how hydrogen sulfide is detected and monitored in the workplace. Learners will understand the purpose of gas detectors and alarms and how to respond to alerts. The unit supports the use of simple procedures to identify unsafe conditions and follow instructions during routine activities.

Learning Outcome:	Assessment Criteria:
1. Demonstrate knowledge of different types of H2S detection equipment, including portable and fixed gas detectors.	1.1 Identify a personal gas monitor worn on the uniform. 1.2 Identify a fixed gas alarm installed on a wall. 1.3 State the difference between a portable and a fixed detector.
2. Properly use and maintain H2S detection devices.	2.1 Demonstrate how to switch on a gas detector. 2.2 Perform a battery check before using the device. 2.3 Show how to keep the sensor area clean from dirt or oil.
3. Implement monitoring techniques to measure H2S levels in the workplace accurately.	3.1 Place the detector near the mouth and nose (breathing zone). 3.2 Use a pump to test the air in a deep hole before going inside. 3.3 Check the gas reading before entering a restricted area.
4. Interpret readings from H2S detection equipment and understand the significance of detection limits.	4.1 Read the "PPM" number on the screen correctly. 4.2 Identify what a flashing red light or loud beep means. 4.3 State if a specific reading (e.g., 5 ppm) is safe or dangerous.

HSE0006-04- Safety Procedures and Emergency Response

This unit covers basic safety procedures for working in areas where hydrogen sulfide may be present. Learners will understand simple emergency actions, evacuation procedures, and reporting requirements. The unit supports following clear instructions and responding appropriately to simple problems under supervision to reduce risks during work activities.

Learning Outcome:	Assessment Criteria:
1. Follow standard operating procedures for working safely in areas where H2S is present.	1.1 Check the "Wind Direction" using a windsock before starting work. 1.2 Work only with a partner (Buddy System) in H2S areas. 1.3 Follow all signs and warning posters on the site.
2. Develop and implement effective pre-entry and post-exit procedures for H2S-prone areas.	2.1 Sign the entry logbook before going into a gas-prone area. 2.2 Test the air with a monitor before stepping inside. 2.3 Sign out of the logbook once the work is finished.
3. Create and follow evacuation plans, including identifying muster points and ensuring proper communication.	3.1 Hold your breath and move away from a leak immediately. 3.2 Move "Upwind" (towards where the wind is coming from). 3.3 Press the emergency alarm button if you see a leak.
4. Provide first aid and appropriate medical response for H2S exposure victims.	4.1 Identify the location of the nearest Muster Point (meeting area). 4.2 Use the correct emergency path shown on the site map. 4.3 Stay at the Muster Point until a supervisor counts everyone.
5. Provide first aid and appropriate medical response for H2S exposure victims.	5.1 Move a victim to a fresh air area only if it is safe for you. 5.2 Call for an ambulance or medic immediately. 5.3 Keep the victim warm and still until help arrives.

HSE0006-05- Personal Protective Equipment (PPE)

This unit introduces learners to basic personal protective equipment used for H2S safety. Learners will identify common types of PPE and understand their purpose. The unit focuses on correct use, basic checks, and reporting damaged equipment while following workplace guidance during routine tasks.

Learning Outcome:

Assessment Criteria:

- | | |
|---|--|
| 1. Identify the types of personal protective equipment (PPE) used for H2S protection. | 1.1 Identify a full-face breathing mask (SCBA).
1.2 Identify an emergency escape hood (EEBD).
1.3 Name the safety goggles used to protect eyes from gas. |
| 2. Select appropriate PPE based on the level of H2S risk and workplace requirements. | 2.1 Choose an escape set for leaving a building during an alarm.
2.2 Choose a full air tank (SCBA) for working inside a gas area.
2.3 Pick the right size mask to ensure a tight fit on the face. |
| 3. Properly don, doff, inspect, and maintain H2S-related PPE, including respirators and gas masks. | 3.1 Put on a mask and do a "leak test" with your hand.
3.2 Check the air pressure gauge to see if the tank is full.
3.3 Inspect the rubber straps for any cracks or damage. |
| 4. Ensure the effective use and longevity of PPE through proper maintenance and storage practices. | 4.1 Wipe the mask clean after every use.
4.2 Store the breathing kit in its proper bag or locker.
4.3 Report any broken PPE to the supervisor immediately. |

HSE0006-06- Legislative and Regulatory Requirements

This unit provides basic awareness of key legal and workplace rules related to hydrogen sulfide safety. Learners will understand the importance of following site procedures, safety signs, and instructions. The unit supports compliance with simple regulatory requirements and taking responsibility for safe behavior under guidance.

Learning Outcome:

Assessment Criteria:

- | | |
|--|---|
| 1. Understand the local and international regulations and standards related to H2S safety. | 1.1 Identify the name of the local safety law (e.g., Labor Law).
1.2 State that there are legal limits on gas exposure (Threshold Limits).
1.3 Identify the official safety signs required by law. |
| 2. Comprehend compliance requirements and the legal responsibilities of employers and employees regarding H2S safety. | 2.1 State that workers must wear PPE provided by the company.
2.2 State that companies must provide H2S training to all staff.
2.3 Explain that workers have the right to refuse unsafe work. |
| 3. Apply industry best practices for H2S safety as recommended by regulatory bodies and safety organizations. | 3.1 Attend the daily safety "Toolbox Talk" before starting.
3.2 Report any "Near Miss" where gas was almost released.
3.3 Follow the "Permit to Work" rules for high-risk jobs. |
| 4. Stay informed about updates and changes in legislation and standards concerning H2S. | 4.1 Check the safety notice board for new rules.
4.2 Attend a safety refresher course once a year.
4.3 Read the latest Safety Data Sheet (SDS) for H2S gas. |

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