COURSE OVERVIEW HE1935
Industrial Hygiene Certification Program
BOHS-M501: Measurement of Hazardous Substances (Including Risk Assessment)

(Accredited by the British Occupational Hygiene Society - BOHS)

Course Title

Industrial Hygiene Certification Program: BOHS-M501: Measurement of Hazardous Substances (Including Risk Assessment) *(Accredited by the British Occupational Hygiene Society - BOHS)*

Course Date/Venue

August 04-08, 2025/Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference

HE1935

Course Duration

Five days/3.7 CEUs/37 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course aims to provide candidates with an outline to the general approach advocated for the assessment of the health risk(s) associated with exposure to hazardous substances and then focuses in detail on the role and application of atmospheric monitoring.

It addresses the theory of sampling, practical sampling and analytical considerations and the calculation and presentation of results. Numerical calculations are included to ensure that the underlying principles are understood. It covers principles of occupational hygiene on the basis of anticipation, recognition, evaluation and control of hazards that can be encountered in the workplace.

This course will require at least 45 hours of study time, of which at least 37 hours will be taught (teaching and practical assessments) and 8 hours will be independent (in the candidates' own time).

On Completing this course successfully, participants will be able to:-

- Describe the general approach to health risk assessment, including the role of atmospheric monitoring
- Select appropriate equipment to measure specific airborne contaminants and devise a suitable sampling strategy
- Present the results in a form useful for health risk assessment purposes to enable management to comply with relevant legislation

During this interactive course, participants will learn the risk assessment process and information gathering; the workplace sampling strategies, survey design and personal and area sampling; the surface and other measurements and confined spaces; the sampling pumps, sampling heads and filters and direct reading instruments; the calibration of air sampling equipment; the trace level analytical methods, gravimetric analysis, microscopy and quality assurance of analysis; the hygiene standards and biological monitoring; and the calculation, interpretation and presentation of results.

Course Objectives

Upon the successful completion of this course, each participant will be able to:

- Achieve the OHTA Certificate in BOHS-M501: Measurement of Hazardous Substances (Including Risk Assessment)
- Define a hazard and risk in terms of chemical safety and carryout risk assessment process and information gathering
- Assess risk and use risk assessments to decide on appropriate actions to protect worker health
- Record risk assessment information in a useful form and discuss the role of risk assessment in occupational health and safety management
- Carryout workplace sampling strategies, survey design, personal sampling and area sampling
- Apply surface and other measurements and identify the nature of confined spaces hazards
- Choose the most appropriate air sampling equipment for the contaminant under investigation and be able to operate the equipment
- Identify sampling pumps, sampling heads and filters and direct reading instruments
- Calibrate air sampling equipment and apply sample analysis methods and techniques covering trace level analytical methods, gravimetric analysis, microscopy and quality assurance of analysis
- Discuss the principles of hygiene standards calculation / setting of standards and the commonly used international hygiene standards in other countries
- Explain how exposure measurements relate to hygiene standards and how hygiene standards are used to protect worker health
- Discuss the definitions, terminology, units, ‘Sk’ ‘Sen’ notations and situations that may require different interpretation of standards
- Identify the limitations of exposure standards in the light of this background
- Apply biological monitoring and discuss the role of measurement of metabolites in biological monitoring
- Carryout numerical evaluations, interpretation and presentation of results

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of hazardous substances measurement for technicians and technologists who conduct measurements and testing in workplaces.

Exam Eligibility & Structure

Candidates who undertake this course are expected to be aware of the contents of the Control of Substances Hazardous to Health regulations (COSHH), HSE Guidance HSG173, Monitoring Strategies for Toxic Substances and HSE guidance General Methods for Sampling and Gravimetric Analysis of Respirable and Inhalable Dust.

Suggested References and Further Reading

(1) BOHS Technical Guide No 15 Direct Reading Instruments
(2) ILO Chemical Control Toolkit
(3) The Occupational Environment – Its Evaluation and Control (the "White Book") published by AIHA Press
(4) Air Sampling Instruments for the evaluation of atmospheric contaminants published by ACGIH
(5) Occupational Hygiene, Edited by Harrington and Gardiner, Published by Blackwell Science

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Training Fee

US$ 7,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Exam Fee

US$ 200 per Delegate.

Accommodation

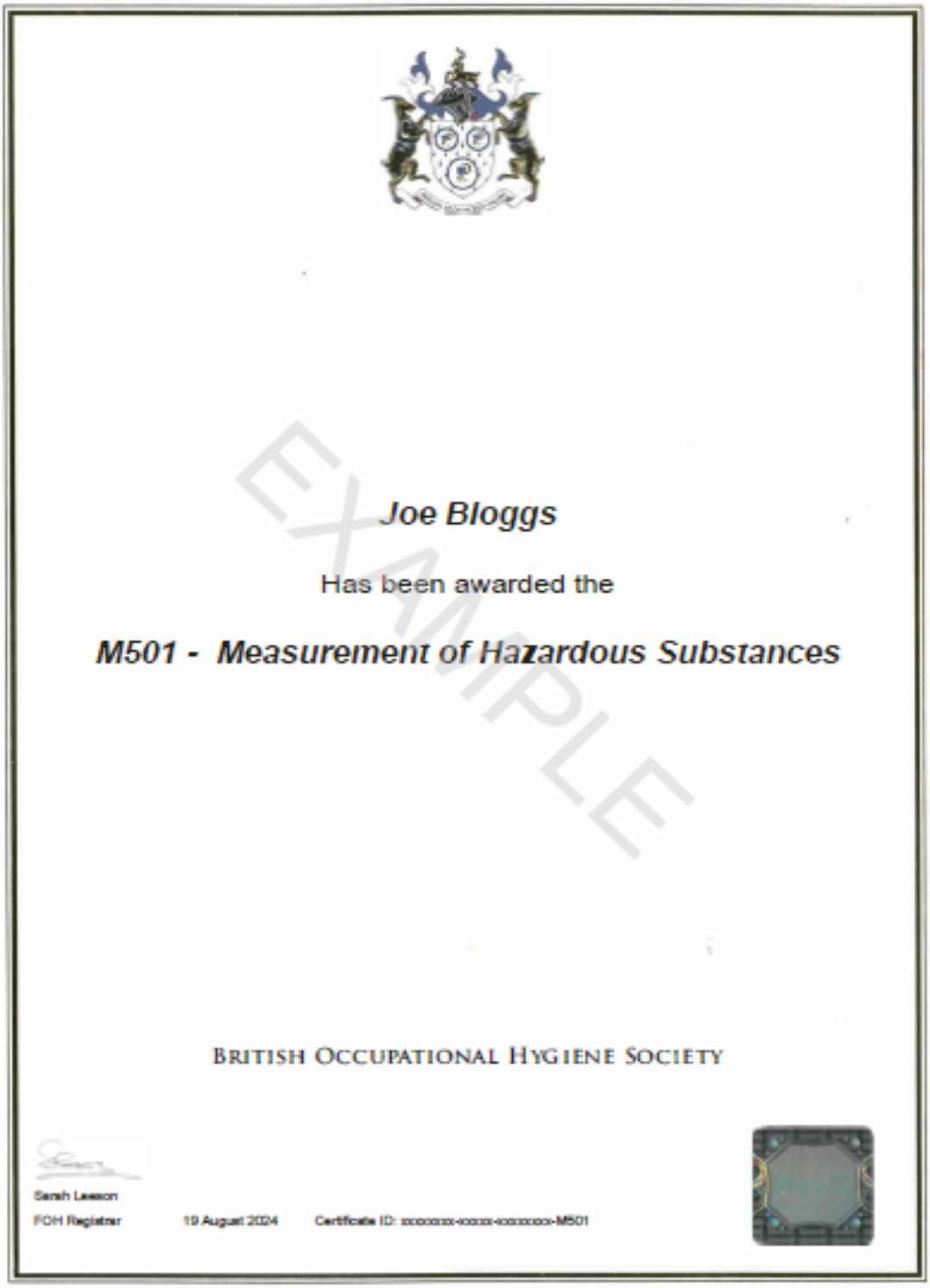
Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Certificate(s)

(1) BOHS-M501 – Measurement of Hazardous Substances (Including Risk Assessment) will be awarded to participants who have successfully completed the course and passed all the parts (A and B) within 12 months.

BOHS Certificate(s)

The following certificate is a sample of the BOHS certificates that will be issued to successful candidates:-



(2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 15-Nov-23

HTME No. 74851

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE1935	Industrial Hygiene Certification Program BOHS-M501: Measurement of Hazardous Substances (Including Risk Assessment) *(Accredited by the British Occupational Hygiene Society - BOHS)*	November 11-15, 2023	37	3.7

Total No. of CEU's Earned as of TOR Issuance Date **3.7**

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Accredited Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2018 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2018 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by

P.O. Box 26070, Abu Dhabi, United Arab Emirates | Tel.: +971 2 3091 714 | E-mail: info@haward.org | Website: www.haward.org

Certificate Accreditations

Haward Technology is accredited by the following international accreditation organizations:-

- The British Occupational Hygiene Society (BOHS)

Haward Technology is an Approved Training Partner of the British Occupational Hygiene Society (BOHS) for the M201 and M500 series modules, which are designed to maintain a high standard of occupational hygiene education.

Together with BOHS, Haward Technology supports hygiene professionals in their mission to create safe working environments globally and is committed to advancing the practice of occupational hygiene to promote healthier workplaces worldwide.

- British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.7 CEUs** (Continuing Education Units) or **37 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Peter Jacobs, is a **Senior HSE Consultant** with almost **25 years** of extensive experience within **Oil & Gas**, **Refinery** and **Petrochemical** industries. His wide experience covers in the areas of **OHTA Modules** (Measurement of Hazardous Substances, Thermal Environment, Noise Measurement & Its Effects, Asbestos & Other Fibers, Control of Hazardous Substances, Ergonomics Essentials, Health Effects of Hazardous Substances), Advanced **Industrial Hygiene**, **Incident Command & Report Writing**, **HAZOP**, **HAZMAT**, **HAZID**, **Health Risk** Assessment, Modern **Safety Risk** Management, **Process Risk** Management, **Root Cause Analysis** Techniques, **HSE Management System** Development & Implementation, **SAESI Hazardous Materials** for the **First Responder Operations (NFPA 472)**, **Industrial Safety** & Housekeeping, **Job Safety & Hazard** Analysis, **Hazardous Substances** Measurement, **Workplace** Control, Physical Agents, **Emergency Response**, **Chemical & Biological** Operations, Basic **Safety & Loss Prevention**, Safety in **Chemical Laboratory**, **Confined Space Safety**, **Industrial Hygiene**, **Occupational Health & Hygiene**, **Ergonomics**, **Biological** Assessment, **Radiation** with Radon/Thoron Assessment, **Radiation** Protection Safety, **Radiation** Monitoring, Natural **Radiation** Sources, **Nuclear** Regulatory Act, **Industrial Ventilation**, **Air Pollution Dispersion** Modelling, Basic Clandestine **Drug Laboratory** Investigation, **Chemical** Engineering, **Fire** Safety & Evacuation, **Evacuation** Safety, Safety Orientation, Hand & Power Tools Safety, Isokinetic Stack Sampling, Dust Exposure, Quantifying Workplace Stressors, Noise & Airborne Pollutants, Thermal Stress, Illumination, Mine Health & Safety, Statistical Method Validation, Legal Audit Compliance, Riot & Crowd Control, ISO 14000, OHSAS 18000, ISO 17025 and ISO 9000.

During his career life, Mr. Jacobs has gained his practical and field experiences through his various significant positions and dedication as the **Forensic Science Laboratory Manager**, **Occupational Hygienist**, **Radiation Protection Officer**, **Lead Practitioner**, Safety, Health & Environmental (**SHE**) **Specialist**, **First Responder**, **OHS Inspector**, **Ambulance Assistant** and **LPG Distributor Auditor** from various international companies like the Sedulitas, Richards Bay Minerals, Sasol and South African Police Service.

Mr. Jacobs has a **Master's** degree in **Public Health – Occupational Hygiene**, a **National Diploma** in **Purchasing Management** and an **Intermediate Certificate in Mine Environmental Control** an **Accredited South African Emergency Services Institute** (**SAESI**). Further, he is a **Certified Instructor/Trainer**, an Appointed Commissioned Officer, a SAIOH/ IOHA President, an Assessor/Moderator of Health & Welfare SETA, a **Registered Occupational Hygienist** of the Southern African Institute for Occupational Hygiene, awarded as a SAIOH **Occupational Hygienist** of the Year Award and a well-regarded member of the British Occupational Hygiene Society (**BOHS**), Mine Ventilation Society of South Africa (MVSSA) and South African Radiological Protection Association (SARPA). He has further delivered numerous trainings, courses, seminars, workshops and conferences worldwide.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Monday, 04th of August 2025***

0730 – 0745	*Registration & Coffee*
0745 – 0800	*Welcome & Introduction*
0800 – 0815	***PRE-TEST***
0815 - 0930	***Risk Assessment*** *To be Able to Define a Hazard in Terms of Chemical Safety & be Able to Define Risk in Terms of Chemical Safety • The Risk Assessment Process & Information Gathering (To be Aware of Various Sources of Information Available & be Able to Make Judgements About the Significance of a Hazard from Toxicological Properties, Physiochemical Properties, & Other Data)*
0930 - 0945	*Break*
0945 – 1030	***Risk Assessment (cont'd)*** *Assessing Risk (To Understand the Relationship Between Risk, Hazard, & Exposure; to be Able to Make Judgements About Likely Risk Based Upon the Possible Health Effects, Physiochemical Properties, & Use of a Hazardous Material; to be Able to Make Judgements About Probable Risk Based Upon Measurement Data)*
1030 - 1230	***Risk Assessment (cont'd)*** *To be Able to Use Risk Assessments to Decide on Appropriate Actions to Protect Worker Health*
1230 – 1330	*Lunch*
1330 – 1500	***Risk Assessment (cont'd)*** *To be Able to Record Risk Assessment Information in a Useful Form & Understand Why It Is Important to Record Risk Assessment Information*
1500 – 1515	*Break*
1515 – 1620	***Risk Assessment (cont'd)*** *Understand the Role of Risk Assessment in Occupational Health & Safety Management*
1620 – 1630	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today & Advise Them of the Topics to be Discussed Tomorrow*
1630	*End of Day One*

Day 2: ***Tuesday, 05th of August 2025***

0730 – 0930	***Air Sampling Theory & Practice: Workplace Sampling Strategies*** *Strategies - Understand What a Sampling Strategy Is & Its Importance in Gaining Representative Results & be Aware of How the Choice of a Strategy May Affect the Measurement Results • Surveys - Understand the Different Types of Surveys & be Aware of How the Results From Various Surveys can be Used • Routine Monitoring - Understand the Role of Routine Monitoring & be Able to Plan Basic Routine Monitoring Programmes • Interpretation of Results - to be Able to Interpret Results, Understand How Monitoring Strategy & Survey Type can Affect Results & be Able to Make Judgements About the Significance of Measurement Results • Basic Statistical Analysis - be Aware of How Basic Statistical Tools can be Used to Help With the Interpretation of Measurement Results • Quality Assurance - Understand the Importance of Quality Assurance in Surveys*
0930 - 0945	*Break*

0945 - 1100	***Air Sampling Theory & Practice: Survey Design*** *Non-Sampling Sampling Approaches - to be Able to Apply Non-Sampling Approaches Such As the ILO Chemical Control Toolkit or COSHH Essentials & Understand the Uses & Limitations of Such Approaches • Survey Design - to Understand the Effects of Survey Design on Measurement Results & be Able to Design Basic Surveys to Produce Representative Measurements (What, Who, Where, When, etc • Sample Numbers - be Able to Calculate the Appropriate Number of Samples Required to Produce Representative Measurements & Understand the Basis of Statistically Representative Sampling • Grab Sampling - Understand the Use of & Limitations of Grab Sampling • Acute & Chronic Effects - to be Able to Design Sampling Strategies That Are Appropriate for Different Types of Health Effects • 8 Hour Twa & 15 Minute Stel Sampling - Understand the Significance of Twa & Stel Measurements, be Able to Adjust Measurements for Different Sampling Periods & be Able to Calculate Twa Results From Multiple Measurements*
1100 – 1230	***Air Sampling Theory & Practice: Personal Sampling*** *Understand the Location of the Breathing Zone & Its Significance in Personal Sampling • Effect of Sample Head Location • Understand the Effect of Sample Head Location on the Sample Collected • Operator Variability • Understand the Reasons for the Differences in Exposure Measurement Between Operators • Understand the Effect of Sample Head Location on the Sample Collected • Understand the Reasons for the Differences in Exposure Measurement Between Operators*
1230 – 1330	*Lunch*
1330 - 1500	***Air Sampling Theory & Practice: Area Sampling*** *Understand the Function & Limitations of Background Measurements • Understand the Effect of Particle Size & Physiochemical Properties on Contaminant Spread • Be Aware of the Techniques for Assessing the Quality of Breathing Air Supplied for Use in Air-Fed Respirators & Self-Contained Breathing Apparatus*
1500 - 1515	*Break*
1515 – 1600	***Air Sampling Theory & Practice: Surface & Other Measurements*** *Be Aware of the Techniques & Uses of Surface Contamination Measurements • Be Aware of the Uses of In-Situ XRF Metal Analysis • Be Aware of How Settlement Rates of Particulates can Affect Their Dispersion • Understand the Role of Bulk Sampling in Determining the Nature of a Contaminant • Understand the Techniques for Assessing Skin Exposure*
1600 - 1620	***Air Sampling Theory & Practice: Confined Spaces*** *Identification & the Nature of Confined Spaces Hazards • Be Aware of Where Confined Space Hazards Might Exist • Understand the Nature of such Hazards • Be Aware of the Techniques for Assessing & Monitoring Confined Spaces*
1620 – 1630	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today & Advise Them of the Topics to be Discussed Tomorrow*
1630	*End of Day Two*

Day 3: **Wednesday, 06th of August 2025**

0730 – 0930	***Air Sampling Equipment: Sampling Pumps*** *Common Types of Pumps - be Aware of the Different Types of Sampling Pump & Their Use • Fixed Volume Hand Pumps for Indicator Tubes - Understand the Correct Use of Fixed Volume Hand Pump • Mechanism of Operation - be Aware of the Basic Operating Systems for sampling Pumps • Intrinsic Safety of Sampling Equipment - be Aware of the Need for Intrinsically Safe Sampling Pumps in Certain Environments*
0930 - 0945	*Break*
0945 - 1100	***Air Sampling Equipment: Sampling Heads & Filters*** *Particulates - Understand the Techniques for Sampling of Common Particulates • The Use of Size Fractionation Techniques for Respirable Dusts • Sampling Heads - be Aware of the Different Types of Sampling Heads & Their Uses & Understand the Effect of the Filter Head on the Sample Collected • Filters - be Aware of the Different Types of Filters, Understand the Use of Filters for Trapping Particulates & be Aware of the Use of Chemically Treated Filters for Sampling for Reactive Materials • Gases & Vapours - Understand the Use of Whole Air Sampling, the Use of Solvation for Trapping Gases & Vapours, the Use of Chemical Derivatisation for Sampling for Reactive Materials & Understand the Use of Adsorption • Types of Adsorbents & Absorbents - Understand the Basic Principles of Adsorption, the Difference Between Adsorbents & Absorbents & be Aware of the Common Types of Adsorbents & Their Uses • Colorimetric Tubes - be Aware of the Operating Principle of Colorimetric Tubes, Understand the Correct Use of Colorimetric Tubes & be Aware of the Limitations of Colorimetric Tubes*
1100 – 1230	***Air Sampling Equipment: Sampling Heads & Filters (cont'd)*** *Mixed Exposure to Solid/Liquid/Aerosol/Gases - be Aware of the Techniques Available for Mixed Phase Sampling • Sampling Trains - Understand How the Different Components of a Sampling System Connect Together to Form the Sampling Train & How the Sampling Train is Attached to the Worker • Collection Efficiency - be Aware of the Collection Efficiency of Common Sampling Devices*
1230 - 1330	*Lunch*
1330 - 1430	***Air Sampling Equipment: Sampling Heads & Filters (cont'd)*** *Sample Stability - be Aware of How Minimise Sample Loss Between Sampling & Analysis • Diffusive ("Passive") Samplers - Understand the Basic Operating Principle; of a Diffusive Sampler, be Aware of the Different Types of Diffusive Sampler & the Relative Advantages & Disadvantages of Diffusive Samplers*
1430 - 1500	***Air Sampling Equipment: Direct Reading Instruments*** *Portable, Fixed-Site or Personal Devices - be Aware of the Operating Principles of Common Direct Reading Instruments & Understand the Nature of the Information Provided by Such Instruments • Intrinsic Safety of Instruments - be Aware of the Need for the Use of Intrinsically Safety Instruments in Some Environments • Real-Time Analysis - be Aware of the Uses of Real-Time Measurements for Training & Other Purposes • Uses - Understand the Appropriate Use of Direct Reading Instruments & Their Limitations • Instruments for Particulates - be Aware of the Common Types of Instruments Available for Direct Reading Measurements of Particulate Concentrations • Instruments for Gases & Vapours - be Aware of the Common Types of Instruments Available for Direct Reading Measurements of Gas & Vapour Concentrations*

1500 – 1515	*Break*
1515 - 1620	***Air Sampling Equipment: Calibration of Air Sampling Equipment*** *Flow Rate & Primary Standards - Understand What Primary Standards Are & How They Are Used in Flow Rate Calibration • Secondary Standards - Understand What Secondary Standards are & How they are Used in Flow Rate Calibration • Known Concentrations & Standard Atmosphere Generalisation - be Able to Use Standard Atmospheres to Calibrate Direct Reading Equipment • Known Concentrations & Primary & Secondary Standards - Understand the Difference Between Primary & Secondary Standards*
1620 – 1630	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today & Advise Them of the Topics to be Discussed Tomorrow*
1630	*End of Day Three*

Day 4: ***Thursday, 07th of August 2025***

0730 – 0800	***Sample Analysis: Trace Level Analytical Methods*** *Basic Techniques & Applications - Know the Analytical Techniques Used for Common Hazardous Substances • Detection Limits, Sensitivity, Chemical Interferences - Understand How Detection Limits & Sensitivity of such Techniques Will Affect the Sample Volume Required & Understand How Chemical Interferences May Bias Results • Sources of Methods - be Aware of the Sources of Standard Sampling & Analysis Methods Such as the NIOSH NMAM & HSE MDHS Methods*
0800 - 0830	***Sample Analysis: Gravimetric Analysis*** *Weight Variation - Understand the Common Causes of Weight Variation & How They can be Minimised • Instrument Sensitivity - Understand the Level of Sensitivity of the Technique & How this May Affect the Sample Size Required • Cost of Analysis - be Aware of the Relative Cost of Using this Technique • Specificity - Understand What This Type of Information for this Type of Measurement Provides*
0830 – 0900	***Sample Analysis: Microscopy*** *Fibre Identification of Asbestos - Be Aware of the Technique Used for the Measurement of Asbestos Fibre Concentrations*
0900 - 0930	***Sample Analysis: Quality Assurance of Analysis*** *Internal Quality Control - Understand the Importance of Internal Quality Control in Analysis •External Quality Assessment - be Aware of the Function of External Quality Assessment Schemes in Improving Reliability of Laboratory Measurements*
0930 - 0945	*Break*
0945 – 1230	***Hygiene Standards*** *Principles of Calculation / Setting of Standards (Be Aware of How Hygiene Standards Are Set) • Standards Used in Other Countries (Be Aware of Commonly Used International Hygiene Standards)*
1230 – 1330	*Lunch*
1330 – 1500	***Hygiene Standards (cont'd)*** *Application of Standards (Understand How Exposure Measurements Relate to Hygiene Standards; Understand How Hygiene Standards are Used to Protect Worker Health) • Definitions, Terminology, Units (Understand the Terminology Commonly Used in Association with Standards; Understand the Relationship Between Ppm & Mg M3 for Gases & Vapours)*

1500 – 1530	*Break*
1530 - 1620	***Hygiene Standards (cont'd)*** *'Sk' 'Sen' Notations (Understand the Meaning of the Skin Notation; Understand the Meaning of the Sensitiser Notation) • Problems (Be Aware of Situations that may Require Different Interpretation of Standards) • Limitations (Be Aware of the Limitations of Exposure Standards in the Light of this Background)*
1620 - 1630	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today & Advise Them of the Topics to be Discussed Tomorrow*
1630	*End of Day Three*

Day 5: ***Friday, 08th of August 2025***

0730 – 0930	***Biological Monitoring*** *Biological Monitoring - be Aware of Common Methods of Biological Monitoring • Biological Effect Monitoring - Understand the Difference Between Biological Monitoring & Biological Effect Monitoring • Metabolites - be Aware of the Role of Measurement of Metabolites in Biological Monitoring*
0930 - 0945	*Break*
0945 – 1100	***Biological Monitoring (cont'd)*** *Target Organs - be Aware How the Target Organ May Affect the Choice of Monitoring Technique • Local Action - Understand the Difference Between Local & Systemic Actions • Biological Half-Life - Understand the Significance of Biological Half-Life in Biological Monitoring*
1100 – 1145	***Biological Monitoring (cont'd)*** *Sample Timing - be Aware of How to Plan the Timing of Biological Sampling • Biological Standards - be Aware of the Sources of Biological Standards & Understand How they are Applied • Confidentiality - be Aware of the Need of Confidentiality When Dealing with Biological Sampling Data*
1145 - 1215	***Calculation, Interpretation & Presentation of Results: Numerical Evaluations*** *Time-Weighted Average Airborne Concentration - be Able to Calculate TWA Values • Standardised Format - be Able to Present Calculations in a Standardised Format*
1215 - 1315	*Lunch*
1315 – 1430	***Calculation, Interpretation & Presentation of Results: Interpretation*** *Relevance of the Calculated Result - Understand the Significance of Exposure Measurements • Overall Accuracy - be Aware of the Elements That Effect the Overall Accuracy of Measurements*
1430 - 1445	*Break*
1445 - 1545	***Calculation, Interpretation & Presentation of Results: Presentation of Results*** *Relevant Information - be Able to Organise & Present Data in a Relevant Format • Interpretation of Data - be Able to Provide Useful & Appropriate Interpretation of Data • Recommendations - be Able to Make Relevant & Appropriate Recommendations Based Upon Exposure Measurements*
1545 – 1600	***Course Conclusion***
1600 - 1615	***POST-TEST***
1615 - 1630	*Presentation of Course Certificates*
1630	*End of Course*

MOCK Exam

Upon the completion of the course, participants have to sit for a MOCK Examination similar to the exam of the Certification Body through Haward's Portal. Each participant will be given a username and password to log in Haward's Portal for the MOCK exam during the 30 days following the course completion. Each participant has only one trial for the MOCK exam within this 30-day examination window. Hence, you have to prepare yourself very well before starting your MOCK exam as this exam is a simulation to the one of the Certification Body.

Examinations & Assessment

Candidates are required to pass all of the following parts (A and B below) to be awarded this qualification.

(A) Practical Assessment

The practical assessment will be conducted by the Tutor during relevant parts of the course for all candidates. This is to ensure that every candidate can demonstrate their individual ability and correct method.

The studies are designed to assess the basic skill and knowledge of each of the candidates in the techniques of personal sampling for the assessment of personal exposure.

The exercises will involve:

- The setting up and calibration of sampling pumps for vapour sampling with charcoal tubes
- The flow calibration will be conducted using basic equipment such as a soap bubble meter and stopwatch rather than more sophisticated equipment now used by experienced staff in the field
- The set up and use of both a cyclone sampler for respirable dust and an open faced sampler for inhalable dust. This will include the weighing of filters, preferably GFA, before and after a sampling sequence to demonstrate that all candidates have the requisite manipulative skills needed for this procedure
- The correct positioning of sampling equipment on the wearer

Full details of the practical requirements and individual candidate reporting can be found in the Practical Evaluation Report which is available from www.bohs.org

(B) Written Examination

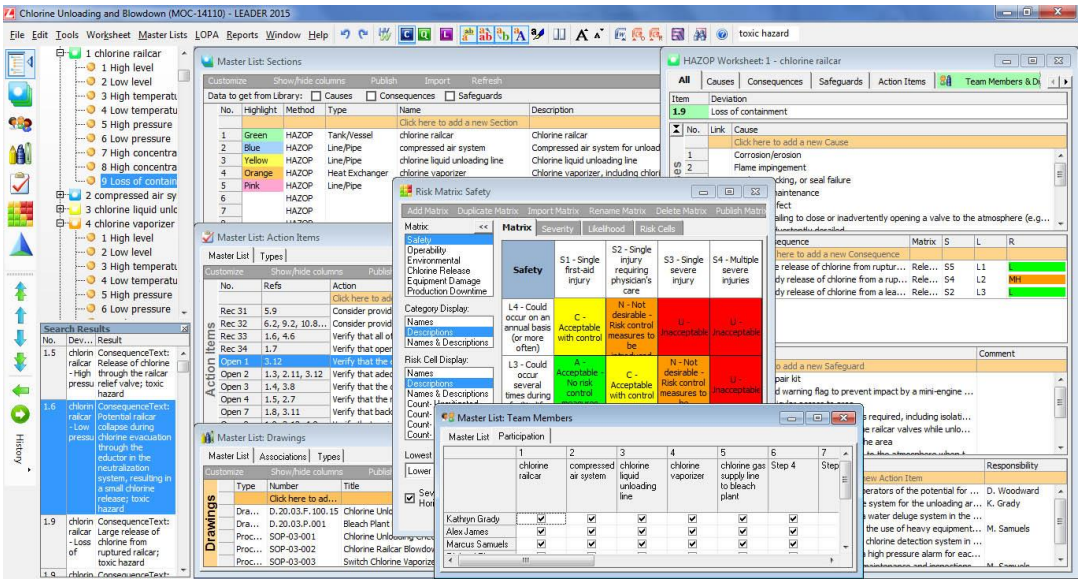
This is an open-book examination comprising of 40 (160 marks) short-answer questions to be answered in 2 hours. Each question is worth 4 marks.
Questions may also include multiple answers and some questions may require calculations

The examination covers all sections of the syllabus and is overseen by an invigilator.

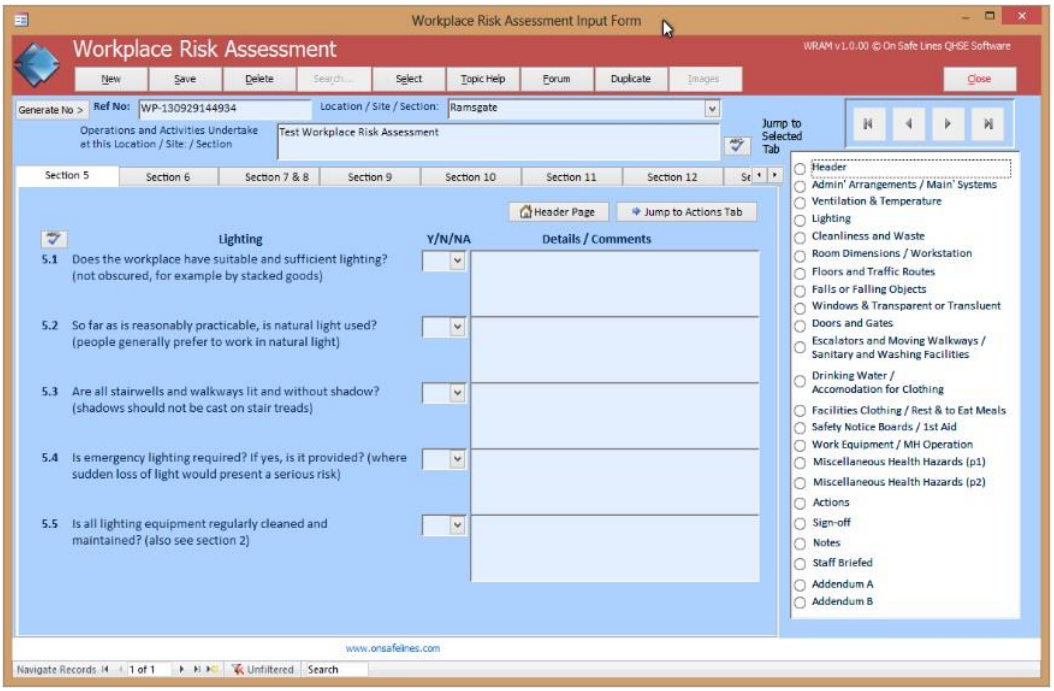
The pass mark for this examination is 50 %

Simulators (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art "Haward PHA/HAZOP", "Workplace Risk Assessment", "Industrial Hygiene Virtual Laboratory" and "CIHprep V9.0 " simulators.

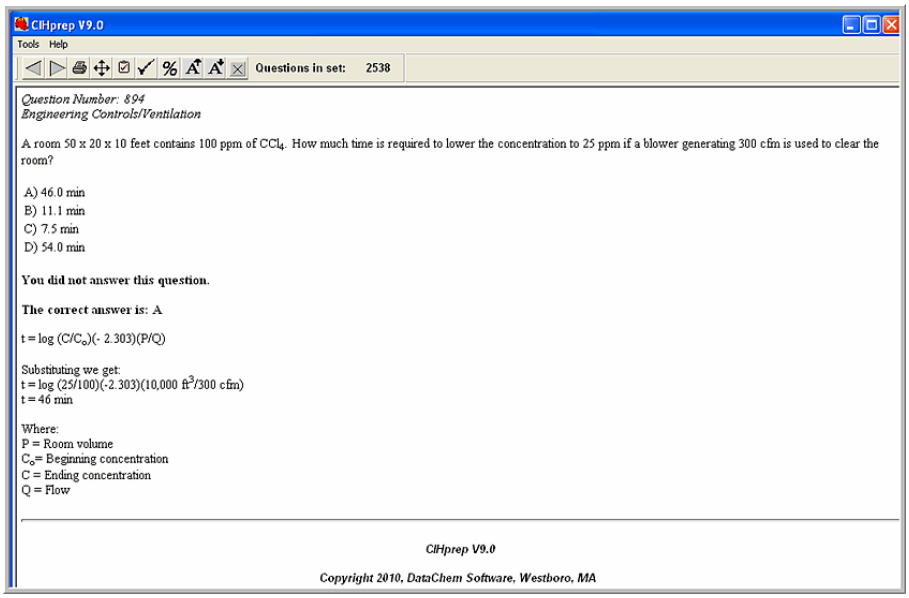


Haward PHA/HAZOP Simulator



Workplace Risk Assessment

Industrial Hygiene Virtual Laboratory Simulator



CIHprep V9.0 Simulator

Course Coordinator
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