

The logo for the British Occupational Hygiene Society (BOHS) features the letters 'BOHS' in a stylized, bold, white font. The 'O' is a solid white circle. The letters are set against a dark teal background that is part of a rounded rectangular box.

British Occupational
Hygiene Society

The Chartered
Society for Worker
Health Protection

P603 Proficiency Qualification:

**Control of Hazardous
Substances - Personal
Protective Equipment**

Qualification Specification

www.bohs.org

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Section 1

About BOHS

BOHS - the Chartered Society for Worker Health Protection

BOHS is the Chartered Society for Worker Health Protection. Our vision is to create a healthy working environment for everyone by preventing exposure to hazardous substances in the workplace.

Founded in 1953, we have developed over the last 64 years into a highly respected and influential body on workplace health issues, working closely with organisations in the UK and overseas to promote our vision. We are a registered charity, professional society and a member of the International Occupational Hygiene Association which is recognised as a non-government organisation by the International Labour Organisation (ILO) and the World Health Organization (WHO).

We were awarded a Royal Charter in 2013 in recognition of our pre-eminent role in protecting worker health.

BOHS is a membership organisation, open to anyone who has an interest in workplace health issues, and we have over 1700 members in 60 countries.

BOHS qualifications – the quality choice

We are the leading awarding body in our field. Our UK courses and qualifications are recognised and respected by independent agencies such as the Health and Safety Executive (HSE) and the United Kingdom Accreditation Service (UKAS) and further afield by industry and employers worldwide. Over 50,000 people have taken one of our qualifications through our network of training providers which offer engaging, challenging and practical courses.

Our courses and qualifications are overseen by a team of highly experienced professionals who are dedicated to developing the competence and career opportunities for the many thousands of people who play a key role in protecting worker health, in diverse fields such as asbestos, legionella and control technologies.

Information about all our qualifications is available from our website:

www.bohs.org/qualifications-training/bohs-qualifications/

Section 2

P603 at a glance

What is the objective?

To teach candidates about the different options available for controlling health hazards in the workplace, and how to develop, organise and implement a successful personal protective equipment programme to reduce worker exposure to these hazards.

Who is it for?

Anyone who is responsible for managing health risks in the workplace or maintaining local exhaust ventilation systems. This could include LEV engineers, health and safety practitioners and occupational hygienists.

What are the entry requirements?

Candidates are expected to have some basic knowledge of chemical hazards in the workplace, and how they could be controlled by means other than personal protective equipment. Modules P601 or P304 would meet this requirement.

What are the main subject areas?

- Hierarchy of Control.
- Achieving effective control of hazards.
- General requirements of Personal Protective Equipment.
- Respiratory Protective Equipment (RPE).
- Chemical Protective Clothing (CPC).
- Gloves and dermal care.

How long does it take?

Normally two days.

What level is it?

Level 4 in the BOHS qualifications framework.

How do candidates pass it?

Candidates must pass a Written Theory examination within 12 months.

Section 3

Background to the qualification

BOHS aims to protect worker health through promoting the science and practice of occupational hygiene. By identifying and controlling health risks in the workplace, we can reduce the levels of occupational ill health.

Inhalable hazardous substances (e.g. wood dusts) are a big cause of ill health in the workplace, and if not controlled can lead to potentially fatal illnesses such as lung cancer. LEV systems are an effective method of drawing harmful contaminants out of the air, making it safer to breathe in and potentially saving many lives.

However, in order to work effectively an LEV system must be functioning properly. It is therefore important that an experienced professional carries out regular maintenance of LEV system equipment to ensure that it is working to its full potential.

It is equally important that LEV specialists understand which types of PPE to wear when maintaining these systems, to ensure that they are fully protected from airborne contaminants. *P603 - Control of Hazardous Substances - Personal Protective Equipment* gives candidates in-depth knowledge about the options available for controlling hazardous substances, how PPE works as a control measure, and how to select, use and maintain PPE effectively to reduce exposure to hazardous substances in the workplace.

In addition, P603 is a valuable qualification for candidates wanting to apply for BOHS' Certificate of Competence (Control), as it demonstrates that they have the requisite knowledge to advise on all aspects of control in the workplace.

Section 4

Key features of the qualification

Objective

To provide candidates with the theoretical and practical knowledge for implementing a successful PPE programme in the workplace, in order to protect workers from airborne contaminants.

Target audience

This qualification is suitable for anyone who is responsible for implementing hazard controls in the workplace, and/or maintaining ventilation systems. This could include:

- LEV TExT engineers.
- LEV system designers and specifiers.
- Commissioning engineers.
- Occupational hygienists.
- Health and safety officers and managers.

It may also be suitable for those who wish to progress into these job roles.

Entry requirements

Before taking P603, candidates are expected to have some basic knowledge of chemical hazards in the workplace, and how they could be controlled by means other than personal protective equipment. Modules P601 or P304 would meet this entry requirement.

Level

The level of a qualification indicates the relative complexity and depth of knowledge and skills required to attain the qualification.

This qualification is set at level 4 in the BOHS qualifications framework.

Fees

The examination fee for each candidate is published on the BOHS website:

www.bohs.org/qualifications-training/examination-fees/

Section 5

Delivering the qualification

Teaching and learning time

The P603 qualification is normally conducted over two days, which comprises a minimum of 14 hours of learning time. This includes 12 hours teaching time and 2 hours independent study (in the candidate's own time).

The course can be delivered more flexibly, such as one day per week, but should still include 12 hours of teaching time.

Tutors

The course should be taught by tutors who are experienced and qualified/certified LEV professionals or occupational hygienists. As a guide, tutors will typically have:

- At least three years' current experience of working with LEV systems;
- A recognised LEV qualification or a professional occupational hygiene qualification/certification such as:
 - BOHS Certificate of Competence (Control).
 - BOHS Certificate of Operational Competence (CertOH).
 - BOHS Diploma of Professional Competence (DipOH).

This list is not necessarily exhaustive or definitive.

Teaching resources

Training providers must have the following facilities and equipment:

- Examples of the full range of PPE and RPE equipment available.
- Suitable case study examples.

Support for teaching and learning

BOHS provides:

- Examination guidance for tutors, which includes sample examination questions.

Language

The examinations are provided in English only.

Section 6

Syllabus

The qualification is structured into four main sections, each with an indicative time allocation:

Section	Syllabus section	Time allocation
1	Hierarchy of Control	5%
2	Achieving effective control	10%
3	Personal Protective Equipment:	
3.1	General requirements	15%
3.2	Respiratory Protective Equipment (RPE)	25%
3.3	Chemical Protective Clothing (CPC)	15%
3.4	Gloves and dermal care	15%
4	Practical	15%

1 Hierarchy of Control (5%)

Educational objectives

The student should understand how to identify different types of health hazards in the workplace and the control measures that can be put in place to reduce their exposure.

- 1.1.1 Principles of identifying hazards and risks in the workplace.
- 1.1.2 Hierarchy of Control and its underlying principles.
- 1.1.3 The most common controls at work, including substitution or change of material properties; work procedures; process engineering control; enclosures and local exhaust ventilation; personal protective equipment. Include practical programmes which may involve a combination of measures.

2 Achieving effective control (10%)

Educational objectives

Students will understand how to apply control measures in the workplace, and which sources of information to use to identify the best controls for each hazardous substance.

- 2.1.1 The practical application of the Hierarchy of Control, and using a combination of control measures in a stepwise approach.
- 2.1.2 Identifying effective control strategies, adopting the principles of reasonable practicability (including COSHH Essentials/ILO toolbox).

3 Personal Protective Equipment (15%)

Educational objectives

Students should have a thorough understanding of the different types of PPE and RPE available, how they work and how to select the most suitable protection for the task and hazards involved.

3.1 General requirements

Overview of all types of Personal Protective Equipment (PPE), including Respiratory Protective Equipment (RPE), chemical protective gloves and chemical protective clothing (CPC).

- 3.1.1 Limitations of use.
- 3.1.2 Definition of suitability.
- 3.1.3 Ergonomic impact of PPE.
- 3.1.4 Importance of selection, training, maintenance, and proper use in the development of a PPE programme.

3.2 Respiratory Protective Equipment [RPE] (25%)

- 3.2.1 Overview of the different types of RPE and their limitations. This includes: dust respirators, gas and vapour respirators, high-efficiency, powered, ventilated visors, disposable and maintenance-free respirators, self-contained and supplied air breathing apparatus.
- 3.2.2 Selection, use and maintenance of RPE: the importance of Face Fit Testing.
- 3.2.3 Use of nominal protection factors and their application.
- 3.2.4 Implementing RPE programmes in the workplace, including maintenance and inspection.
- 3.2.5 Face and eye protection requirements.

3.3 Chemical Protective Clothing (CPC) (15%)

- 3.3.1 Different types of CPC.
- 3.3.2 Performance criteria.
- 3.3.3 Testing effectiveness of CPC.
- 3.3.4 Application and limitations of CPC.
- 3.3.5 Storage arrangements, laundering arrangements, role in prevention of contamination spread.
- 3.3.6 Suitability for use and integrity.
- 3.3.7 Decontamination units and their application.

3.4 Gloves and dermal care (15%)

- 3.4.1 Basic dermal exposure assessment techniques and principles of dermal exposure risk management.
- 3.4.2 Types of gloves and their performance data.
- 3.4.3 Chemical resistance, permeation, penetration and degradation, breakthrough times.
- 3.4.4 Glove selection, maintenance and training in use.

4 Practical (15%)

Practical studies need to include the demonstration of face fit testing for respiratory protective equipment, along with case studies to demonstrate the strength and weakness of all personal protective equipment and an overview of the required maintenance programme.

Section 7

References and further reading

1	ACGIH (2014), Quick Selection Guide to Chemical Protective Clothing
2	DHHS 87-116 (1987), NIOSH guide to industrial respiratory protection, NIOSH
3	DHHS 90-109 (1990), A guide for evaluating the performance of Chemical Protective Clothing, NIOSH
4	HSE COSHH Essentials e-tool: http://www.hse.gov.uk/coshh/essentials/
5	HSG258 (2017), Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV) 3 rd Edition, HSE
6	HSG53 (2013), Respiratory protective equipment at work: a practical guide, HSE
7	INDG330, Selecting protective gloves for work with chemicals, HSE: www.hse.gov.uk/pubns/indg330.pdf
8	ISO:16602 (2007), Protective clothing for protection against chemicals: Classification, labelling and performance requirements, ISO
9	ISO:16900, Respiratory protective devices publications, ISO: https://www.iso.org/ics/13.340.30/x/
10	Sithampanadaraj, Rajadurai (2008), Controlling skin exposure to chemicals and wet-work: a practical book

HSE guidance is reviewed and revised periodically. Training providers should check that the publications listed above are the current versions.

Useful websites

All the Health and Safety Executive (HSE) publications listed above are available as free downloads from the HSE website: www.hse.gov.uk/lev.

Section 8

Achieving the qualification

Candidates are required to pass a Written Theory examination in order to be awarded the qualification.

Written Theory examination

The written theory examination enables candidates to demonstrate that they have attained the breadth and depth of knowledge about the different options available for controlling airborne contaminants, the types of PPE and RPE available to protect against these contaminants, and how to select and maintain the most effective protective equipment for the place of work.

The examination comprises 35 short-answer questions, to be answered in 1 hour 45 minutes. Short-answer questions require candidates to give brief answers, sometimes as bullet points or calculations. All questions are worth 4 marks and candidates may be awarded between 0 and 4 marks per question. Candidates should attempt all questions as no marks are deducted for incorrect answers.

The pass mark is 50%. The examination covers sections 1 to 3 of the syllabus in proportion to the time allocation given for each section. This gives a question allocation as follows:

Section		Number of questions
1	Hierarchy of Control	2
2	Achieving effective control	4
3.1	General requirements	6
3.2	Respiratory Protective Equipment [RPE]	11
3.3	Chemical Protective Clothing [CPC]	6
3.4	Gloves and dermal care	6

The sections are clearly marked in the examination paper.

The written theory examination is a closed-book examination, which means that candidates are not permitted to have access to any external materials or text books.

Invigilation

The written examinations are carried out in controlled conditions, to help ensure that all candidates demonstrate their true level of attainment. BOHS will appoint an independent invigilator to oversee the examination.

Marking and results

All examination papers are marked by BOHS.

Candidates receive their results in writing from BOHS. The results are reported as pass or fail plus a percentage. Borderline fail results are automatically re-marked by a second marker.

Training providers are sent a list of results for all candidates on a course.

Feedback

Candidates receive feedback on their examination performance for both examinations. For example, the feedback for a written theory examination in which a candidate scored 69% would be shown as follows:

Syllabus area		Result	
1	Hierarchy of Control	2/8	(25%)
2	Achieving effective control	8/16	(50%)
3.1	General requirements	18/24	(75%)
3.2	Respiratory Protective Equipment [RPE]	44/44	(100%)
3.3	Chemical Protective Clothing [CPC]	24/24	(100%)
3.4	Gloves and dermal care	0/24	(0%)
Total:		96/140	(69%)

Training providers receive feedback on the overall performance of all candidates. For example, the feedback for a course with six candidates would be as follows:

Written exam performance against syllabus		Number of candidates in each scoring band		
		0-49%	50-75%	76-100%
Written Theory	1. Hierarchy of Control	1	4	1
Written Theory	2. Achieving effective control	0	3	3
Written Theory	3.1 General requirements	2	4	0
Written Theory	3.2 Respiratory Protective Equipment [RPE]	1	2	3
Written Theory	3.3 Chemical Protective Clothing [CPC]	0	0	6
Written Theory	3.4 Gloves and dermal care	2	2	2

Resits

Candidates may re-sit the written theory examination, provided that they pass within 12 months of the original sitting.

Certification

Candidates who pass the Written Theory examination within 12 months will be awarded a Proficiency Certificate in *P603 - Control of Hazardous Substances - Personal Protective Equipment*.

Section 9

Quality assurance

Internal quality assurance

Training providers must operate an internal quality assurance system which evaluates and improves the delivery of the qualification.

External quality assurance

BOHS undertakes desk-based reviews of documents, including teaching materials, and conducts surveys of candidates. We also may inspect training providers.

Section 10

Offering the qualification

Approved training providers

Please complete and return the 'Application to Offer Additional Qualifications' form to qualifications@bohs.org. The form is available on the BOHS website.

New training providers

Please send an email to qualifications@bohs.org expressing your interest in offering the P603 qualification and we will advise you about the approvals process.

Section 11

Other courses and qualifications

Candidates who successfully complete this qualification may wish to take:

P601 - Thorough Examination and Testing of Local Exhaust Ventilation

Objective

To provide candidates with the knowledge and skills to carry out thorough testing and examination (TExT) of local exhaust ventilation systems, to ensure that they are performing to a high standard.

Target audience

P601 is aimed at anyone that is responsible for evaluating, inspecting, testing and examining LEV systems. This could include LEV engineers, installation contractors and health and safety practitioners.

P602 - Basic Design Principles of Local Exhaust Ventilation Systems

Objective

To provide candidates with the theoretical and practical knowledge for designing and evaluating the performance of local exhaust ventilation systems, to ensure that they effectively control airborne contaminants.

Target audience

P602 is aimed at anyone that is responsible for designing the components for an LEV system, and evaluating its performance. This could include LEV engineers (e.g. designers, specifiers, commissioning engineers), maintenance personnel and health and safety practitioners.