

IOM



working for a healthy and sustainable world

# IOM Science, Research & Services

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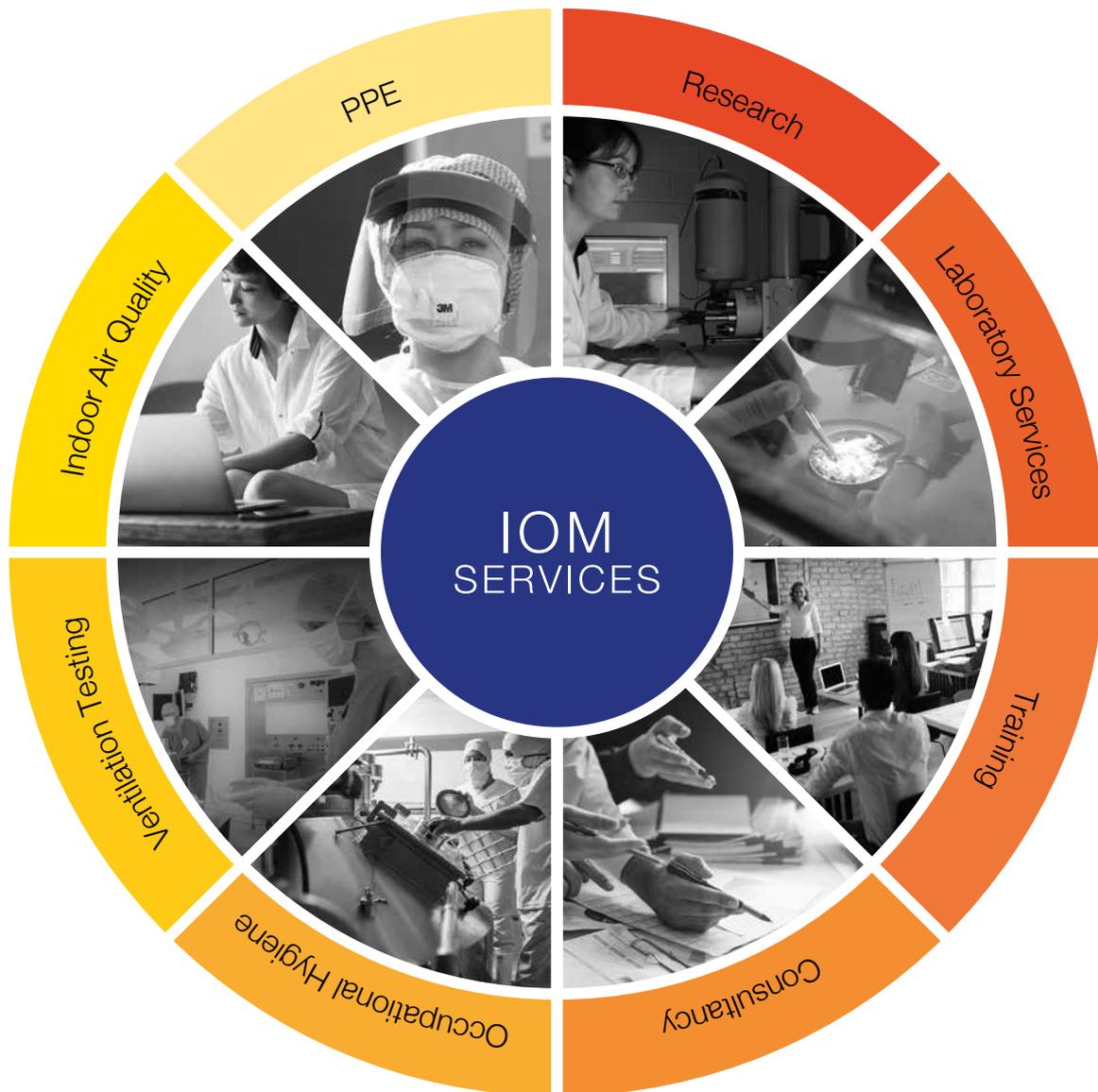
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The Institute of Occupational Medicine (IOM) helps organisations to create safe environments. IOM uses multi-disciplinary teams to investigate and solve environmental challenges across workplaces and residences. Through our authoritative research, a UKAS accredited laboratory and experienced ventilation testers, occupational hygienists and authorising engineers, our mission is to make the world a healthier, safer and sustainable place. Improving the environments people live and work in through behavioural, procedural and structural change. To achieve that mission, IOM offers the following services:



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## Research:

IOM's research group is committed to delivering independent and impartial research. Our purpose is to provide authoritative evidence based research, which informs policy, regulation and practice. Resulting in improvements in occupational, environmental and public health for workers and the general public. We provide detailed knowledge about a broad range of issues such as working environments, chemical exposure and risk assessment, ergonomics and human factors. As well as developing and evaluating interventions for healthier lives and more sustainable environments.

Our team of highly qualified research scientists specialise in a wide range of scientific areas and disciplines.

### Areas of IOM research expertise include:

- Environmental and Occupational Epidemiology
- Nanosafety
- Air Pollution (Indoor and Outdoor) Research
- Chemical Exposure & Risk Assessment
- Work related Health & Wellbeing
- Exposure Science
- Data Science
- Toxicology
- Human factors, Psychology & Ergonomics.

Our scientists bring a unique international and multi-disciplinary approach to our work, focussing on creating safer, healthier and more sustainable workplaces and environments. Environments which are supported by effective behaviours and processes.

Additionally, many senior staff act as scientific advisors on various influential UK, European and International scientific advisory committees. IOM's research expertise allows an invaluable insight into commercial projects, ensuring that we are able to offer innovative services, including bespoke testing and advice.



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## Laboratory Services:

The IOM laboratory helps clients address the potential risks associated with handling solvents, chemicals, dust and asbestos. Reliable laboratory analysis is a crucial component in managing health and safety in the workplace and the wider environment. IOM's UKAS accredited laboratory offers high quality independent analysis to help our clients ensure compliance with workplace exposure regulations.

To achieve this the IOM laboratory draws upon decades of experience in undertaking standard occupational hygiene analysis and complex investigations with support from IOM's research team. Our laboratory is a leader in the provision of analytical services to support workplace and environmental monitoring. It is able to provide expert technical advice to assist companies in organising sampling strategies for a wide range of chemical and mineralogical testing.

### Our analytical capabilities include:

- GC (BTEX and other hydrocarbons)
- GCMS (PAHs, PCBs, mercaptans etc.)
- ICP (Metals and elemental analysis)
- HPLC (Isocyanates, Pharmaceutical APIs, Formaldehyde etc.)
- IC (Acid gases)
- SEM (Asbestos, other fibres, dusts)
- Gravimetric (Dust analysis)
- XRD/FTIR (Crystalline silica and mineral dust identification)
- Fibre counting (Asbestos and MMMF)
- Asbestos in soils (Identification and quantification)
- Bulk asbestos identification
- Microbiology
- Particle and fibre characterisation (Nano).

The IOM is a UKAS accredited laboratory No 0374, a list of accredited analysis can be found on our [UKAS schedule](#).



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## Training:

**IOM delivers both accredited and bespoke occupational hygiene and safety training courses, through a team of highly experienced trainers.**

We are an approved BOHS course provider and at IOM we deliver the Occupational Hygiene Training Association (OHTA) W series modules with qualifications awarded by BOHS as part of the OHTA International Training Scheme and Qualifications Framework. These equip participants with the occupational hygiene technical knowledge and sampling technique to enable them to undertake a variety of hazardous exposure assessments in the workplace.

IOM also offers Competent Person and Authorised Person ventilation training, with courses specialised to Healthcare premises as detailed in the requirements of the Health Technical Memorandum (HTM).

Competent Person training gives attendees the practical aspects of measurements and ensures that hospital ventilation systems are properly maintained. The result is a knowledgeable and competent workforce which is able to identify, report and resolve situations before they become problems. This reduces downtime of key equipment whilst also protecting patients and staff.

Authorised Person training is more technical and more comprehensive. It covers legal requirements, design, maintenance, core duties and responsibilities as detailed in the HTM – giving you the knowledge you need to be fully compliant.

### **IOM's courses include:**

- Competent Person (Ventilation Training) & Refresher Training
- Authorised Person (Ventilation)
- Ventilation Maintenance courses
- BOHS Occupational Hygiene modules
- Face Fit Testing Tester Training
- WSQ Occupational Hygiene (Singapore Workforce Skills Qualifications )
- WSQ Workplace Safety & Health.

IOM can also provide bespoke training courses for our clients which can be designed to deliver specific learning objectives in a meaningful and practical way.



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## Consultancy:

**IOM provides expert advice and opinion around occupational and environmental exposure and risk involving:**

- Physical, chemical and biological agents
- Asbestos
- Authorising engineering
- Ergonomics
- Nanomaterials
- Fire & Explosion Management
- Hazardous Area Classification & Assessment (Explosive Atmospheres).



IOM is internationally recognised for being independent, authoritative and informed. The advice we provide can potentially save organisations millions of pounds with cost effective ways to comply with applicable regulations whilst improving the safety of environments.

This results in safer environments and reduced exposure, enabling organisations to meet legal requirements and ensure best practices for workplace design and controls are in place.

IOM Consulting is also a leading provider of expert witness evidence for civil litigation cases in Great Britain. The highly experienced team have provided Courts with independent and authoritative evidence covering a uniquely wide range of areas including occupational exposures to asbestos and chemical, physical and biological agents in the workplace, asbestos removal practices, the management of asbestos in workplace premises, general health and safety and epidemiology.

In the field of healthcare ventilation our pragmatic Authorising Engineers review designs and carry out audits to ensure that systems are both compliant and appropriate for use. The engineers provide constructive and helpful input to ensure the success of projects. This is particularly evidenced in the healthcare sector where our Authorising Engineer (Ventilation) team are highly respected and relied on for advice by both NHS and private sector healthcare providers.

For ventilation our team of Authorising Engineers offer advice on build and design. It is a complete service which enables clients to achieve and prove compliance with the HTM and ultimately ensure safety for their staff and patients.

Our experts provide organisations with greater clarity around problems and solutions, offering alternative views which challenge thinking, and recommendations which result in more informed decision making.



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## Occupational Hygiene:

IOM's occupational hygiene department focuses on protecting client's staff from hazardous substances including chemical, physical and biological agents and unsafe working environments. We use a combination of established methodologies and state of the art tools to sample, measure and monitor dusts, fumes, vapours, gases, mists and biological materials down to a nano scale. Our services are especially important for organisations using new or novel materials to ensure that the risks are understood. IOM works with clients to quantify hazardous substances which are present in the working environment, and provide guidance and support to ensure exposures are being controlled in line with legislation, guidance and best practice.

The routine examination and testing of Local Exhaust Ventilation systems is particularly relevant to organisations subject to the COSHH regulations who use these control measures and others to demonstrate adequate control of exposure to hazardous substances. IOM offers comprehensive testing of these systems with guidance to ensure that organisations are fully compliant with regulations and risks are minimised.

Additionally, IOM Occupational Hygienists are experts in measurement surveys for physical workplace hazards which include workplace and environmental noise, hand arm vibration and whole body vibration. By utilising noise mapping, personal noise dosimetry and real life vibration measurements our experts help clients by advising on how to comply with regulations.

IOM's experts can quantify the hazards and exposure. Assessing the risk and advising on the relevant control measures where required, or demonstrate the effectiveness of existing control measures.



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## Healthcare Ventilation Testing:

To mitigate the risk of contamination and reduce the spread of disease in hospitals, IOM conducts ventilation testing, and provides expert advice and support on ventilation systems to ensure compliance with Health Technical Memoranda (HTM 03-01) and other Health Building guidance notes. This ultimately ensures that systems are fit for purpose, protecting patients and staff.

### Our IOM experts do this through;

- Validation and verification of critically ventilated areas such as ultra clean ventilation (UCV) and Conventional Operating Theatres, Sterile Service Departments and Mortuaries
- Measuring and quantifying airflows
- Calculating air changes
- Measuring pressure differentials and the hierarchy of cleanliness (cascades of air from room to room or area to area)
- Particle counting to assess the efficiency of the system's filters
- Inspecting and auditing air handling units and systems
- Carrying out microbiological sampling and analysis in accordance with IOM's UKAS accreditation (airborne and surface) using our in-house microbiological laboratory to process samples.



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## Ventilation Testing & Indoor Air Quality:

Covid-19 has brought air quality concerns to the fore. Organisations need to be aware of what is in their air and the risks it poses. At the same time ensuring that the environment is suitable so that staff remain productive and comfortable.

IOM's team of experts can measure and quantify biological, chemical and physical indoor pollutants and provide you with a comprehensive assessment of your indoor air quality and ventilation systems.

### **IOM's experts do this through;**

- Measuring airflows and calculating air changes and evaluating the ventilation system
- Determining suitable room occupancy levels, identifying potential draughts and possible air quality issues through visual assessments of air handling units
- Carrying out indoor air quality measurements of a number of parameters which include temperature, humidity, air movement, carbon dioxide, VOCs and formaldehyde
- Microbiological sampling (airborne and surface) for total viable counts, moulds & yeasts.



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## PPE:

Reliability of Personal Protective Equipment (PPE) is essential when staff are operating in hazardous environments. For manufacturers this means passing stringent testing protocols to classify and certify their PPE products.

The IOM is a UKAS accredited testing laboratory No 0374, for testing chemical protective suits/coveralls. We are accredited to test for:

- Total Inward Leakage (TIL) to test the resistance of protective ventilated and non-ventilated clothing (Type 5) to penetration by a fine particle aerosol
  - Tested to International Standards ISO13982(1/2) and ISO1073 (parts 1 and 2)
- Light and Heavy spray testing (Types 4 and 6) for the determination of the resistance of protective clothing to penetration by a spray of liquid
  - Tested to EN17491-4(a)
- Jet testing (Type 3) for the determination of resistance of protective clothing to penetration by a jet of liquid
  - Testing to EN17491-3
  - Testing to performance requirements set out in EN14605.

IOM also offers Practical Performance testing and bespoke testing options.

For workplaces with hazards present IOM trains users on how to use the PPE and RPE provided to assist in controlling them. This is supported with accredited Face Fit testing services available to ensure that staff are protected by their respirators when at work.



Committed to making the world healthier and safer at work, IOM is a trusted advisor for organisations such as the NHS, HSE and AECOM. We investigate issues, offer independent guidance and provide informed solutions. Talk to IOM and find the solutions to your challenges today.

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