

Where Does Indoor Air Pollution Come From?



Good indoor air quality is essential for maintaining a safe, healthy and efficient workplace. Airborne contaminants, inadequate ventilation and biological contaminants can negatively affect employees' comfort, health, and ability to perform their work effectively.

By identifying potential sources of indoor air pollution and implementing appropriate control measures, organisations can create a healthier environment that supports employee well-being and workplace productivity.

■ Ventilation and HVAC Systems

Poor ventilation can reduce the amount of fresh outdoor air entering the workplace, allowing stale air to accumulate. Heating, ventilation and air conditioning (HVAC) systems that are not properly maintained may circulate dust, dirt and mould spores throughout the building. Inadequate humidity control can also create conditions that encourage mould growth and reduce indoor air quality.



■ Chemical Products and Pollutants

Cleaning products, including bleach, disinfectants and air fresheners, can release fumes that affect indoor air quality. Office equipment such as printers and photocopiers may emit ozone and fine toner particles during operation. In addition, new carpets, freshly applied paint and pressed-wood furniture can release volatile organic compounds (VOCs), which may contribute to indoor air pollution.

■ Biological and Environmental Factors

Moisture from water leaks, damp carpets or wet walls can encourage the growth of mould and mildew, reducing indoor air quality. Dust, dust mites, skin particles and pollen carried in from outside can also accumulate indoors - while pollutants such as vehicle exhaust, industrial emissions or smoke may enter the workplace through doors, windows and air intake systems.



CONTACT SAFETECH FOR PROFESSIONAL INDOOR AIR QUALITY ASSESSMENTS

■ Monitoring and Regulations

The monitoring must take into account all the parameters in Table 3 (inserted below) of the Physical Agents Regulations, as well as the following:

- other applicable hazardous chemical agents;
- mould; and
- other applicable hazardous biological agents.

Table 3 - Guideline levels for Indoor Air Quality Parameters

IAQ PARAMETER	LEVEL	UNIT
Air temperature	20 to 28 dry-bulb temperature	degrees Celcius, °C
Air velocity	0,1 to 0,5	meters per second, m/s
Relative humidity	30 to 60	per cent, %
Carbon dioxide	not to exceed outdoor concentration by more than 600ppm	parts per million, ppm
Carbon monoxide	10	parts per million, ppm

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THE FOLLOWING SERVICES
FOR YOUR BUSINESS:**

- Occupational Hygiene Surveys
- EHS Risk Assessments
- Ergonomics Risk Assessments
- EHS Management System Development and Implementation
- Environmental Monitoring
- Identification of EHS Legal Requirements and Compliance Audits
- Internal Auditor Training
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LEADING AND LAGGING indicators are complementary health and safety metrics. Leading indicators are proactive inputs that predict and prevent harm, and lagging indicators are reactive outcomes that measure past performance.

LEADING INDICATORS
Proactive / Preventive

Leading indicators include conditions or events that occur before injuries, illnesses or other safety incidents, highlighting potential weaknesses in safety procedures. By focusing on proactive, preventative actions, leading indicators help identify risks early, enabling improvements that reduce the likelihood of accidents and create a safer workplace.

Examples

- Number of safety inspections and workplace audits completed
- Hours of employee safety training delivered
- Near-miss and hazard identification reports
- Toolbox talk attendance and safety coaching frequency

LAGGING INDICATORS
Reactive / Outcome-Based

Lagging indicators focus on past safety incidents and are used to identify failures or gaps in safety programme. Reviewing these indicators helps organisations learn from previous incidents, address recurring hazards and implement improvements to reduce the risk of future accidents.

Examples

- Total Recordable Incident Rate
- Lost Time Injury Frequency Rate
- Number of workers' compensation claims
- Property or equipment damage costs and regulatory citations

Relying only on lagging metrics makes safety purely reactive, waiting for an injury to happen before fixing a problem. Relying only on leading metrics makes it hard to prove whether your control measures actually stop workplace incidents. When used together they provide valuable insights from past performance to support better decision-making and a more comprehensive view of safety performance.

<https://www.urbint.com/blog/safety-leading-and-lagging-indicators>



**ARE YOU
READY?**

06
DAY

09
MONTH

26
YEAR

**NEW PHYSICAL AGENTS
REGULATIONS**

Department of Employment and Labour promulgated new regulations.
Full mandatory compliance takes effect 6 September 2026

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to help!**