

# Are you ready for full compliance of EU Directive 2004/37/EC from 12 July 2024?

[The EU Directive 2004/37/EC](#), also known as the "Carcinogens and Mutagens Directive," sets occupational exposure limit values for certain substances known to be carcinogenic or mutagenic, aiming to protect workers from risks related to exposure to such substances at the workplace. Employers within the European Union should take note of this upcoming significant change in ensuring the safety and health of their employees.

## Key points of the Carcinogens and Mutagens Directive

### Scope

The directive applies to activities involving exposure to carcinogens or mutagens during work, with the aim of protecting workers from the associated health risks.

### Identification of Carcinogens and Mutagens

The directive provides a list of substances classified as carcinogenic or mutagenic, based on the criteria established by the EU's classification and labelling regulation. Formaldehyde is included within this classification.

### Occupational Exposure Limit Values (OELs)

The 3rd amendment to EU 2004/37/EC which is [EU 2019/983](#) quantifies OELs for certain substances, representing the maximum concentration of a hazardous substance in the air that workers can be exposed to over a specific period of time without adverse health effects. For those operators of pathology labs for instance, this means that from 12th July 2024, formaldehyde levels in labs must not exceed 0.3ppm over an 8hr time period. This also applies to post-mortem, embalming and funeral sectors.

### Risk Assessment

Employers are required to assess and, if necessary, measure the levels of carcinogens or mutagens in the workplace to ensure that exposure is below the established OELs.

## **Mandatory Information and Training for Workers**

Employers are obliged to educate employees on the dangers of carcinogen and mutagen exposure as well as the safety measures implemented to safeguard them.

## **Preventive Measures**

Employers are obligated to take preventive measures to minimize or eliminate exposure to carcinogens and mutagens. This may include substituting hazardous substances with less harmful alternatives, implementing engineering controls, providing personal protective equipment, and adopting safe work practices. Many laboratories to date have chosen to use Activated Carbon to remove and reduce gaseous pollutants such as Formaldehyde, Xylene and other VOCs.

## **Why is formaldehyde included in the directive?**

For over 100 years, formaldehyde has been the 'gold standard' for tissue preservation. Despite alternative chemicals being available to perform the same function, none have been able to replace it effectively.

As an organic chemical, formaldehyde is classified as an irritant and a carcinogen. Therefore, it is a challenge to the health and well-being of pathology lab workers.

There have been various ways of removing this gaseous pollutant from the lab environment, such as;

- Ventilation systems that extract or exchange contaminated and pollutive air from the general lab space.
- Activated carbon adsorptive filtration technology for removing VOCs and formaldehyde.

However, both these technologies have limitations and can prove costly to implement and maintain.

## **Introducing Innovative Technology to Help Achieve Safer and Sustainable EU Compliance**

Available now is a unique technology that can help you achieve EU compliance in a safer and more sustainable way. This cutting-edge technology is a low-carbon alternative to the conventional charcoal adsorptive technology, which is commonly used to eliminate gaseous organic pollutants.

This new technology, whilst having the same adsorptive power of Activated Carbon it comes with the added benefits of being a more sustainable and cost-effective in making the lab a healthier environment to work in and compliant with the directive.

Welcome to [NCCO technology](#), which uses Nano Confined Catalytic Oxidation as a means of removing organic gaseous pollutants and converting them to harmless carbon dioxide and water molecules.

### **What is NCCO (Nano Confined Catalytic Oxidation)?**

It is a novel and innovative adsorptive technology jointly developed by [RHT Industries](#) and Hong Kong University of Science and Technology. It is as powerful as activated carbon but with the advantages of being sustainable, longer lasting, safer, and more cost-effective.

It works within a mineral framework of nano tunnels whose insides are layered with zeolites. These act as catalysts in the presence of active oxygen so that formaldehyde, for instance, is converted to harmless CO<sub>2</sub> and H<sub>2</sub>O molecules. The catalysts then regenerate to form more adsorptive sites for further decomposition of organic and pollutive chemicals.

The absence of residual pollutants in the end product sets it apart from activated carbon which merely stores pollutants with the added risk of secondary pollution. In addition, NCCO have many more benefits when compared to other alternatives;

- Provides superior disinfection by killing bacteria and viruses
- Improves hygiene and protects lab employees, resulting in a better work environment and increases productivity.
- Longer life span that can last for years, resulting in lower operating costs.
- Regenerates its adsorbing sites, which increases adsorptive capability without causing any secondary pollution.
- Reduces the need for frequent air changes, resulting in less energy costs and less stress on existing extraction systems.
- More sustainable and carbon friendly with no gaseous pollutant remaining at end of life and 90% less of a carbon footprint than activated carbon. No special disposal requirements since the NCCO anhydride granules decompose naturally when placed in landfills.

### **[RHT Industry](#): Your Solution for Formaldehyde and VOC Removal**

RHT Industry offers a variety of systems specifically designed to eliminate formaldehyde and VOCs from any room size, configuration, or level of gaseous pollutant concentration. Its solutions can accommodate small or large labs, spaces with varying ceiling heights, or areas with multiple pollution sources.

Recently, RHT launched a dedicated line of ductless formaldehyde storage cabinets that effectively remove gaseous pollutants and provide clean air to the surrounding environment.

In addition, RHT also provides systems that cater to peripheral rooms or offices where pollutant levels are lower but still require removal. With RHT Industry, you can breathe easy knowing that your air is clean and healthy.

## **NCCO: The Versatile Adsorption Technology for Industry, Commerce, and Households**

NCCO, the innovative adsorption technology, can be applied in multiple areas. RHT with NCCO offers solutions that have been successful in various industries, including:

- Manufacturing: Paint, Printing, Petroleum
- Automotive: Airports, Train Stations
- Hospitality: Hotels, Restaurants
- Retail: Shopping Malls, Offices
- Homes

Not only in the Life Science sector, NCCO has a wide range of applications throughout different sectors of industry, commerce, and households.

See how [RHT has helped other businesses](#)

Looking for Portable or Domestic Clean Air Solutions? [Click here](#) to learn more.

Learn how RHT can aid your compliance with the Carcinogens and Mutagens Directive by reaching out to us.

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