Crop protection products

A crop protection product is a preparation containing one or more active substances, intended to chemically or biologically control harmful organisms such as plants, insects, bacteria, and viruses.

Agriculture and horticulture

A distinction is made between plant protection products used in agriculture and horticulture to protect crops, and biocides, which are applied outside of the agricultural sector.

Plant protection products are classified based on the type of organism they target, such as:

- Insecticides for insects
- Fungicides for fungi
- Herbicides for weeds
- Nematicides for nematodes
- Acaricides for mites
- Rodenticides for rodents
- Molluscicides for slugs
- Bactericides for bacterial plant diseases

Biocides include disinfectants, antifouling paints for ships, insecticides, and wood preservatives.

Pesticides in the environment

Pesticides are introduced into the environment both intentionally and unintentionally. Wind, rain, and leaching from the soil into groundwater and surface water contribute to the spread of these contaminants. Because these compounds are often poorly degradable, they can accumulate in the food chain. They are found worldwide in all environmental matrices and in organisms at all levels of the food chain.

Especially in organisms at the top of the food chain, high concentrations are measured as a result of biological accumulation. The mode of action of pesticides also contributes to their potential to cause harm to the ecological environment and human health. In most cases, the active ingredient is not entirely specific, which means that, in addition to affecting the target organism, it can also have harmful effects on other organisms.

Legislation

European Directive 91/414/EEC requires the registration of plant protection products. Before a product can be authorized in an EU member state, the active substance must be included in Annex I of the directive. In addition, each member state must assess and register the specific applications of the product.

In the Netherlands, the Plant Protection Products and Biocides Act (Wgb) implements this directive, focusing on the safety and health of humans and animals, as well as environmental impact.

Restrictions also apply to the use of pesticides in drinking water abstraction areas, as outlined in the Dutch Drinking Water Act. However, this law cannot fully protect all drinking water sources from contamination. In particular, water companies that use surface water from rivers such as the Rhine or the Meuse often face elevated levels of pesticides in raw water. As a result, these contaminants can also end up in drinking water
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Cooperation at the European level is therefore essential to ensure the safety of our drinking water.

About Eurofins Environment Testing

Eurofins Environment Testing Netherlands is part of Eurofins Scientific and your partner for environmental testing. Our goal is to help you achieve your objectives. With efficient and qualitative analysis techniques we support your business processes. Our customer service is at your disposal with specialized knowledge and extensive experience. You can make use of our own packaging and logistics service. Our reliable couriers take care of sample transfer on site and transport the samples to the relevant laboratory the same day.
Eurofins Environment Testing Netherlands is committed to protecting the environment. With our products and services, we support the responsible use and minimization of substances harmful to humans and the planet. Examples include hormones, pesticides, dioxins and heavy metals. By reducing the usage of water, raw materials and energy, we contribute to sustainability. Our laboratories have developed special programs to minimize environmental risks, such a safe use of chemicals and waste disposal.

Eurofins' offerings

Eurofins offers a very broad analysis package, covering more than 450 components, enabling the detection of the most common pesticides in water and soil. By applying advanced analytical techniques – such as liquid chromatography with tandem mass spectrometric detection (LC-MS/MS) and gas chromatography with tandem mass spectrometric detection (GC-MS / GC-MS/MS) – compounds can be measured at very low reporting limits.

The early identification of new compounds in various matrices and the development of sensitive analytical methods ensure that the range of analyses remains continuously up to date. Because Eurofins thoroughly validates its analytical methods, clients are assured of reliable analytical results. A large portion of these analyses is also accredited by the Dutch Accreditation Council (RvA).

Plant protection products can be classified based on their chemical composition. Eurofins is able to analyze, among others, the following types of plant protection products:

- Anilides
- Carbamates
- Carboxamides
- Chlorobenzenes
- Phenoxy herbicides
- Phenylurea herbicides
- Organochlorine pesticides
- Organophosphorus pesticides
- Organonitrogen pesticides
- Pyrethroids
- Triazines
- Quaternary ammonium compounds

More Information

Samples can be collected at a preferred location or at a designated depot. To arrange this, please contact our logistics service at 0800-0991180 or via email at logistiek@eurofins.com.

For additional information regarding analyses, reporting, pricing, turnaround times, services, and more, please contact your account manager or our customer service during office hours.

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