Drug research

News report regularly highlight that a drug lab has been broken up or that illegal drug dumps has been found, resulting in the release of harmful waste. Eurofins specializes in quantitatively analyzing the components frequently found in these settings, encompassing solvents, excipients, and end products. This service allows the contaminants present to be identified and whether these substances have reached the groundwater.

Pollution from drug waste

Barrels and jerry cans filled with toxic drug waste are found with some regularity in deserted outlying areas. The toxic substances end up in the environment through these dumps, with all possible harmful consequences. It is, therefore, important to remediate the affected areas as quickly as possible.

Drug waste, what does it consist of?

In order to identify the right parameters, it is crucial to understand which harmful substances can be found.
Most dumping is related to the production of (meth) amphetamines or cocaine. Dumps often consist of various types of raw material, intermediates, metals, solvents, auxiliary materials, or even the end product. A number of these substances are very mobile and soluble in water.
The excipients are substances that are needed during production, but are not part of the final product. Common adjuvants are hydrochloric acid and caustic soda, but mercury-based catalysts, which are necessary for production, are also often found in drug cleanups.

Precautionary measures

Each instance of dumping is unique, as are the respective locations. Assisting in identifying options and preferences is Eurofins' pleasure. The initial step to evaluate location safety involves conducting an air measurement to detect volatile substances and mercury presence.

Laws and regulations

The created drugs fall under the opium law. When drugs (end products) are found, a dumping site becomes a matter for justice, if they are not already involved.

The drugs, intermediaries, and certain raw materials are not standardized in the Soil Protection Act (Wbb), but fall under the duty of care (Article 13 Wbb).

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Therefore, when volatile components, solvents resources, heavy metals, and/or end products are found, there is a duty to be sanitized according to the duty of care.
In December 2022, the RIVM published a report which warns for the effects of drug waste on human health. 20% of drug dumping takes place near groundwater protection areas. Therefore, the RIVM recommends including related substances in the analysis and monitoring sewage water, surface water, and groundwater.

For more information about the RIVM report, please see 'De gevaren van dumpingen en lozingen van drugsproductieafval voor de kwaliteit van drinkwaterbronnen – RIVM-briefrapport 2022-0104'.)

Eurofins' offer

Eurofins offers various analysis options tailored to distinct scenarios. A primary offering includes a package for examining prevalent solvents and additives. This mainly concerns (volatile) substances like BTEX, various alcohols, some metals, and the acidity.

Additionally, there are two distinct analysis packages available for common end products: one for amphetamines and XTC, and another for cocaine. Thorough quantitative analysis can be conducted on these substances. These analyses are applicable to both soil and groundwater.
Furthermore, Eurofins' employees can collaborate on devising analysis approaches specific to investigation processes involving dumping incidents. These analyses are not part of the regular process and have a lead time of approximately 15 working days. Unfortunately, it is not possible to produce substances analysis. These types of investigations should be conducted through the judiciary.

Accreditation

Most substances are not standardized, meaning they cannot be analyzed with an AS3000 or AP04 accreditation/recognition. The substances that are standardized will be reported as such. All these analyses have been validated and will be performed according to the ISO17025 accreditation.

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.

More information

Samples can be collected at the desired location or at a depot. Eurofins' logistic services can be reached at 0800-0991180 or logistiek@eurofins.com.

For additional information regarding analyses, reporting, rates, delivery times, service and more, please contact the designated contact person or the customer service during office hours.

Overview of drug packages and tests

Drug monitoring		
Matrix:	**Soil:**	**Water:**
Package code:	PRC7X	PRC7W
Packaging:	1x 053; 1x 055 (sampling cilinder)	1x 062, 063, 064, 066, 080; 2x 067
Fastest delivery time:	96 hours	5 working days
Standard delivery time:	5 working days	5 working days
Includes:	Mercury, sodium, s-total (s), s-total (SO4), benzene, toluene, ethylbenzene, o-xylene, m,p-xylene, xylenes (sum), BTEX (sum), naphthalene, styrene, methanol, ethanol, methyl isobutyl ketone, iso-propanol, n-butanol, acetone, isobutyl alcohol (isobutanol), cyclohexanone, acetonitrile, diethyl ether,n-propanol, t-butanol, 2-butanol, 1,4-dioxane, methyl ethyl ketone, ethyl acetate, isobutyl acetate, methyl acetate, butyl acetate, pH (measurement temperature), pH, ammonium, (NH4-N), ammonium (NH4), chloride	Dry matter, mercury, sodium, sulfur, sulphur as sulphate, benzene, toluene, ethylbenzene, o-xylene, xylenes (sum), BTEX (sum), naphthalene, styrene, methanol, ethanol, methyl ethyl ketone, iso-propanol, acetone, iso-butyl alcohol (isobutanol), n-butanol, acetonitrile, cyclohexanone, diethyl ether, t-butanol, 2-butanol, 1,4-dioxane, ethyl acetate, isobutyl acetate, methyl acetate, butyl acetate, measuring temperature, acidity, ammonium (NH4-N), ammonium (NH4), chloride, MIBK

Drug monitoring Cocaine		
Matrix:	**Soil:**	**Water:**
Package code:	FFKY4	FFAI2
Packaging:	1x 053*	1x 065*
Fastest delivery time:	12 working days	12 working days
Standard delivery time:	12 working days	12 working days
Includes:	Cocaine, benzoylecgonine	

Drug monitoring Amphetamine		
Matrix:	**Soil:**	**Water:**
Package code:	FF290	FFAH2
Packaging:	1x 053*	1x 065*
Fastest delivery time:	12 working days	12 working days
Standard delivery time:	12 working days	12 working days
Includes:	Amphetamine/speed, 3.4-methylenedioxyamphetamine (MDA), 3,4-methylenedioxy-N-ethylamphetamine (MDEA), 3,4-methylenedioxy-N-methylamphetamine (MDMA/XTC), methamphetamine, N-acetylamphetamine	

* In the case of both cocaine and amphetamine in the same sample: 1x 053 or 1x 065 is sufficient for both.