

"We don't investigate technical problems, we solve them!" UMTEC

Competence Centre Odour

Olfactometry

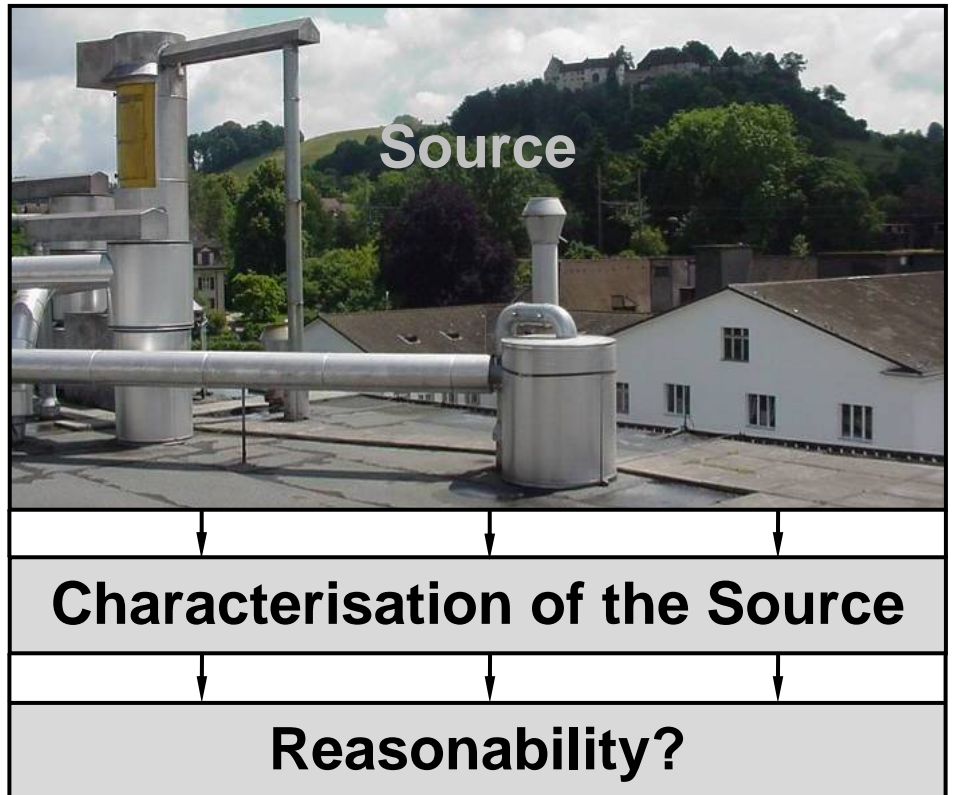
- Emission measurements
- Efficiency
- Limit values

Odour identification

- Odour quality
- Gas chromatography
- Electronic nose

Odour annoyance

- Inspection
- Questioning
- Electronic diary



Subject: Air monitoring

Our demands with regard to a clean environment are ever increasing - What was accepted a few years ago as an "unavoidable" consequence of our technological advance, would nowadays lead to complaints.

Odours for example - Humans have a very pronounced feeling for what smells "good" and what smells "bad". The tolerance limit however is individually different. What one person finds acceptable already appears unbearable to someone else.

What we offer:

From the source of the odour, along with the characterisation and an assessment of the reasonability for the population: We offer independent and competent services with regard to the objective detection of odours - the precondition for a fair agreement between industry, residents and environmental agencies.

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Olfactometry

How strong is a smell? Classical olfactometry is the method of choice for quantifying odour emissions.

How effective is a measure for the reduction of odours, e.g. a filter? By way of olfactometry, the smell reduction is assessed in a quantitative manner.

The fixing of an odour limit value in a mutual agreement between polluters, residents and authorities often makes sense. UMTEC helps you with this.

Fig. 1: four test persons deployed at an olfactometer of UMTEC



Odour quality

For determining the odour quality, we use test persons, as well as chemical analytics. By way of an odour list, the test persons determine the extent of defined odour-components in a sample.

We separate gas mixtures with the help of specialized Gas Chromatographs. In addition to conventional detectors, we may also use the human nose as a detector at the Gas Chromatograph's "sniffing port". In this manner, we are capable of identifying chemical compounds which are of relevance with regard to odour.

Fig. 2: sniffing the odour-active components of a gas mixture at the "sniffing port" of our gas chromatograph



In contrast to apparatus of chemical pollutant analysis, electronic noses contain a multitude of substance-unspecific sensors, whose individual electrical conductivity or oscillation frequency changes by way of the adsorption of gases. Thus complex "odour patterns" are detected in their entirety.

We can therefore cover the requirements of an objective instrumental analysis for the measurement of odour. Our electronic noses are for example used for the breakthrough detection of odour filters.

Together with you, UMTEC determines the optimum way in solving your odour problems.

Fig. 3: electronic nose in the UMTEC-laboratory



Odour annoyance

The following measures are suitable for the objective detection of odour emissions from industrial and from commerce:

- Inspections by independent, external observers
- Interviewing residents with standardised methods
- Monitoring odour emissions by the residents, by way of an electronic diary

Fig. 4: pda micro-computer with software for odour monitoring