Odour measuring device

Continuous monitoring of odour emissions

APPLICATION

Odours arise from the interaction of different chemical substances. So for example, the failure of a system (e.g. ionisation plant) causes an immediate odour development. To recognise potential smell nuisance early and to keep it away from the ambience, odour emissions can be monitored and subsequently an environment-friendly operation of plants can be assured.

FUNCTION

The sampled measuring gas is led into the photometer in the device. On the basis of infrared absorption there the measurement of volatile hydrocarbons (C_xH_y), specifically methane (CH_4) and carbon dioxide (CO_2), is made. For the recognition of the odour pattern a virtual gas sensor array is integrated. This reacts to different concentrations of the volatile hydrocarbons. The registration and allocation of all measuring data is carried out by the internal electronics. By means of the comprehensive evaluation software the stored odour patterns are recognised and evaluated.

APPLICATION EXAMPLES

- monitoring of air purification plants
- waste air of breweries
- general recognition of odour sources

YOUR BENEFITS AT A GLANCE

- high selectivity through the use of versatile sensors
- periodical zero point setting against possible drift of the sensors
- plausibility control of the measuring results

PRECONDITIONS ON SITE

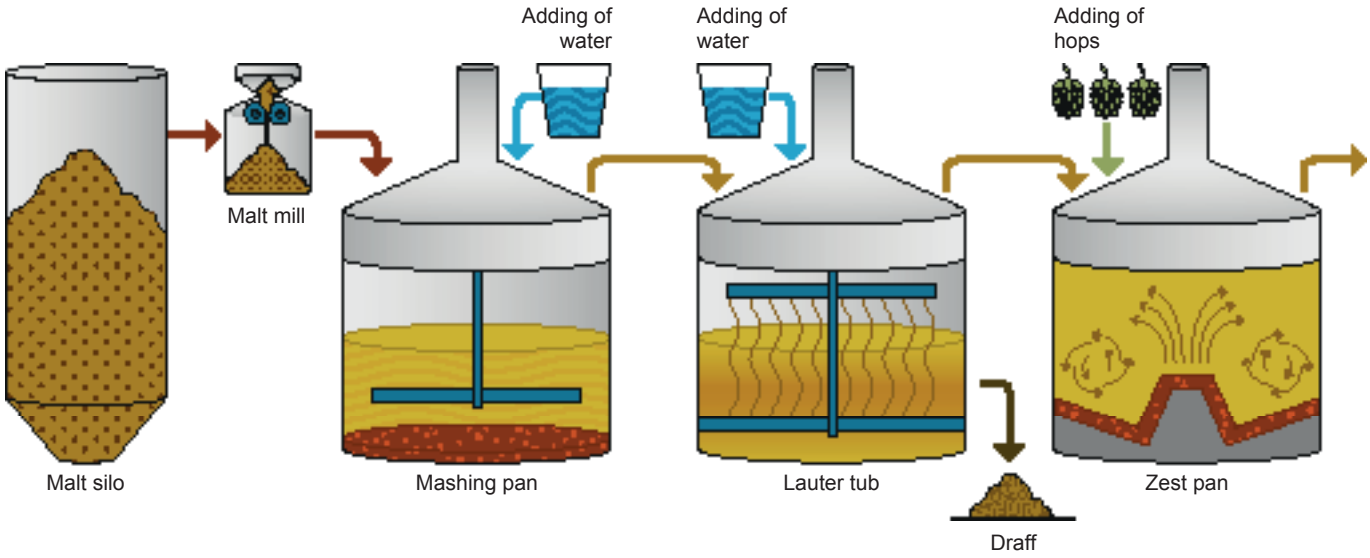
- ambient temperature: 5...45 °C
- installation place indoors and dust-free
- protection against wetness
- protection against percussions/vibrations
- appropriate gas sampling and conditioning

INTERNAL GAS FLOW CHART

APPLICATION EXAMPLE 1: ODOUR DEVELOPMENT IN BREWERIES

A process of brewing consists of several processes, which cause different odour developments. The following figure shows the possible sources of odour development during the process of brewing. By adding water and increasing the temperature the first typical odours develop. The major odour development by far arises during the cooking in the zest pan.

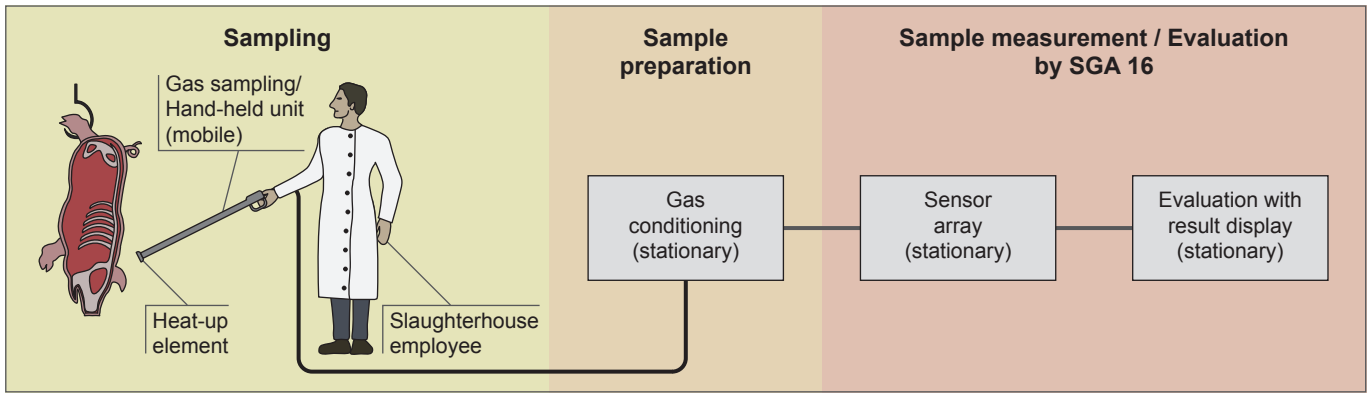
These odours can also be noticed as smell nuisance in the environment of the brewery. For early detection the SGA 16 can be used for odour measurement in the brewery hall. The odours from the process of brewering are supplied to the device and compared with predefined odour samples so that respective counteractive measures can be implemented for the hall exhaust air at an early stage.



APPLICATION EXAMPLE 2: DETECTION OF BOAR SMELLS AT MEAT PRODUCTION

Male piglets produce hormones upon their sexual maturity which can initiate a disagreeable boar smell. This smell can decrease the sales of boar meat. At slaughtering a definition of these odours is currently made by manual odour tests. In order to standardise the judgement of the smell objectively, with the aid of the SGA 16 a respective check can be made.

The sampling is thereby made via an additional hand-held unit by which the neck fat is heated and the therein stored hormones are volatilised and sucked. Through a connected tube the extracted gas is led into the SGA 16 where the final measurement and evaluation of the odour sample is carried out.



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