

Field inspection



In field inspections trained people participate and record when they can detect odour or not in the field and not in the laboratory (as in dynamic olfactometry). For a set period of time, they follow either the grid method or the plume method and record presence or absence of odour. However, this method makes it difficult to separate the type of odour if there are several of them. Field inspections are time-consuming and often induce high costs, and still do not provide real-time information on the discomfort of the impacted citizens.

What is it?

Dynamic olfactometry should be limited to source sampling. In order to assess the presence of odours in the field it is possible to use human “sensors” directly in the field. It is possible to rely on trained assessors by running field inspections such as grid or plume measurements to evaluate the extent of the area impacted.

The main idea of field inspections is to estimate the degree of annoyance in a determined problematic area by means of the olfactory capacities of a group of people (panel) specially trained and "calibrated" for this purpose.

Two different approaches for field inspection can be applied:

- grid method which uses direct assessment of ambient air by panel members to characterize odour exposure in a defined assessment area.
- plume method for determining the extent of the downwind odour plume of a source (there is no direct relation between the presence of recognizable odours and the occurrence of odour annoyance).

Although field inspections have been applied for a long time especially in Belgium, their standardization on an European level is quite recent. Two European standards were published in 2016: EN 16841-1 "Ambient air - Determination of odour in ambient air by using field inspection - Part 1: Grid method" and the EN 16841-2 "Ambient air - Determination of odour in ambient air by using field inspection - Part 2: Plume method"

What can it be used for?

The "grid method" allows to estimate the degree of annoyance in terms of time percent of "odour hours" in a determined problematic area.

With the "plume method", it is possible to determine the extent of the odour plume from a facility under specific meteorological conditions.

With a suitable training, assessors carrying out field inspections may provide some information about odour quality and recognize its provenance.

What can it NOT be used for?

It can't give us information about odour concentration.

