PROJECT FACTSHEET

# SENSITIVE MEASUREMENTS TO FACILITE COMPLIANCE

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## ABSTRACT:


to their direct and indirect effects on the environment and the potential risk to human health. Industrial plants using solvents have to limit their emissions to the levels stated in VOC-directive (Directive 99/13/EC) before the end of October 2007, whereby VOC emissions from the solvent using industry should be reduced by 67% compared to the 1990 VOC levels. Furthermore the directive sets very strict limits (in some cases below 1 ppm) for the so-called "R-labelled" VOCs, which contain for example different chlorinated VOCs.

In environmental analysis, one of the most challenging and still unresolved needs is the reliable measurement of (VOC). VOC emissions are normally present as mixtures. Furthermore, it is typical for many really harmful VOCs to be present at low concentrations. The emission limits for these compounds are also very low. This poses an enormous challenge in terms of the sampling, measurement and the selection of removal methods. To date, however, no reliable, selective and sensitive measurement technique exists that is capable of identifying the VOC emission levels of certain "R-labelled" VOCs in order to fulfil the limits stipulated by new directives.

This project will develop an affordable, reliable tool for on-line monitoring of harmful and toxic VOC emissions. The main focus will be the development of a novel iPAS sampling technique and calibration for online process measurements, which will be applied for its use in several demanding gas measurements (VOC emissions), where the use of traditional measurement techniques have clearly failed, or have proven very difficult and laborious. As a result, reliable emission measurement would form a coherent basis for the development and evaluation of the VOC emission abatement technologies.



**KEYWORDS:** Volatile Organic Compounds, Optical measurement technology.


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