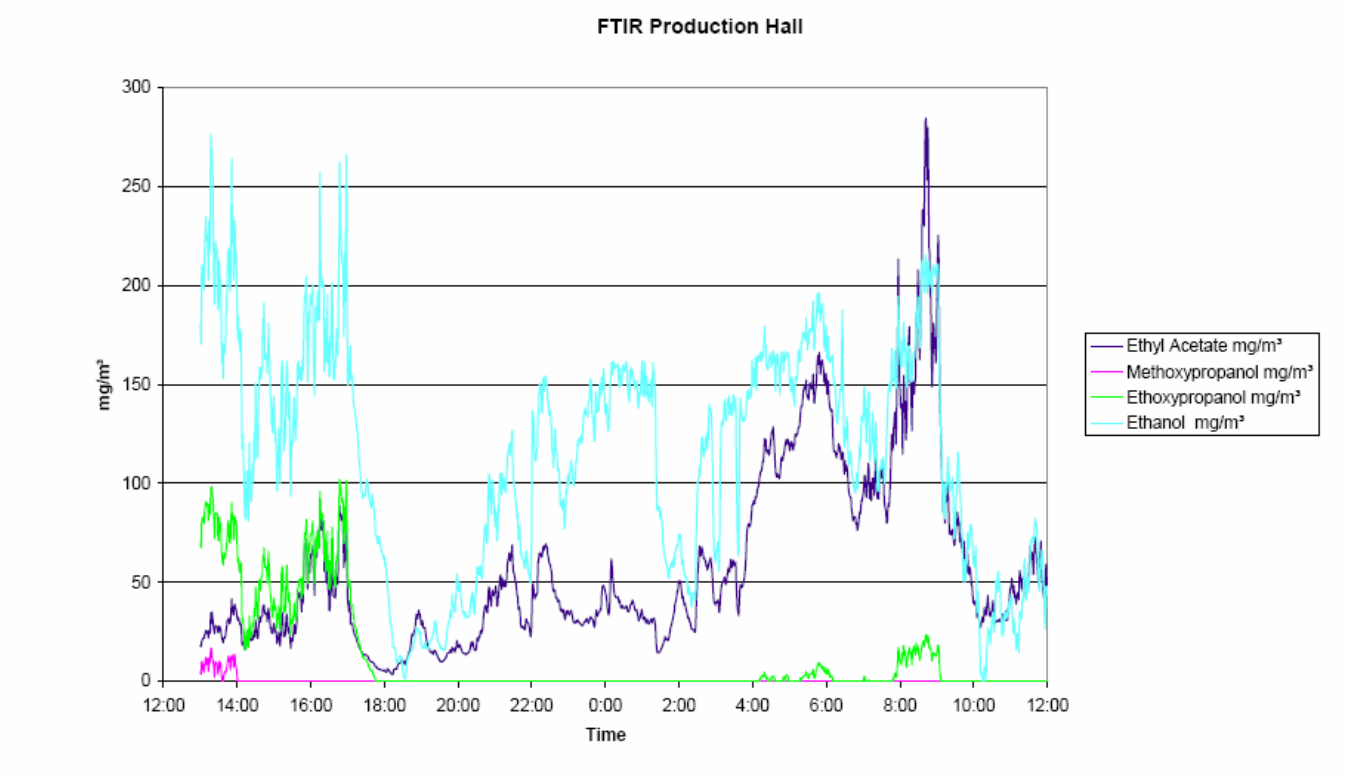
Gasmet™ in industrial air quality – applications: Measurement of Solvents in Print Factories

Typical printing process is based on solvent based dye. Solvent evaporation to factory air may have health effects to workers. Different solvents have highly different worker exposure limits. In order to protect the workers health, but on the other hand to avoid unnecessary production stops, it is important to get component specific measurement data.



The figure below presents real time measured data with Gasmet™ FTIR gas analyzer from a plastic bag printing facility

Gasmet™ FCX: Stationary System for continuous on-line measurements. With multipoint sampling system a single analyzer can measure up to 16 sampling points.

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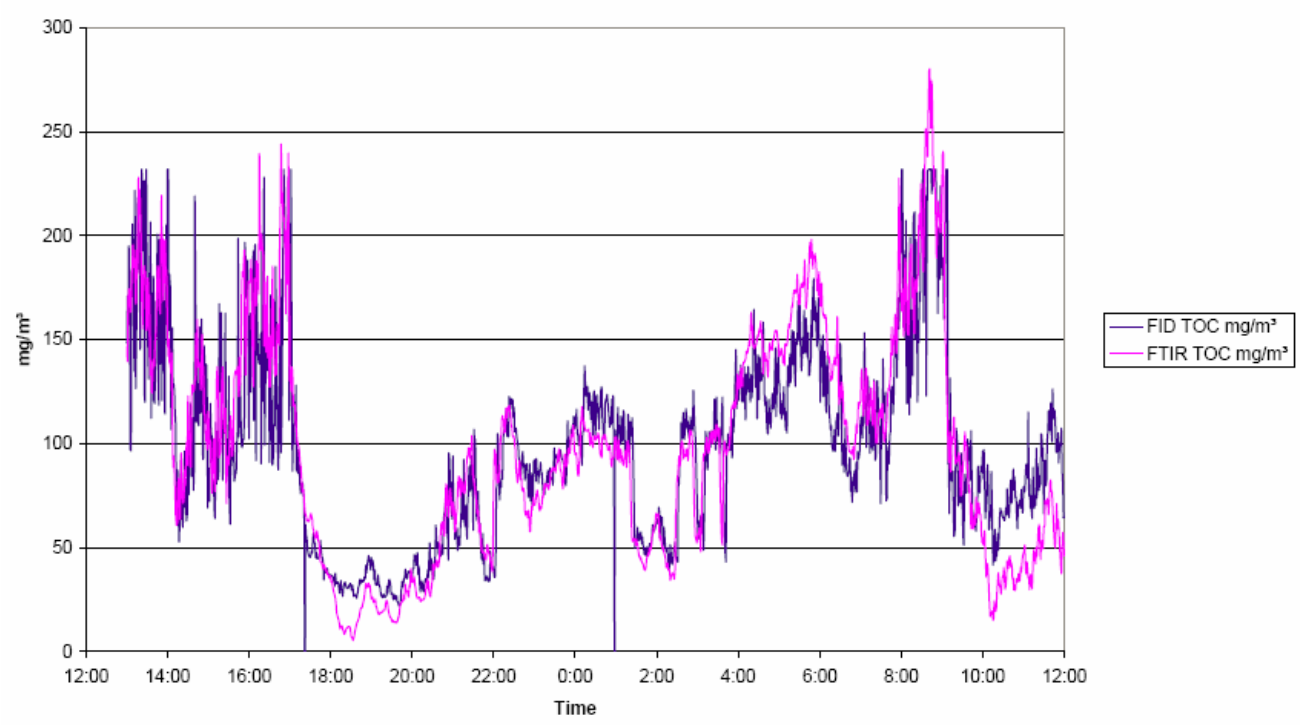
Different Analysis Methods:

- Electrochemical sensors: cheap, sensitive, fast, but cross-interference effects cause unnecessary alarms •
- Flame ionization detector (FID): fast, however only total organic carbon (TOC) can be measured, lack of component specific information makes the interpretation of data difficult
- Gas chromatography with manual sampling: sensitive, specific, lack of real time data (batch sampling).
- **FTIR**: specific, sensitive, fast. Real time data allows real time countermeasures when concentrations increase

Comparison of FTIR and FID measurements: FTIR can produce virtually the same total organic carbon reading as FID, but also in addition component specific concentrations for different components.



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Gasmet™ Dx-4015: Portable Analyzer for short-term measurements at different locations. Includes internal sample pump