

# TECHNICAL THERMAL DESORPTION COUPLED TO GC / MS



## Analytical Services

Whether you have detected an unusual smell coming from a product or during the manufacturing steps or are looking to determine the nature of gaseous emanations of your product? TD-GC / MS technique is helpful.

This device allows you to extract volatile organic compounds (voc's) of a sample in a controlled manner to accumulate the gas within an absorption tube. The gas chromatography coupled with mass spectrometry (GC / MS) is then used to separate, identify and quantify these same voc's.

VOC's are removed from the sample by controlled heating to a temperature up to 250 °C and accumulated in a tube containing suitable absorbent for organic compounds of different molecular weights (eg. C3 to C9). Sampling can also be done in a room with a pump or simply by diffusion.

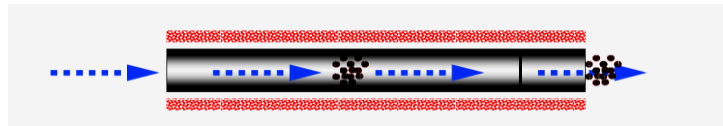
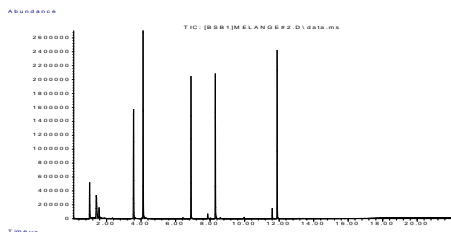
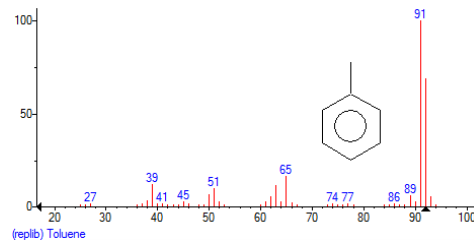


Schéma d'un tube d'absorption des cov's

VOC's are then transferred to a gas chromatograph to separate the various components. A chromatogram is formed with a line for each separate cov. A mass spectrum for each detected component is used to identify the nature of these components by comparison with a database.



Exemple d'un chromatographe



Exemple de spectre de masse du toluène

In sum, this technique can perform analysis of ambient air or extract the volatile organic compounds from materials such as plastics, electronics, chemical (epoxy-based adhesives, silicones, paintings, etc ...) to identify volatiles that can cause process or even health problems.