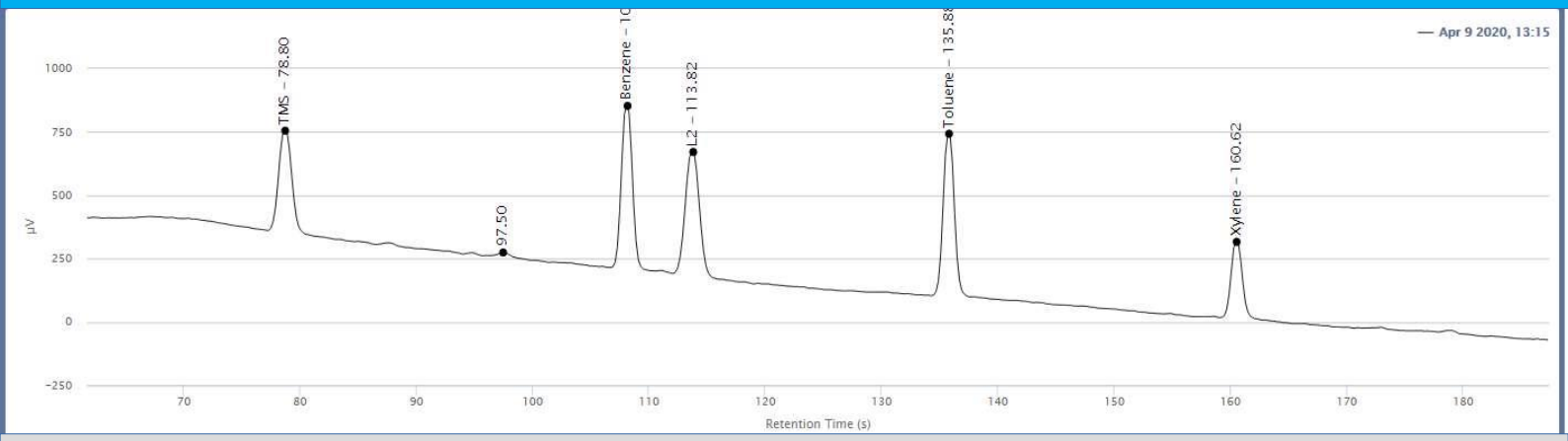
Application note: Analysis of BTEX and siloxanes in biogas, syngas

Context :

Numerous processes have been developed for the valuation of waste and sludge from wastewater treatment plants. The production of methane, in particular from fermentation or pyro-gasification, is a major issue in the constitution of a 100% renewable energy mix in France.

BTEX and siloxanes are often present in biogas before purification because they are widely used in industry and everyday products.

These impurities must be removed prior to any use of the biogas for their deleterious effect on the infrastructure or the health risk they represent.

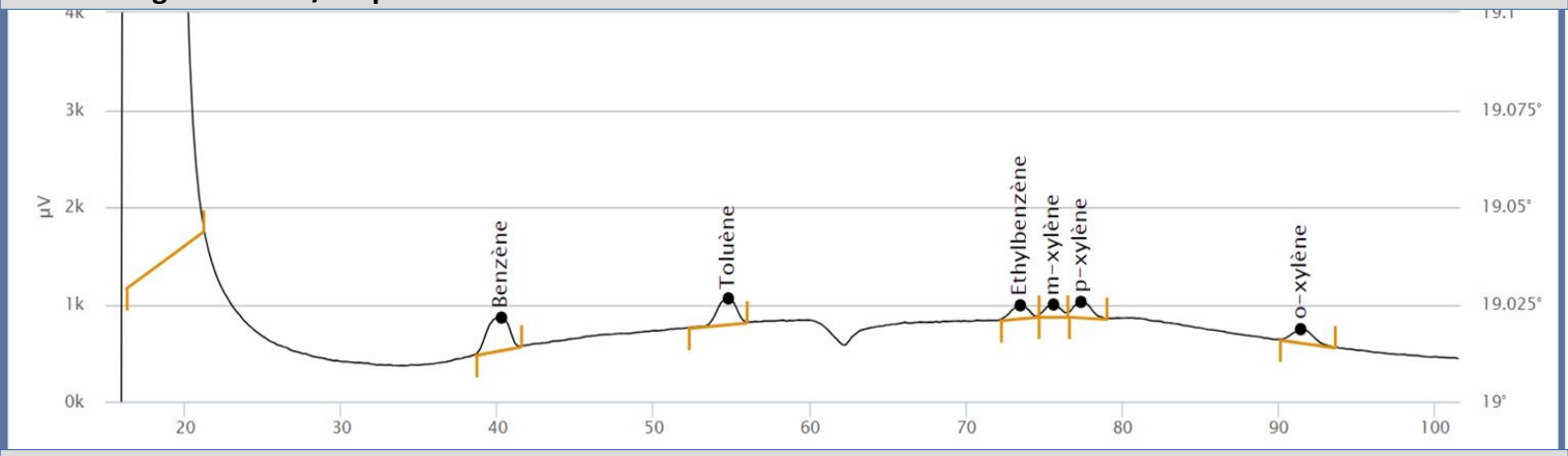


Configuration :
Micro GC Fusion, module Rxi-1ms 10m
Injector: Variable volume
Method :
50°C for 40 seconds
Then >> 220 (1°C/s) for 40 seconds
Carrier gas: Helium / 25 psi

Standard :

Trimethylsilanol (TMS)	*40 ppm*
Benzene	*50 ppm*
Hexamethyldisiloxane (L2)	*45 ppm*
Toluene	*55 ppm*
Xylene	*25 ppm*

Detection limit = 1 ppm



Configuration :
Micro GC Fusion, module Stabilwax 10m
Injector : Large volume variable
Method :
80°C for 30 seconds
Then >>100 (1°C/s) for 60 seconds
Carrier gas: Helium / 25 psi

Standard :

Benzene	*3 ppm*
Toluene	*3 ppm*
Ethylbenzene	*3 ppm*
m-xylene	*3 ppm*
p-xylene	*3 ppm*
o-xylene	*3 ppm*