CHEMLYS Application note
Micro GC Fusion : The best sensitivity

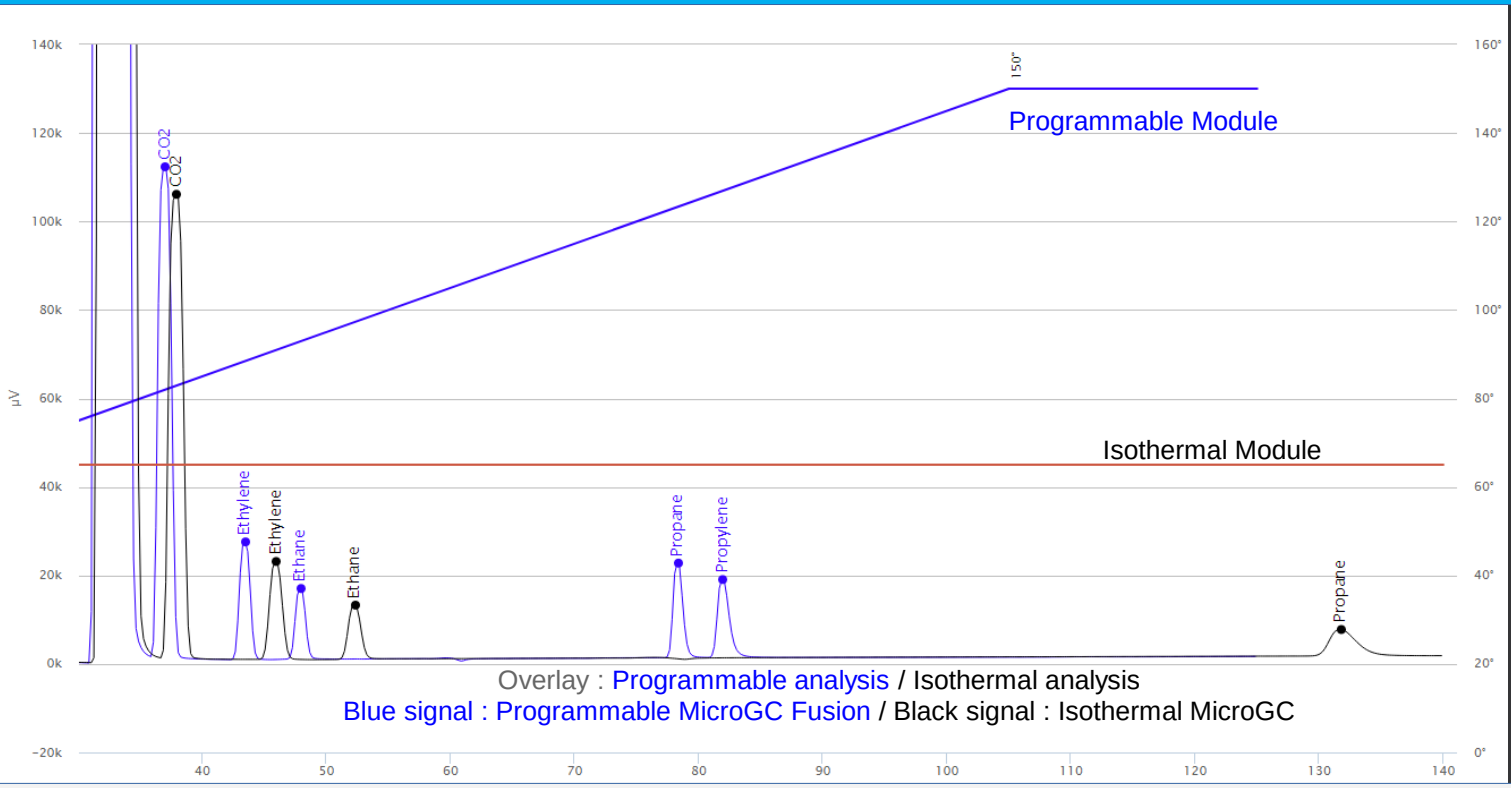
Context :

The sensitivity in Micro GC is a critical parameter.

Isothermal Micro GC suffers from **a critical loss of sensitivity** as the compounds exit late from the column . Indeed, the peaks become wider and wider, less and less high and thus more difficult to integrate.

This phenomenon is illustrated here on the analysis of the same sample containing CO2 and hydrocarbons on two micro GC, a Fusion and an isothermal model.

With **temperature programming** available on the MicroGC Fusion, there is no longer compromise between separation and detection limits on the entire chromatogram.



S/N ratio	CO2	Ethylene	Ethane	Propane	Propylene
Micro GC Fusion	110911	26614	16006	21379	16621
Isothermal Micro GC	104875	22146	12216	5977	ND
Loss of sensitivity of the isothermal MicroGC	**5,8%**	**20,1%**	**31,2%**	**>>300 %**	**ND**

The Micro GC Fusion has the highest sensitivity over the entire analysis with maintained performance and detection limit over the entire chromatogram.

Isothermal Micro GC does not elute propylene in cycle time. The detection limits in isotherm collapse rapidly after 30 seconds of analysis.