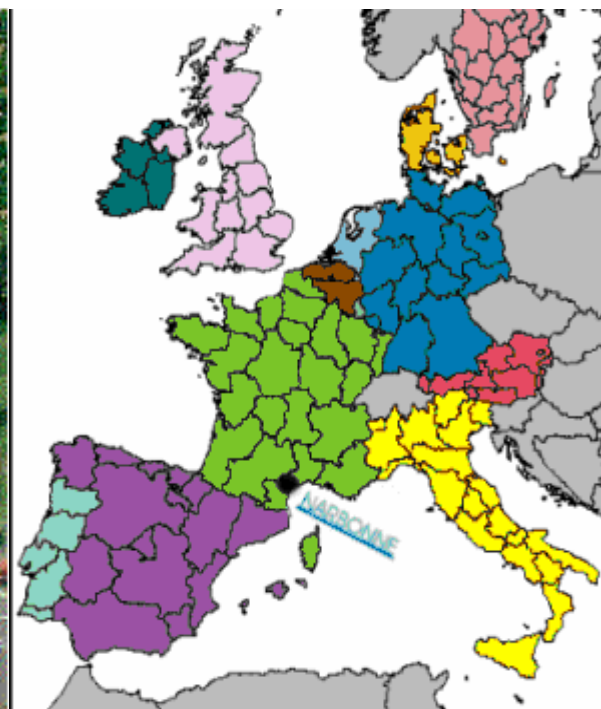




INRA-LBE Narbonne (France)

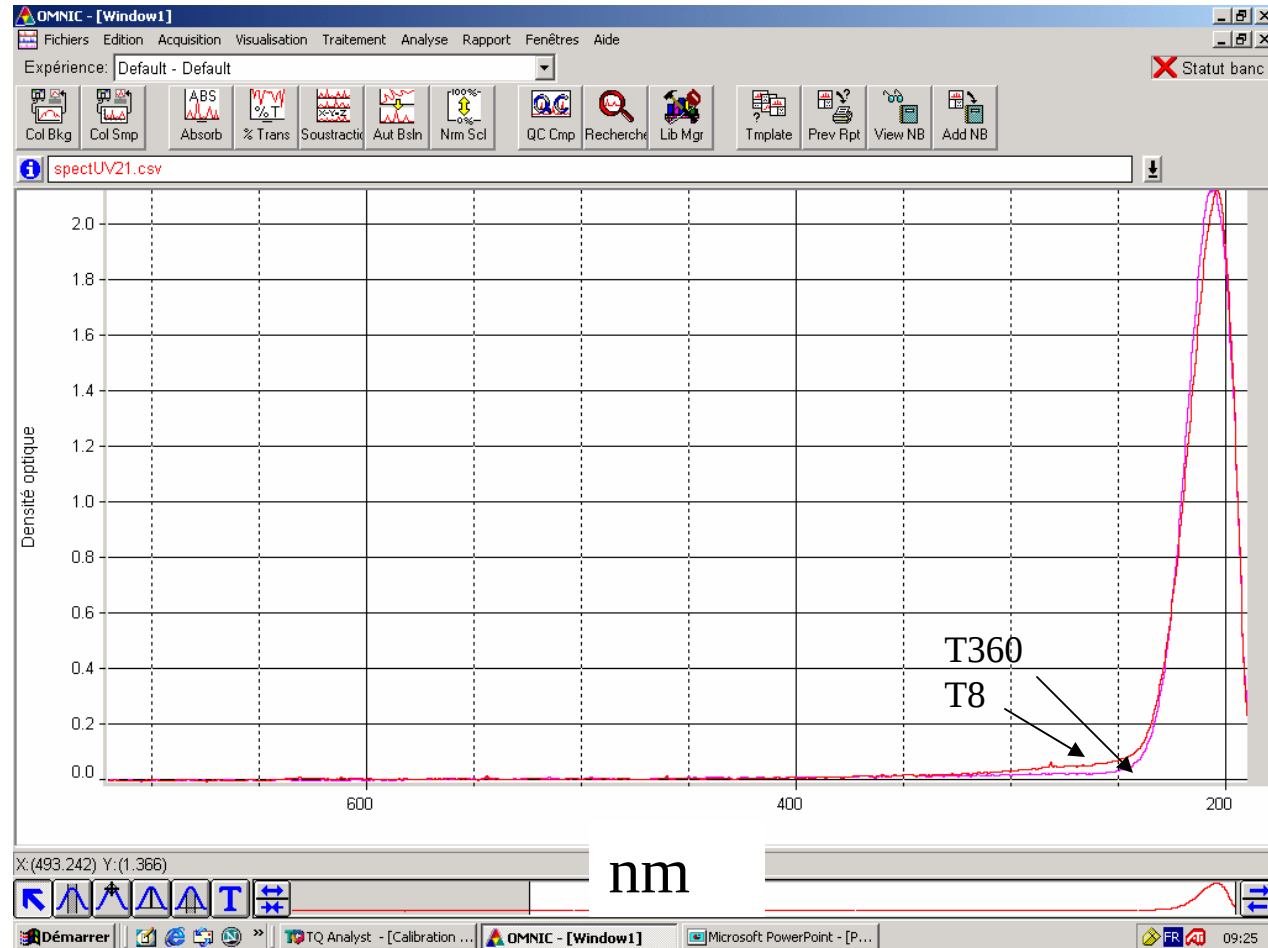


National Institute of Agronomic Research
Laboratory of Environmental Biotechnology

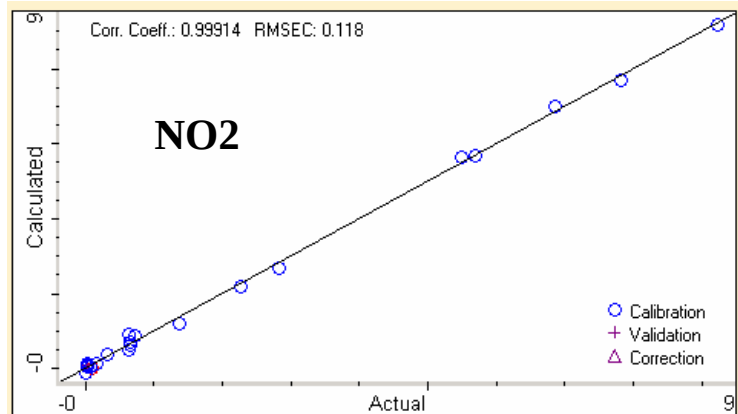
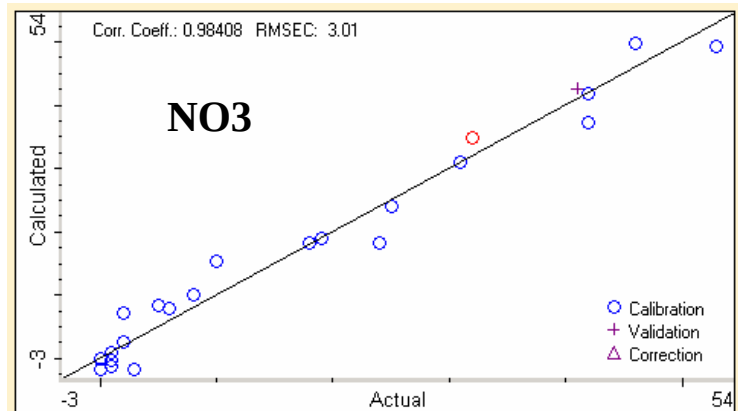
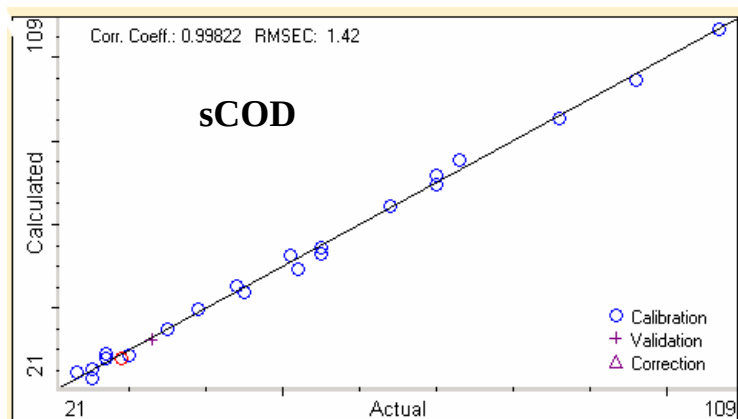
- UV_Visible spectrum Calibration
- FTMIR spectrum Calibration

By M. Jean-Claude Bouvier

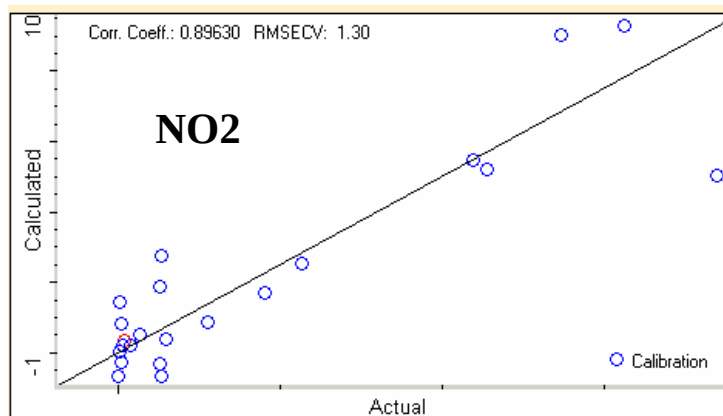
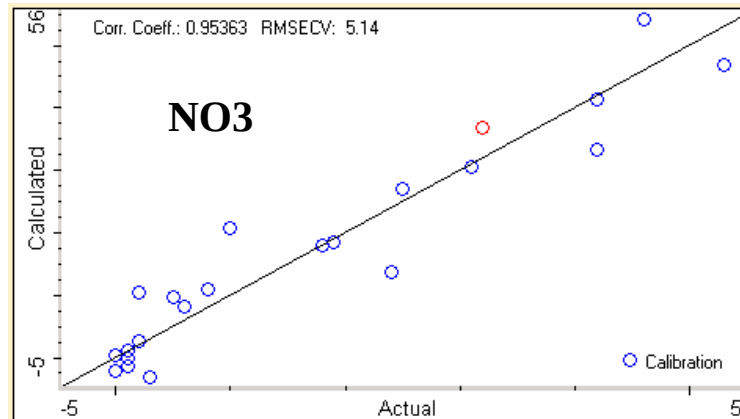
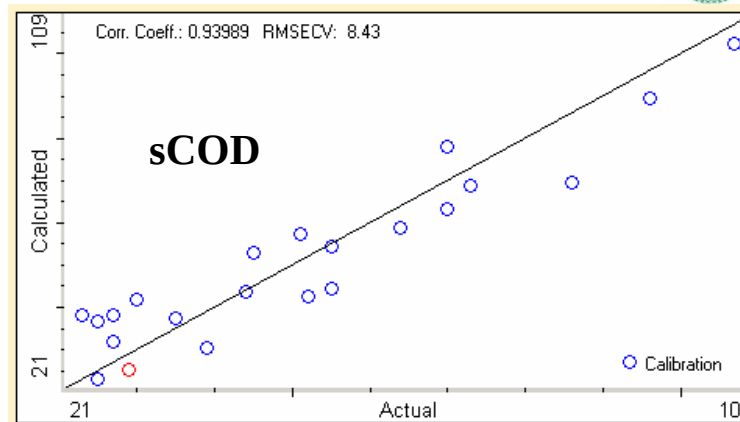
Uv-Visible spectra (serie 09.07.04)



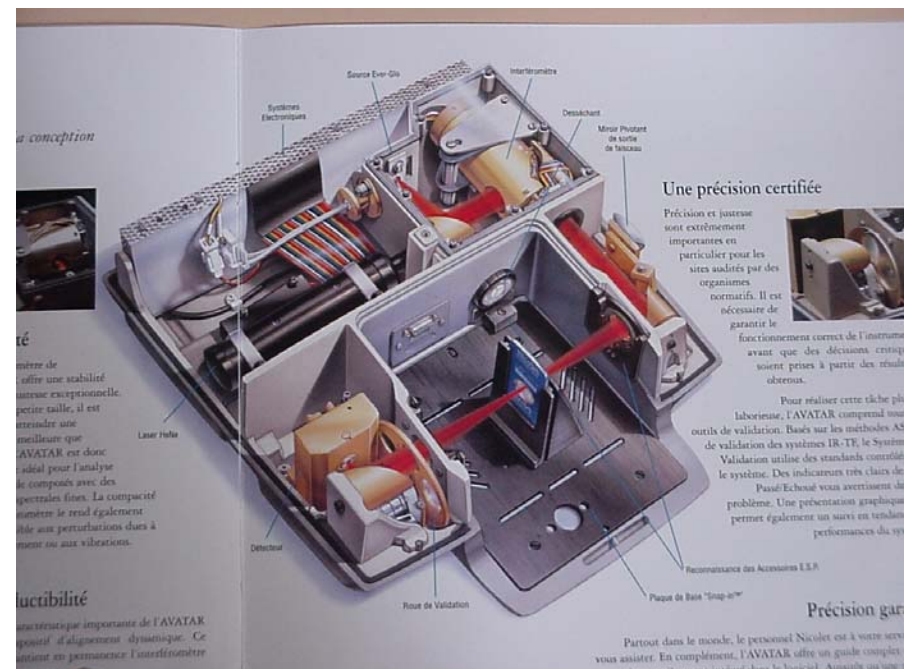
PLS UV-Visible Calibration.



Cross Validation.

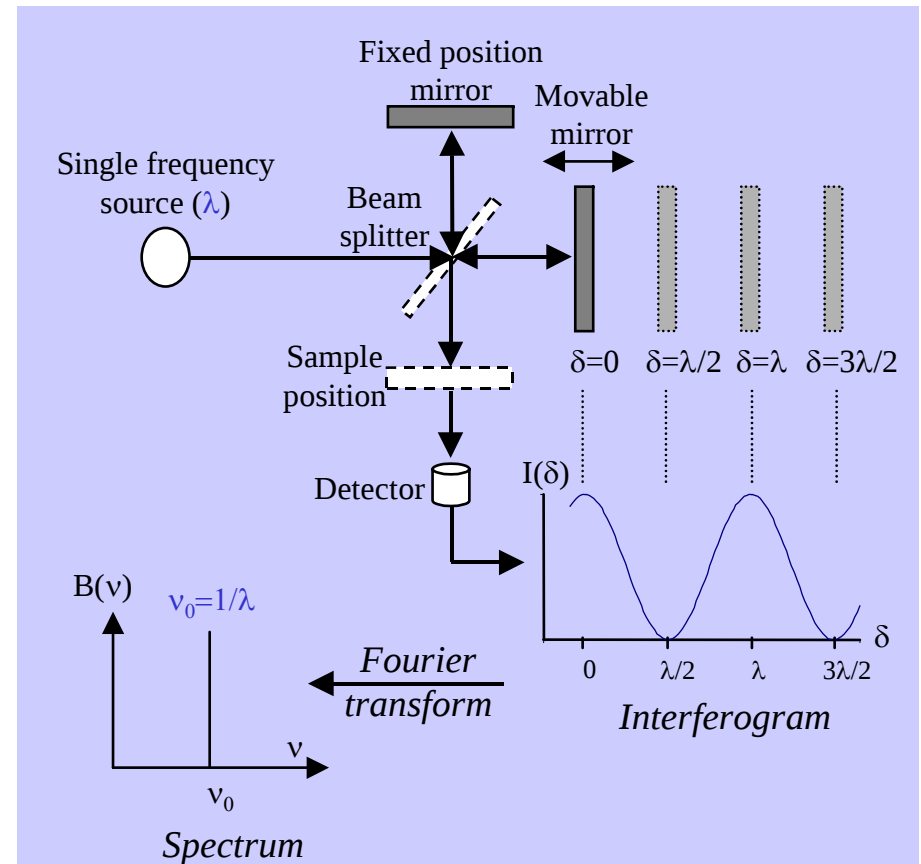
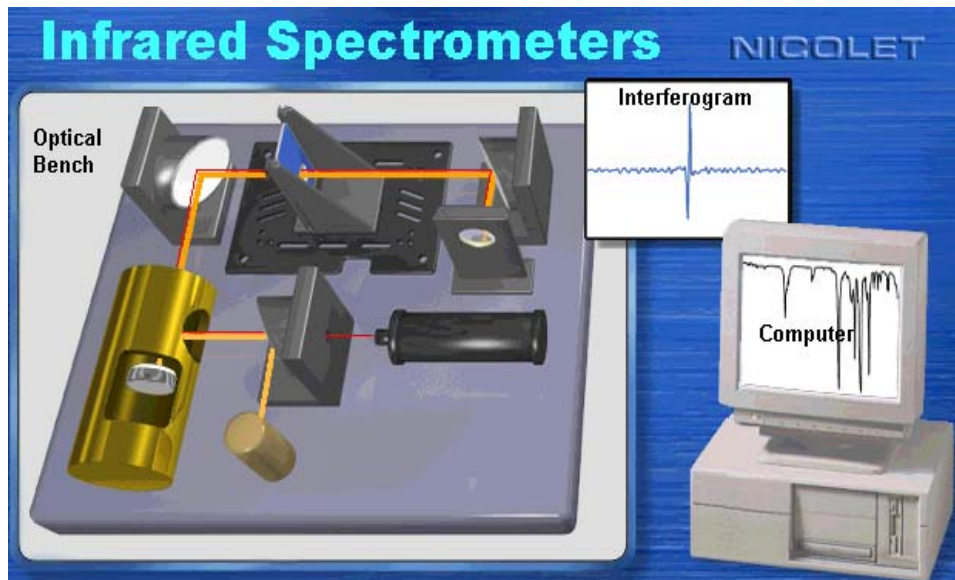


FTMIR Spectrometer



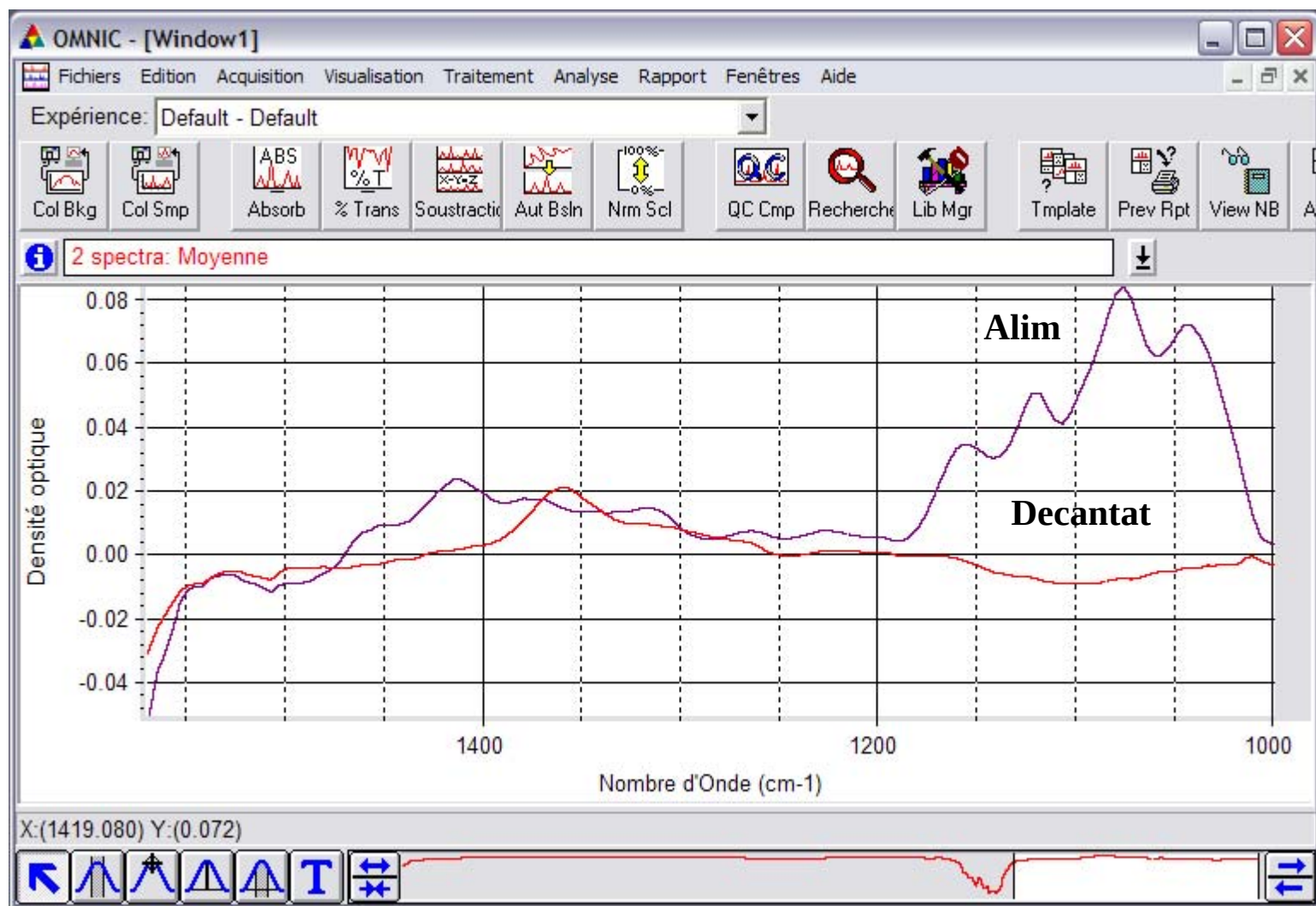
Principle of FT-IR Spectrometry

*First interferometer :
Michelson (1881)*



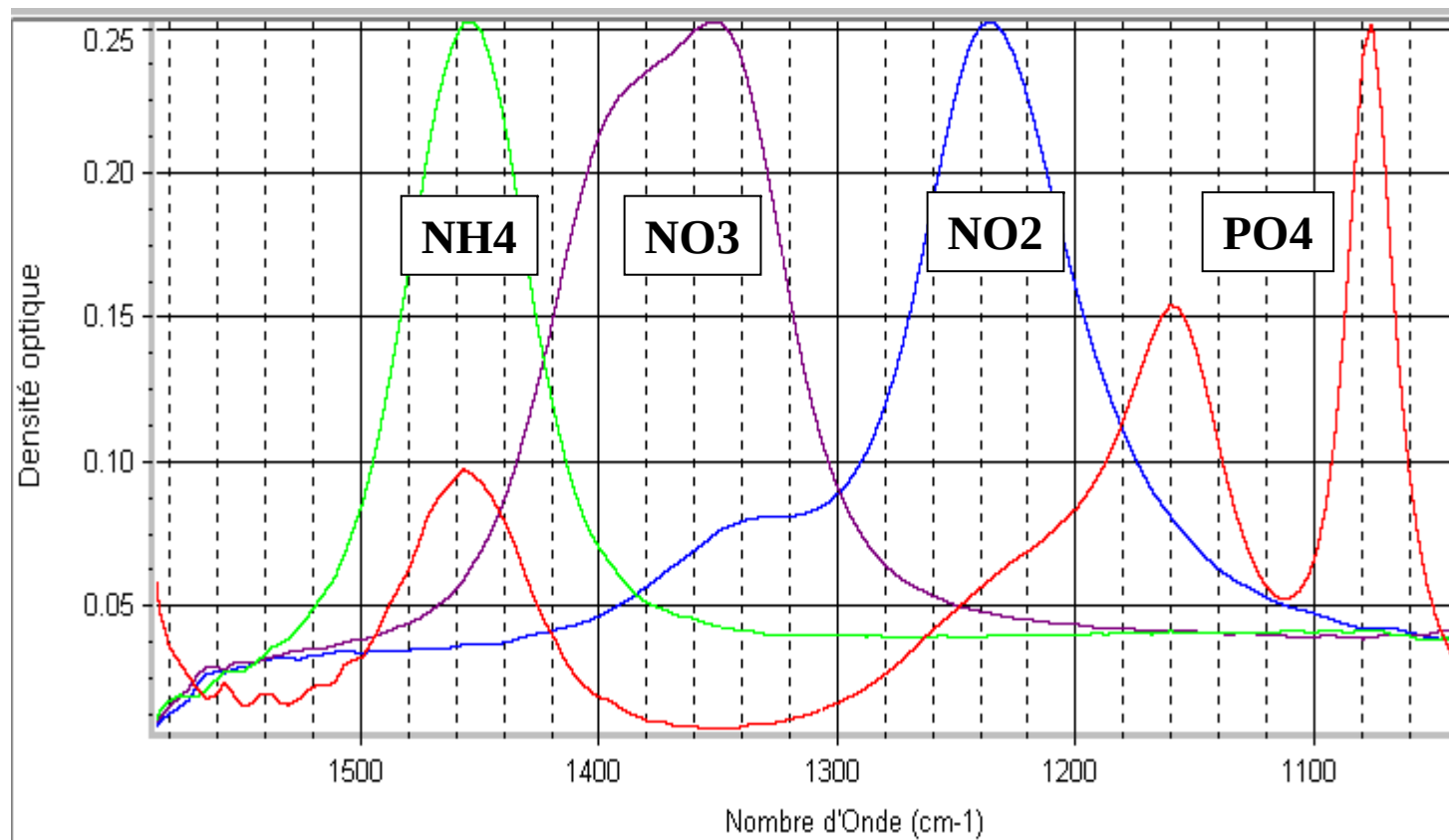
***FT-IR :
Fourier Transform
Infra Red***

FTIR spectra *(Lacto-serum SBR)*



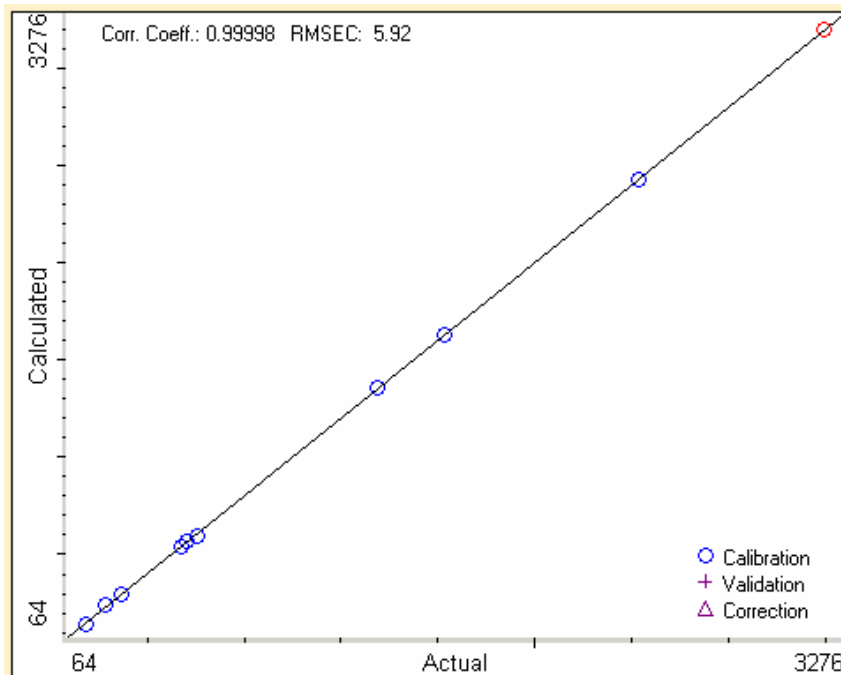
Nitrification Process

IR Spectra of pure samples (10 g/l)

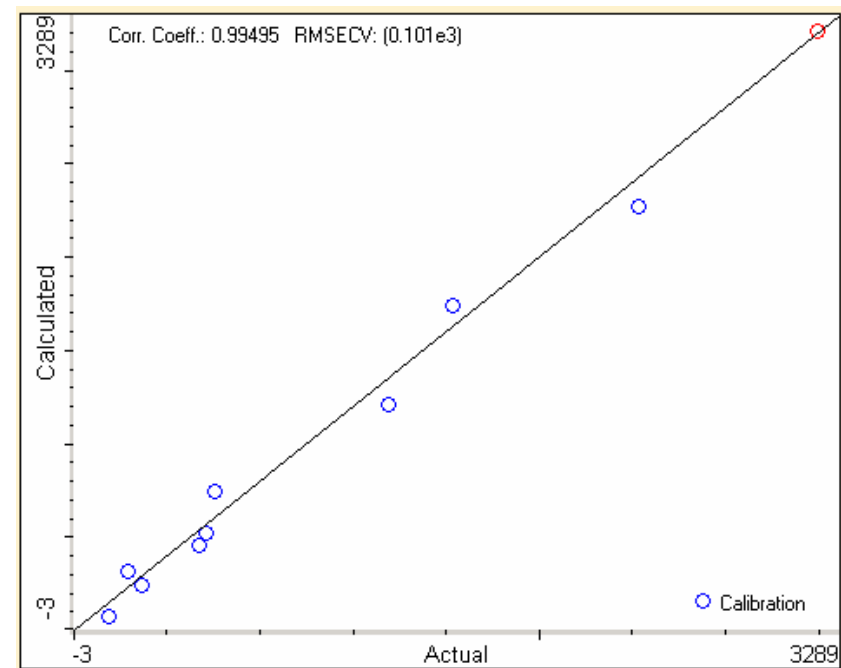


sCOD FTIR Calibration (Lacto-serum)

PLS Calibration



Cross Validation



Conclusions

UV-Visible spectra.

- Adequate range for low concentrated wastewaters,
- Problems related to the robustness of the calibration...

FTMIR spectra.

- More information (the spectra are more diverse), at least for high concentrated wastewaters,
- Good robustness in the corresponding measurement range,
- Need for a microfiltration unit,
- More Expensive than UV.