CLAIMS

1.- Method for correcting an infrared absorption spectrum, a spectrum being the evolution of an absorption quantity with regards to a wavelength quantity in a predefined range of wavelength quantity, the absorption quantity being a quantity representative of the absorption and the wavelength quantity being a quantity representative of the wavelength, the method for correcting an infrared absorption spectrum at least comprising the steps of:

- providing a measured infrared absorption spectrum from a sample,

- determining a first baseline correction curve by using at least one spectral interval in which absorption quantity is expected to be null for at least two wavelength quantities,

- subtracting the first baseline correction curve from the measured infrared absorption spectrum, to obtain a first corrected absorption spectrum,

- from the first corrected absorption spectrum, extracting at least one absorption band whose position is located out of the fingerprint region, the fingerprint region being a spectral region which extends between 1700 cm^{-1} and 500 cm^{-1}, an absorption band being a distribution profile associated to at least one covalent bond of chemical species present in the sample, a position being defined for the distribution profile, the distribution profile being characterized by mathematical parameters, one parameter of the mathematical parameters being the position, the position being the wavelength quantity of the absolute maximum of absorption quantity of the considered absorption band,

- obtaining an expected absorption band,

- comparing each extracted absorption band with the expected absorption band,

- correcting the first baseline correction curve in accordance with the results of the comparing step, to obtain a corrected baseline correction curve, and

- subtracting the corrected baseline correction curve from the measured infrared absorption spectrum, to obtain a second corrected absorption spectrum.

2.- Method for correcting an infrared absorption spectrum according to claim 1, wherein the correcting step further comprises at least the steps of:

- calculating a residual spectrum by subtracting each extracted absorption band from the first corrected absorption spectrum, and

- refining the first baseline correction curve by using the residual spectrum as a supplementary calculation material to obtain a corrected baseline correction curve.

3.- Method for correcting an infrared absorption spectrum according to claim 1 or 2, wherein at the determining step, the first baseline correction curve is an interpolation curve chosen in a group consisting of :

- polynomial function, preferably a polynomial of an order inferior or equal to 4.
- spline function, preferably based on polynomial functions of an order inferior or equal to 4, and
- a linear combination of polynomial functions and/or spine functions.

4.- Method for correcting an infrared absorption spectrum according to any one of claims 1 to 3, wherein the distribution profile is chosen among a Gaussian profile, a Lorentzian profile and a Voigt profile, the Voigt profile being characterized by a Gaussian proportion and a Lorentzian proportion.

5.- Method for correcting an infrared absorption spectrum according to any one of claims 1 to 4, wherein one parameter of the mathematical parameters is the width of the absorption band.

6.- Method for correcting an infrared absorption spectrum according to any one of claims 1 to 5, wherein the extracting step comprises the steps of:

- searching the absorption band(s) in the first corrected absorption spectrum, to obtain found absorption band(s), and
- deducing values to mathematical parameters of each found absorption band, to obtain deduced parameters.

7.- Method for correcting an infrared absorption spectrum according to claim 6, wherein the extracting step further comprises:

- defining each absorption band by using the deduced parameters of the absorption band and a distribution profile.

8.- Method for correcting an infrared absorption spectrum according to any one of claims 1 to 7 when depending from claim 2, wherein the refining step comprises for each extracted absorption band:

- determining an algebraic sign of the residual spectrum at the position of the considered absorption band and/or at the extremities of the width of the considered absorption band, and/or

- analyzing the symmetry of the residual spectrum with relation to the position of each considered absorption band.

9.- Method for correcting an infrared absorption spectrum according to any one of claims 2 to 8, wherein at the extracting step, all the absorption bands whose position is located out of the fingerprint region are extracted.

10.- Spectrometer (200) comprising a radiation source (202), optics (204) to transport the radiation emitted by the radiation source (202) towards the sample, a sample holder (208), a detector (210) and a calculator adapted to carry out a method according to any one of claims 1 to 9.

11.- Computer program product comprising a computer readable medium, having thereon a computer program comprising program instructions, the computer program being loadable into a data-processing unit and adapted to cause execution of a method according to any one of the claims 1 to 9 when the computer program is run by the data-processing unit.