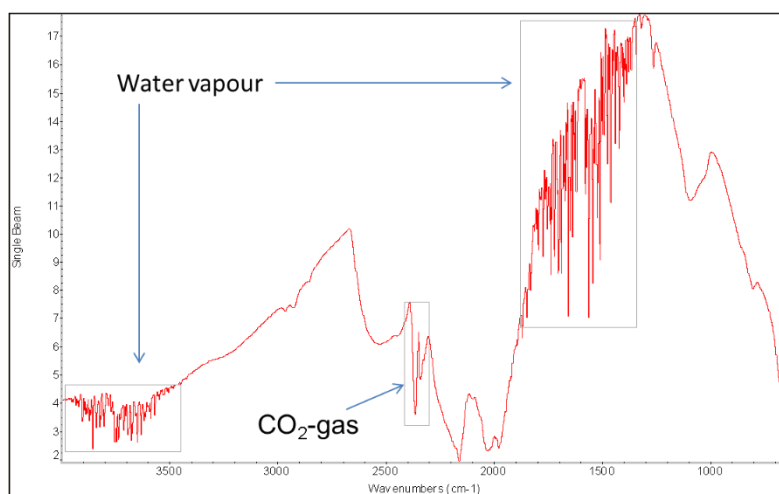


Open OMNIC

Collecting background spectrum

- Make sure the crystal is clean before using the instrument. Clean the crystal using alcohol on a “Kim wipe” tissue paper if unsure.
- Clean by dripping alcohol on lens/tissue paper and wipe the crystal once or twice. Then wipe with dry lens paper. *Do not drip solvent directly on the crystal and do not use "normal towel paper".*
- Use **keystroke “Ctrl + B”** See figure 1 for example of a background spectrum.
- Press "OK" and then "Start Collection" in the top right corner.
- Choose "No" when the collection is finished.
- It is not necessary to collect a new background before every sample.
- Do not use the piston when collecting the background.

Figure 1: Example of a background spectrum.



Collecting sample spectrum

- Use **keystroke “Ctrl + S”**
- Write a suitable sample name and press "OK" two times
- Check that the spectrum on screen only shows noise. See figure 2 for an example of a spectrum showing only noise.
- Ignore the peak of CO₂-gas in the air in the 2400-2200 cm⁻¹ region.

Liquid samples

- Apply a small drop to the crystal. Do not use the piston.

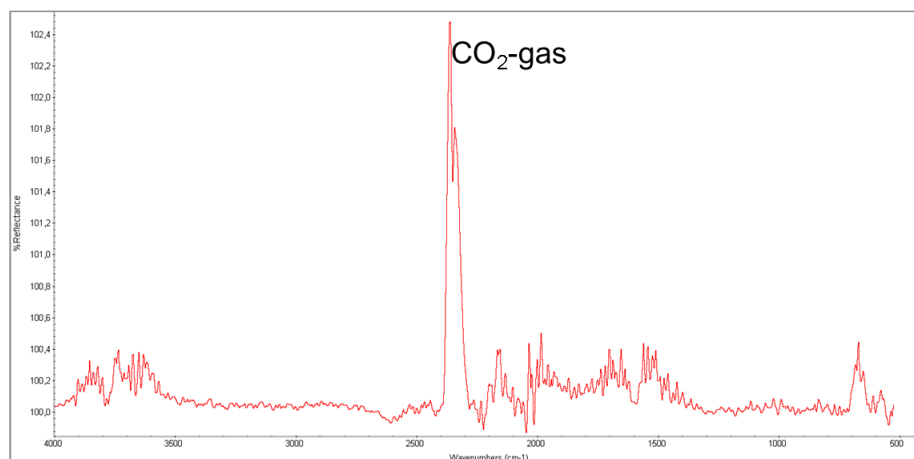
Solid samples

REVISED

1:06 pm, Sep 02, 2025

- Put a small amount of solid next to the crystal. Slide it onto the crystal using a spatula. Do not scratch the crystal.
- Apply just enough pressure with the piston until you get a good spectrum on the screen. 65% reflectance of the most intense peak is OK. This is done by turning the large black "wheel".
 - Press "Start Collection" in the top right corner to start.
 - Select "Yes" and then "OK" when the collection is finished.

Figure 2: Example of spectrum of clean and dry diamond-crystal



Analysis

- Press "Find Pks"
- The values of the peaks below the black line is shown.
- Click in the spectrum to move the line up or down to adjust the intensity threshold (%R) for the peak picking.
- Use the "Sensitivity" setting to the left to adjust what is defined as a peak (higher sensitivity to include broader peaks).
- Click "Replace" in the top right corner to save.
- Press "Full Sc" to adjust the Y-axis to include everything. **Keystroke "Ctrl + F"**

Saving spectra

Press "Save As".

Cleaning crystal

- Clean by dripping alcohol on lens/tissue paper and wipe the crystal once or twice. Then wipe with dry lens paper. Also, clean the piston tip if it has been used. Do NOT apply solvent directly to the crystal
- The first part of the collection of sample can be started again to make sure the plate is properly cleaned.

Suitable alcohols are methanol, ethanol and iso-propanol. If compatible with the sample, acetonitrile or water can be used as cleaning agents.