

COSAC operational modes

COSAC is a combination of gas-chromatograph and mass-spectrometer. It has the following operational modes:

MS sniffing:

The MS is operated without any explicit sampling. Only the local gas environment is measured

(This mode was used mainly. It is recognized by the data structure, i.e. a single mass spectrum without additional information like oven heating details))

GC-oven:

A drill sample is heated and investigated by GC only

(This mode was not used in COSAC at the comet. It is easily recognized by the data structure, i.e. a GC chromatogram only))

MS-oven:

A drill sample is heated and investigated by MS only

(This mode was not used in COSAC at the comet. This would be a bit more difficult to recognize since it closely resembles MS sniffing. But it is not relevant since it was not used)

GC-MS:

A drill sample is heated and investigated by the combined GC and MS measurement

(This mode was used twice, once in post hibernation commissioning for reference, once on the comet. It is easily recognized by the data structure, i.e. typically several hundred MS spectra followed by one GC chromatogram)