

9.2.3.5 Temperatures

Ambient Temperature (T_a)

The temperature outside the chromatographic system.

Injection Temperature

The temperature within the injection device.

Separation Temperature (T_c)

The temperature of the chromatographic bed under isothermal operation. In column chromatography it is called the *Column Temperature*.

Initial Temperature

The temperature of the chromatographic bed (column) at the start of the analysis. Temperature programming might start immediately upon sample introduction or it can be preceded by a short isothermal period (*Initial Isothermal Temperature*). In this case, the time of the *Initial Isothermal Period* must also be specified.

Program Rate

The rate of increase of column temperature. The rate of temperature increase is usually linear ($^{\circ}\text{C min}^{-1}$) but it may also be non-linear. During one analysis the temperature rate may be changed and/or the temperature programming may be interrupted by an isothermal period. In this case one is speaking about *Multiple Programming*. In multiple programming each program must be specified by its initial and final temperatures and program rate.

Mid-Analysis Isothermal Temperature

The temperature of the column in an isothermal period during elution. The corresponding time (*Mid-Analysis Isothermal Period*) must also be specified.

Final Temperature

The highest temperature to which the column is programmed.

Final Isothermal Temperature

The final temperature of the program if it is followed by an isothermal period. The time corresponding to the *Final Isothermal Period* must also be specified.

Retention Temperature

The column temperature corresponding to the peak maximum.

Detector Temperature

The temperature of the detector cell. In the case of a detector incorporating a flame, it refers to the temperature of the detector base.