

local flame temperature, T_1

in flame emission and absorption spectrometry

The effective thermodynamic temperature in the observation space as measured by a specific sensor for a specified element (in K). The temperature of a flame (or other plasma) is not homogeneous. It is usually lower at the borders of the flame. It is therefore appropriate to speak of an effective temperature which represents an average value of all temperatures throughout the observation space. The flame temperature depends on several factors such as: kind of plasma, kind of gas or gas mixture and concentration gradient of the thermometric species in the observation space.

Source:

PAC, 1986, 58, 1737 (*Quantities and units in clinical chemistry: Nebulizer and flame properties in flame emission and absorption spectrometry (Recommendations 1986)*) on page 1741