

Calibration

Calibrations contain information regarding energy, full width at half maximum (FWHM) and efficiency calibrations. They must be selected and loaded for analyses (see [Analysis Parameters](#)). In *LVis* / *GammaVision* calibrations (.CLB files) or any calibrated *LVis* measurement file (.LVM files) can be used as a source of calibration.

In each *LVis* measurement, the calibration is presented in its own tab (see as well [Changing a Calibration in an .LVM file](#)).



IMAGE MISSING

The accurate measurement values of individual calibrations can be shown and edited in a calibration table. There you can find (if known) the reference source (on the left side), as well as optionally the respective nodes and fit information of the energy and FWHM calibration or the efficiency calibration.



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To change peak fit parameters, click on the Spectrum tab to access the peak editor.



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Several ways exist to create and edit calibrations. For example it is possible, to manually calibrate each already existing measurement (.LVM file) using the peak editor (See [Detector Calibration](#)). It is also possible to change an already existing calibration by changing the data in the calibration table.

However, *LVis* usually automatically takes care of all calibrations using its own detector-specific calibration parameter sets (see [Detector Calibration](#)). The calibration data obtained is automatically assigned to the detector or measurement parameter sets to ensure that the most up-to-date calibrations are used at all times. In principle, energy and FWHM calibration (channel-energy relation and channel-resolution relation) as well as efficiency calibration (energy - efficiency relation) are performed in two separate steps. The energy calibration as detector-specific calibration is saved under the detector (or better, the electronic measurement equipment); efficient calibrations can be assigned to individual parameter sets. If such calibrated parameter set is used, *LVis* automatically combines the current internal energy calibration of the detector with the efficiency calibration stored in the parameter set for analysis.

Automatic calibrations are based on [reference sources](#), which contain all necessary nuclide information ([library](#)) and activity data (certificate file). In order to use the automatic *LVis* calibration function, you must create your calibration sources as reference sources in *LVis*. Without reference sources it is not possible to create calibration measurements in *LVis*. Therefore, in the event that no

reference source is available in the calibration parameter set, you will be requested to enter one prior to analysis.



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