- Statistical data treatment and emission of individual reports -

A statistical treatment of the results is realised for each parameter in accordance with our general provisions (DGTEAQT for quantitative proficiency testings and DGTEAQL for qualitative proficiency testings):

- **Quantitative analysis method**

- Determination of the assigned values per samoles after selection of the laboratories on:
  - the analysis of the samples in the required delay
  - the sélection on the applied method and, where applicable, the recovery on pure solutions or on control samples
- For each sample, calculation of the mean of the laboratory's results (or taking into account of the unique value if no analyses in duplicate) after transformation or not (Log for the microbiological quantitative PT) and of the deviation between the mean calculated by the laboratory and the assigned value.
- For each laboratory and for all the samples:
  - calculation of the mean deviation d (assigned value - result of the laboratory), and calculation of the standard deviation of deviation of the assigned value Sd.
  - Representation of the laboratory performances positioning on a conformity target
- Evaluation of the laboratory's performance by comparing its d and Sd values in relation to the limits and the positioning on a conformity target.

At the end of the statistical treatment, an individual report is emitted containing the evaluation of the laboratory's performance (d, Sd and conformity target) with an emoticon ☺ ☹

Various elements are also included in the individual report **for information only**:

- An evaluation of the laboratory's repeatability.
- An evaluation of the laboratory's accuracy sample per sample, as a Z score form (except for infrared proficiency testing).
- An evaluation of the calibration for the methods requiring calibration (milk lipolysis, raw milk amido black, infrared method, somatic cells and urea only)
- An evaluation of the linearity (raw milk amido black and infrared method only).
- An evaluation of the intercorrections among channels (infrared method only).

An instruction to understand the proficiency testing report and the exploitation of the results is available via a web link (instruction for the physico-chemistry or quantitative microbiology proficiency testing report) on the report or on the website www.cecalait.fr.

- **Qualitative analysis method**

- For each sample, the laboratory's result is compared to the reference value
- For each laboratory, calculation of the accuracy answers frequency for all of the samples.

At the end of the statistical treatment, an individual report is emitted containing the evaluation of the laboratory's performance (d, Sd and conformity target) with an emoticon ☺ ☹

Various elements are also included in the individual report **for information only**:

- Information concerning the methods used by all the participating laboratories
- Table of samples characteristics
- Results of all the participating laboratories (table of laboratories results (positive/negative)
- Histogram representing the correct answers frequency.

An instruction to understand the proficiency testing report and the exploitation of the results is available via a web link (instruction for the physico-chemistry or quantitative microbiology proficiency testing report) on the report or on the website www.cecalait.fr.

- **Particular case for the phosphatasic activity proficiency testing**

The individual report sent to the participating laboratorys contains a qualitative part and a quantitative part.

- For laboratories having transmitted only quantitative results, qualitative results will be generated on the basis of standardised tolerances (separate for milk and cheese)
- For laboratories having transmitted only qualitative results, the "quantitative" part will remain blank.

- **Particular case for the antibiotics proficiency testing**

For these proficiency testings, the laboratory's performance is not formally evaluated in the individual report sent. Indeed, the laboratory's performance is linked to the detection limits of the method used in this test, it will therefore be up to the laboratory to evaluate its performance with regard to its results and the performance of its method.