

CRITERIA FOR THE SELECTION OF RAW DATA TAKEN INTO ACCOUNT TO HARMONIZE THE CONVERSION EQUATIONS AT EUROPEAN LEVEL

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On 3 October 2012, during the 1st meeting of the working group on the harmonization of conversion factors between instrumental methods and reference method for enumeration of total flora in raw milk, it was decided that the EURL would analyze with a linear mixed-effect model raw data obtained by the NRLs, in the frame of establishment of national conversion equations, in order to assess the possibility to harmonize the conversion equations at European level.

To select raw data to be transmitted, the EURL MMP proposed at this meeting, in a first step, to send to the working group, a list of factors which can have an impact on the conversion relationship (storage conditions, regional influence,...) and the criteria for the selection by the NRLs of raw data to be forwarded to the EURL (use of EN ISO 4833, laboratory competence,...) for comments and/or approval.

The analysis will concern in a first step only data of raw cow's milk.

1. CRITERIA FOR THE SELECTION OF RAW DATA BY THE NRLs

We propose to retain raw data of laboratories:

- Having used the EN ISO standard method 4833 for enumeration of total flora in the frame of establishment of the conversion relationship between the alternative method and the reference method,
- Having used the EN ISO standard 21187 for the establishment of the conversion relationship between the alternative method and the reference method,
- Which are ISO 17025 accredited for the EN ISO standard method 4833*,
- Which are ISO 17025 accredited for the application of the alternative method*,
- Which can provide information about the background of the data, especially in relation to the influencing factors on the relationship,
- *Having used milk samples without preservation substances.*

*: If the NRL has not data of accredited laboratories for the EN ISO standard method 4833 and/or for the alternative method, the NRL can supply data of unaccredited or partially accredited laboratories.

2. FACTORS WHICH CAN HAVE AN IMPACT ON THE CONVERSION RELATIONSHIP

According to the EN ISO standard 21187, during the establishment of the conversion equation, factors which can have an influence on the conversion relationship between the alternative method and the reference method must be taken into account.

These factors, which can modify the microbiological quality of raw milk, are the following ones and can be gathered in three groups: factors concerning the environment of animals' production, factors concerning the storage of raw milk and other information.

We propose to retain raw data of laboratories which provide **information on all or some** of the following factors:

1. Environment of animals' production:
 - Date of analysis (Season)
 - Herd size
 - Equipment of milking (automated milking equipment, milk by hand, ...)
 - Type of soil for animal housing
 - Feeding

2. Storage of raw milk:
 - Frequency of milk collection (24 hours, 48h, 72h)
 - Time from collection to delivery and analysis
 - Storage conditions (4°C-24h, ...)
 - Sampling technique (manual sampling, automatic sampling, ...)
 - Milk composition (fat, protein, lactose, somatic cells)

3. Other information:
 - Geographic location
 - Breed
 - Instrument in use
 - Use of a sampling plan or not
 - Number of laboratories implicated in the establishment of conversion equation

3. SENDING OF THE RAW DATA BY THE LNRs

We propose that each LNRs send their raw data with the joined Excel file. Every column must be informed (if the information is available).

Every LNR will send all raw data of two years with rather the data of last two years.

The raw data will be expressed in micro-organisms.ml⁻¹ for the EN ISO standard method 4833 and in counts.ml⁻¹ for the alternative method. For every analyzed sample, two values must be supplied by the reference method (corresponding to duplicates and not to the number of plates) and two values by the alternative method.