



IDF/ICAR Project on Reference System for Somatic Cell Counting in Milk

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Somatic cell counting in milk is one of the most frequently performed tests in milk, estimated at over 500 000 000 tests/year worldwide. It serves as an indicator for the udder health status of lactating animals, is relevant in food legislation, in payment of raw milk and also has an considerable impact for farm management and animal breeding programs. Somatic cell counting is done with automated instruments in laboratories worldwide. A joint IDF/ICAR project group has concluded that the dairy sector can benefit from a reference system that ensures global equivalence in somatic cell counting. A reference system uses reference method results in conjunction with other relevant information coming from an international network of laboratories.*

* ICAR = International Committee for Animal Recording

Outcome of questionnaire for reference material providers

By Véronique Ninane*, Silvia Orlandini**, Ute Braun***

Many dairy laboratories use secondary reference material to calibrate or to check their instruments for routine analyses. The Project Group wants to understand the current status of systems to ensure the accuracy of somatic cell counting and to make use of that knowledge to achieve better equivalence in results. For this purpose, a first questionnaire was dispatched to reference material providers in the beginning of 2010.

Good response

Replies were received from 13 providers, 11 from Europe, 1 from USA and 1 from South America. A common point is that all providers supply the material for multiple purposes; that is for somatic cell counting in the frame of DHI (Dairy Herd Improvement) programmes as well as milk payment testing and animal health control.

Characteristics of reference materials

The reference materials consist either of raw milk or heat-treated milk with natural somatic cells but in some cases also with cells from other matrices. The ranges provided are different: for example from 200 000 to 500 000 cells/ml or from 50 000 to 1 000 000 cells/ml. Declared shelf life is from 7 to 180 days, depending on heat or preservation treatment.



Establishing reference values and interlinkage

Different schemes and techniques are used to assign somatic cell count values to the materials. Some producers rely on the reference method performed in their own laboratory, others combine data from reference and routine method testing, either collected on a small scale or through extensive proficiency testing.

Interlinkage between different reference materials is important for equivalency. This is currently achieved by nine providers, which compare with other available reference material or participate in proficiency testing studies organized by other providers. It is noted that this is the beginning of an interlinked networked reference system, which is the target of this joint IDF/ICAR project.



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Questionnaire to routine laboratories in November 2010

To gain a full picture on the use of reference materials, the Project Group has prepared a second questionnaire. This will be dispatched in November 2010 to routine laboratories through 'local' distributors in multiple languages, e.g. English, French, German, Spanish, Italian or Russian, with accompanying information on the project.

When you are interested in receiving this questionnaire, please contact Silvia Orlandini, orlandini.s@aia.it.

A webpage dedicated to the project will be soon available through the websites of IDF (www.fil-idf.org) and ICAR (www.icar.org).

Newsletter's next issue

May 2011, in conjunction with the IDF/ISO Analytical Week, 23-27 May, Lyon, France, see www.idf-iso-analytical-week.org.



Joint IDF/ICAR Project Group

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