CECALAIT® NEWSLETTER

2nd quarter 2011, No. 77

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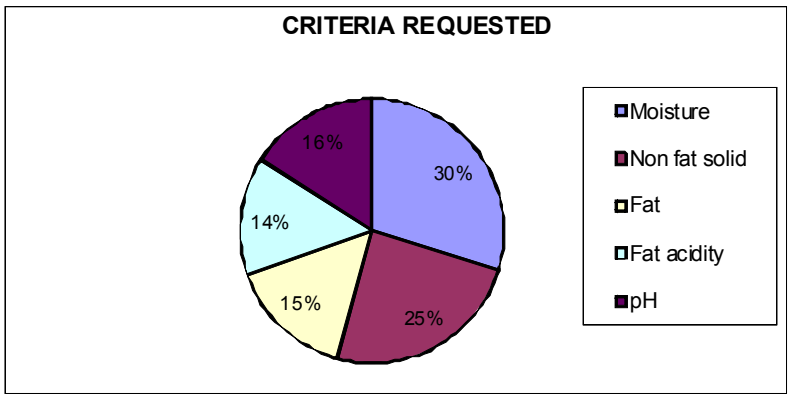
NEW CECALAIT® PROFICIENCY TEST ON BUTTER

Following numerous requests formulated by laboratories in a questionnaire sent out in January 2011 concerning the set up of proficiency tests on butter, two tests have been proposed this year.

Results of the questionnaire:

579 questionnaires were sent to laboratories and 179 (30.9 %) replied. Among these replies, 24.6% (44 of which 16 foreign laboratories) were interested in participating in proficiency tests on butter. The questionnaire also included questions concerning the criteria, the quantity of samples and the frequency of use.

You will find below a graph representing the requests according to the criteria:



Other criteria such as salt content, fat iodine index and peroxide index have been quoted but they were not representative.

The laboratories interested also requested:
- 2 tests per year (43% of the laboratories),
- 3 to 5 samples per proficiency test (84% of the laboratories).

On the basis of the results of this questionnaire, two tests have been scheduled for June and November 2011. This proficiency test is composed of 5 samples packaged in 250 gram tubs containing varying moisture, non fat solids, fat, fat acidity and pH values.
As with all the CECALAIT® proficiency tests, you can subscribe to one or both tests, for only one or several criteria. We hope that many of you will use this new product and we are at your disposal for any more details on the subject.

BUTYROMETRIC METHODS FOR MILK AND CREAM
- An international standardisation project -

Butyrometric methods are widely used in France and internationally for the determination of fat content in milk and dairy products. These methods are quick and do not require any solvents.

There are currently two international standards (quite old documents) on this subject:
- **ISO 488 for milk butyrometers,**
- **ISO 2446 for butyrometric method applicable to milk.**

Through the AFNOR commission V 04A, France has very carefully studied and reviewed these methods, over the past few years, integrating their adjustments to the corresponding reference methods.

- In 1989, AFNOR reviewed the butyrometric method for cream (NF V 04-263) and the associated butyrometers (NF B 35-540) and adjusted the internal volume of the butyrometer (NF B 35-540) so it corresponded to the reference method ISO 2450.
- In 2002, AFNOR also reviewed the Gerber method for milk and introduced a new criterion concerning the composition of the amylic alcohol used (isomeric ratio) in order to harmonise and adjust the butyrometric method to the reference method ISO 1211.

Thanks to this competence as well as the sustained, increasingly international use of these methods, the AFNOR V 04A standardisation commission and the IDF-France analytical commission proposed to the IDF and ISO to review the standards concerning the Gerber method. They will propose a supplementary document concerning the pipette used and the creation of two international standards concerning the butyrometric method for cream.

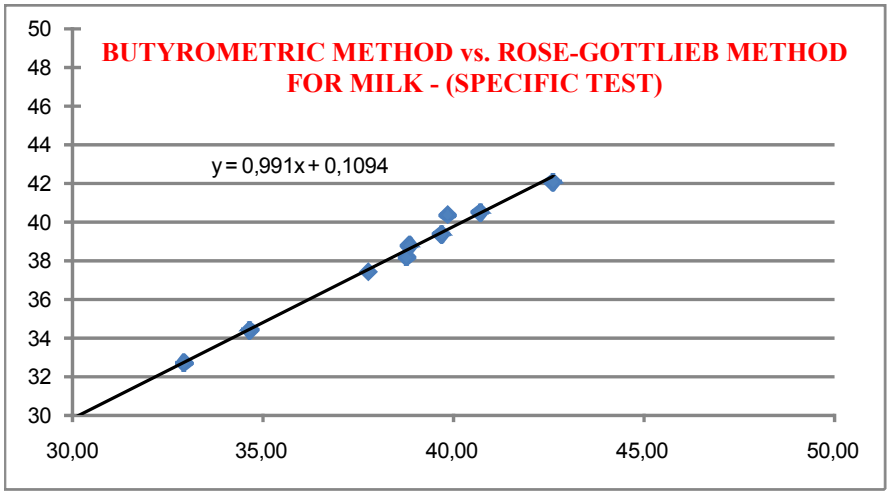
The first discussions at international level were held during the IDF analytical week in Montreal in 2010. There seems to be considerable interest in these methods and many countries backed this approach. At the time of the discussions, a question about the influence of the matrix on both these methods cropped up and it was decided, during the meeting of the SCAMC standing committee (major and minor components), to carry out investigations before the official proposition of the methods.

Many investigations have also been carried out at Actilait (Poligny) to reply to this demand and the results were presented during the IDF analytical week in Lyon from 25 to 29 May 2011.

1) "INFLUENCE OF THE MATRIX" TEST FOR MILK

For the method on milk, a specific test was carried out on 10 milk samples from different European countries (Germany, Belgium, Switzerland, France, Greece and Israel) preserved with Bronopol (0.02%). The analyses were performed in duplicate at Actilait's laboratory in Poligny according to the Gerber (NF V 04-210) and Röse-Gottlieb (ISO 1211) methods. The conversion g/L to g/Kg was achieved using the density.

The results obtained are described below (regression line and statistical parameters):



Mean deviation	0.23
Slope	0.991
Intercept	0.11
Residual SD	0.33

Unit: g/Kg of milk

A mean deviation of 0.23 g/Kg between the two methods can be observed and the regression slope is not significantly different from 1.00. The individual deviations observed between the two methods are about 0.5 g/Kg maximum, which is very close to the repeatability limits of the Gerber method (r = 0.5 g/L) and the reproducibility limits of the Röse-Gottlieb method (R= 0.53 g/Kg).

2) USE OF PROFICIENCY TEST DATA FOR THE METHOD WITH MILK AND CREAM

For many years, Actilait has been proposing Cecalait® proficiency tests (PT) for the determination of fat in milk and cream using the acidobutyrometric and Röse-Gottlieb methods on the same set of samples. Four PT are scheduled each year, in March, June, September and December for milk, and in February, May, September and November for cream.

The cows' feed varies significantly during these 4 periods (in the region where the milk and cream used for the samples is produced), thus the fat composition of the basic products (milk and cream) is different. It also seemed interesting to verify if the relationship between the two methods is influenced by the different periods of sample preparation.

The data compared below come from the results of proficiency tests from 2003 to 2010 (4 tests per year). The butyrometric values correspond to the robust mean (according to ISO 13528) of around 100 lab results (mainly French) using the standard NF V 04-210 for milk and the standard NF V 04-263 for cream. The Röse-Gottlieb values correspond to the robust mean (ISO 13528) of around 40 French and foreign lab results using the ISO 1211 method for milk and the ISO 2450 method for cream. A comparison was made between 32 different PT on 10 samples, and an additional study was performed in the range of 3-5 % fat in milk (best agreement between the two methods) to observe the traceability of this alternative method.

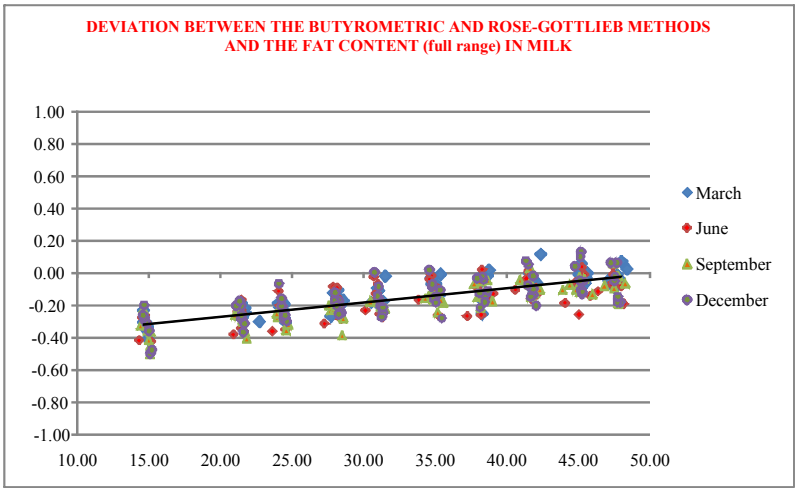
The results and comparison of 4 different periods using the butyrometric and extraction methods for milk and cream are presented below:

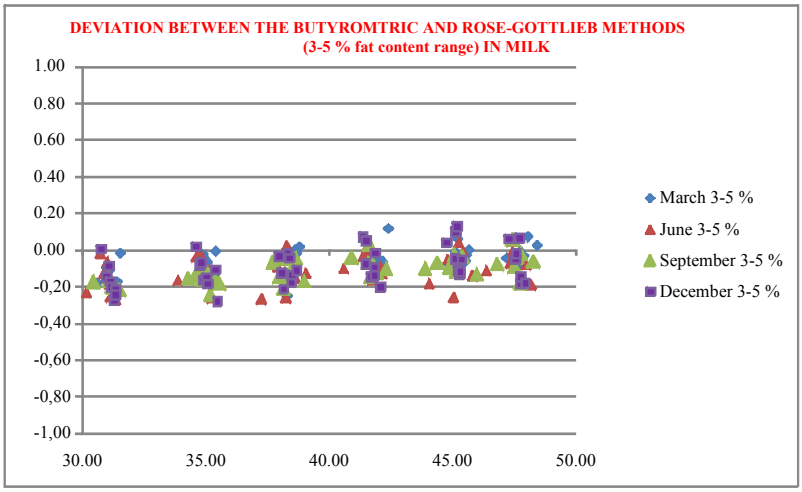
	Deviation Buty / RG	Slope	Bias	Sy,x
March	-0.13	0.991	0.444	0.057
June	-0.17	0.992	0.440	0.08
September	-0.19	0.991	0.493	0.061
December	-0.16	0.991	0.446	0.085
All PT	-0.16	0.991	0.446	0.074

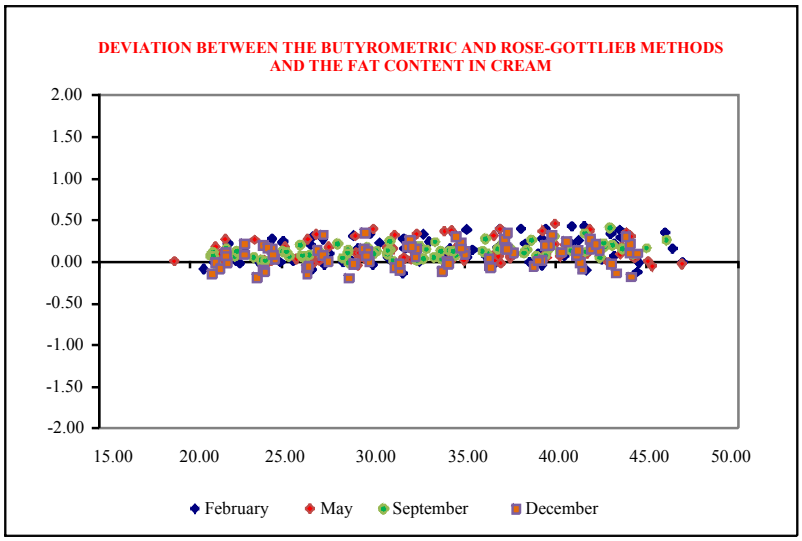
Relationship between the butyrometric Gerber and Röse-Gottlieb methods (in g/100 g) –Milk

	Deviation Buty / RG	Slope	Bias	Sy,x
February	0.12	0.995	0.05	0.15
May	0.12	0.996	-0.01	0.13
September	0.13	0.994	0.07	0.07
November	0.08	0.995	0.09	0.14
All PT	0.11	0.995	0.05	0.13

Relationship between the butyrometric Gerber and Röse-Gottlieb methods (in g/100 g) –Cream







For milk a mean deviation of –0.16 g/L can be observed over the entire measurement range (15 to 50 g/Kg) of the Gerber method in comparison with the Röse-Gottlieb method. Concerning the 30 to 50 g/Kg range, which corresponds to the range targeted for optimum coupling when the method was reviewed in 2002, the mean deviation between the two methods is 0.10 g/Kg. These mean deviations and the parameters of the linear regression (slope, intercept and residual standard deviation) are equivalent for all the periods observed.

For cream, a mean deviation of +0.11 g/100 g can be observed over the entire measurement range of the method between the butyrometric and the Röse-Gottlieb methods. This mean deviation and the parameters of the linear regression (slope, intercept and residual standard deviation) are equivalent for all the periods observed.

GENERAL CONCLUSION

On the basis of the specific test on milk and the proficiency test data, it can be noted that the relationship between the two methods is very stable over the entire year for milk and cream. No significant difference was measured between the 4 periods tested. We can thus conclude that the fat composition does not have an influence on the butyrometric method for milk and cream. Moreover, a good fit between the butyrometric method and the extraction method was observed for both matrixes: milk and cream.

These results were presented to the butyrometric methods work group during the IDF analytical week in Lyon. The work group confirmed these conclusions and validated the official dispatch of these new drafts, firstly to the national IDF committees for consultation and to be added to the work programme in the event of a positive vote. If the draft is accepted at this level, the same procedure will be carried out by ISO for dispatch to member countries.

Ph. TROSSAT

STANDARDS, DRAFT STANDARDS

Classification in alphabetical order by theme

ISO standards under development

QUALITY MANAGEMENT		
CUSTOMER SATISFACTION	ISO/DIS 10004 July 2011	QUALITY MANAGEMENT Customer satisfaction – Guidelines for monitoring and measuring

NEW EU REGULATIONS

Classification is established in alphabetical order of the first keyword

FOOD

O.J.E.U. C 102E, 2nd April 2011 – Position (UE) No 7/2011 of the Council at first reading with a view to the adoption of a Regulation of the European Parliament and of the Council on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 and repealing Directives 87/250/EEC, 90/496/EEC, 2000/13/EEC, 2002/67/EC, 2008/5/EC and Regulation (EC) No 608/2004
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:102E:0001:0055:EN:PDF

FOOD INGREDIENT

O.J.E.U. L 143, 31st May 2011 – Commission Decision of 27 May 2011 authorising the placing on the market of Chromium Picolinate as a novel food ingredient under Regulation (EC) No 258/97 of the European Parliament and of the Council
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:143:0036:0037:EN:PDF

HEALTH CLAIMS

O.J.E.U. L 115, 5th May 2011 – Commission Regulation (EU) No 432/2011 of 4 May 2011 refusing to authorise certain health claims made on foods, other than referring to the reduction of disease risk and to children's development and health
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:115:0001:0004:EN:PDF

O.J.E.U. L 119, 7th May 2011 – Commission Regulation (EU) No 440/2011 of 6 May 2011 on the authorisation and refusal of authorisation of certain health claims made on foods and referring to children's development and health
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:119:0004:0009:EN:PDF

HYGIENE

O.J.E.U. L 143, 31st May 2011 – Commission Decision of 27 May 2011 amending Annexes I and II to decision 2009/861/EC on transitional measures under Regulation (EC) No 853/2004 of the European Parliament and of the Council as regards the processing of non-compliant raw milk in certain milk processing establishments in Bulgaria
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:143:0041:0047:EN:PDF

METHODS OF ANALYSIS

O.J.E.U. L 166, 25th June 2011 – Commission Implementing Regulation (EU) No 617/2011 of 24 June 2011 amending Regulation (EC) No 900/2008 laying down the methods of analysis and other technical provisions necessary for the application of the arrangements for imports of certain goods resulting from the processing of agricultural products
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:166:0006:0007:EN:PDF

STANDARDS - REGULATIONS

PESTICIDES

O.J.E.U. L 086, 1st April 2011 – Commission Regulation (EU) No 310/2011 of 28 March 2011 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for aldicarb, bromopropylate, chlorfenvinphos, endosulfan, EPTC, ethion, fenthion, fomesafen, methabenzthiazuron, methidathion, simazine, tetradifon and triforine in or on certain products
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:086:0001:0050:EN:PDF

O.J.E.U. L 137, 25th May 2011 – Commission Regulation (EU) No 508/2011 of 24 May 2011 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for abamectin; acetamiprid; cyprodinil, difenoconazole, dimethomorph, fenhexamid, proquinazid, prothioconazole, pyraclostrobin, spirotetramat, thiacloprid, thiamethoxam and trifloxystrobin in or certain products
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:137:0003:0052:EN:PDF

O.J.E.U. L 140, 27th May 2011 – Commission Regulation (EU) No 520/2011 of 25 May 2011 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for benalaxyl, boscalid, buprofezin, carbofuran, carbosulfan, cypermethrin, fluopicolide, hexythiazox, indoxacarb, metaflumizone, methoxyfenozide, paraquat, prochloraz, spirodiclofen, prothioconazole and zoxamide in or on certain products
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:140:0002:0047:EN:PDF

O.J.E.U. L 142, 28th May 2011 – Commission Regulation (EU) No 524/2011 of 26 May 2011 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for biphenyl, deltamethrin, ethofumesate, isopyrazam, propiconazole, pymetrozine, pyrimethanil and tebuconazole in or on certain products
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:142:0001:0056:EN:PDF

O.J.E.U. L 152, 11th June 2011 – Commission Regulation (EU) No 559/2011 of 7 June 2011 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for captan, carbendazim, cyromazine, ethephon, fenamiphos, thiophanate-methyl, triasulfuron and triticonazole in or on certain products
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:152:0001:0021:EN:PDF

PROTECTED DESIGNATIONS OF ORIGIN

O.J.E.U. L 098, 13th April 2011 – Commission Implementing Regulation (EU) No 355/2011 of 8 April 2011 approving non-minor amendments to the specification for a name entered in the register of protected designations of origin and protected geographical indications [Montasio (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:098:0006:0007:EN:PDF

O.J.E.U. L 098, 16th April 2011 – Commission Implementing Regulation (EU) No 375/2011 of 11 April 2011 entering a name in the register of protected designations of origin and protected geographical indications [Formaggella del Luinese (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:102:0015:0016:EN:PDF

O.J.E.U. C 124, 27th April 2011 – Publication of an application pursuant to Article 6(2) of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs [Salva Cremasco (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:124:0020:0023:EN:PDF

O.J.E.U. C 129, 30th April 2011 – Publication of an amendment application pursuant to Article 6(2) of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs [Neufchâtel (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:129:0008:0014:EN:PDF

O.J.E.U. L 160, 18th June 2011 – Commission Implementing Regulation (EU) No 584/2011 of 17 June 2011 approving non-minor amendments to the specification for a name entered in the register of protected designations of origin and protected geographical indications [Grana Padano (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:160:0065:0070:EN:PDF

STANDARDS - REGULATIONS

O.J.E.U. C 185, 25th June 2011 – Publication of an application pursuant to Article 6 (2) of Council Regulation (EC) No 510/2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs [Tolminc (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2011:185:0014:0017:EN:PDF

O.J.E.U. L 170, 30th June 2011 – Commission Implementing Regulation (EU) No 637/2011 of 29 June 2011 approving a non-minor amendment to the specification for a name entered in the register of protected designations of origin and protected geographical indications [Beaufort (PDO) (cheese)]
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:170:0030:0031:EN:PDF

VETERINARY MEDICINAL PRODUCTS

O.J.E.U. L 100, 14th April 2011 – Commission Regulation (EU) No 362/2011 of 13 April 2011 amending the Annex to Regulation (EU) No 37/2010 on pharmacologically active substances and their classification regarding maximum residue limits in foodstuffs of animal origin, as regards the substance monepantel
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:100:0026:0027:EN:PDF

AFNOR VALIDATIONS

During its May meeting, the Technical Committee of NF VALIDATION approved by vote:

Commercial name	Date	Certificate	Description
NEW VALIDATION			
CHROMID *LMONO*	Validation date: 13.05.2011 **End of validity: 13.05.2015**	**BIO-12/31-05/11**	**Detection of *Listeria monocytogenes*** All human food products and samples of production environment
RENEWALS OF VALIDATIONS			
IQ-CHECK *LISTERIA* SPP.	Validation date: 24.05.2007 Extension: 28.09.2007 and 04.02.2010 Renewal: 13.05.2011 **End of validity: 24.05.2015**	**BRD-07/13-05/07**	**Detection of *Listeria* spp.** All human food products and environmental samples
***LISTERIA* RAPID TEST**	Validation date: 11.04.1995 Renewal 11.04.1999, 24.06.2003, 03.07.2007 and 24.03.2011 **End of validity: 11.04.2015**	**UNI-03/02-04/95**	**Detection of *Listeria* spp.** All human food products and environmental samples
VIDAS® IMMUNO-CONCENTRATION *SALMONELLA* II (VIDAS ICS2+SLM)	Validation date: 24.05.2007 Renewal: 12.05.2011 **End of validity: 24.05.2015**	**BIO-12/22-05/07**	**Detection of *Salmonella*** All human food (except raw milk) and pet food products
VIDAS® IMMUNO-CONCENTRATION *SALMONELLA* II (VIDAS ICS2+PLATE)	Validation date: 24.05.2007 Renewal: 12.05.2011 **End of validity: 24.05.2015**	**BIO-12/23-05/07**	**Detection of *Salmonella*** All human food (except raw milk) and animal feeding stuffs
EXTENSIONS OF VALIDATIONS			
ADIAFOOD *SALMONELLA*	Validation date: 02.07.2010 Extension: 02.12.2010 and 12.05.2011 **End of validity: 02.07.2014**	**AES-10/09-07/10**	**Detection of *Salmonella*** All human and animal food products and environmental samples (except breeding samples)
BAX® *SALMONELLA* (AUTOMATISED)	Validation date: 28.11.2002 Extension: 30.06.2008, 27.11.2008, 18.05.2009 and 24.03.2011 Renewal: 23.10.2006 and 24.09.2010 **End of validity: 28.11.2014**	**QUA-18/03-11/02**	**Detection of *Salmonella*** All human and animal food products and environmental samples (except breeding samples)
TRANSIA PLATE *SALMONELLA* GOLD	Validation date: 23.03.2001 Extension: 12.05.2011 Renewal: 03.02.2005 and 02.07.2009 **End of validity: 03.02.2013**	**TRA-02/08-03/01**	**Detection of *Salmonella*** All human and animal food products and environmental samples (except breeding samples)

AFNOR VALIDATIONS

COMPASS *LISTERIA* AGAR	Validation date: 28.11.2002 Extension: 27.09.2007 and 12.05.2011 Renewal: 25.05.2007 and 24.09.2010 **End of validity: 28.11.2014**	**BKR-23/02-11/02**	**Detection of *Listeria monocytogenes* and *Listeria* spp.** All human food products and environmental samples
BAX® *LISTERIA MONOCYTOGENES* (AUTOMATISED)	Validation date: 01.07.2008 Extension: 26.01.2009 and 12.05.2011 **End of validity: 01.07.2012**	**QUA-18/05-07/08**	**Detection of *Listeria monocytogenes*** All human food products and environmental samples
BAX® *LISTERIA* SPP. (AUTOMATISED)	Validation date: 01.07.2008 Extension: 26.01.2009 and 12.05.2011 **End of validity: 01.07.2012**	**QUA-18/06-07/08**	**Detection of *Listeria* spp.** All human food products and environmental samples

The validation certificates and the recapitulative list are available at the following website address:
http://www.afnor-validation.com/afnor-validation-validated-methods/validated-methods.html

BOOKSHOP: LATEST PUBLICATIONS

The classification in alphabetic order of the first keyword allows you to consult the references according to your interests. The web site allows you to know more, or to order the book.

FOOD QUALITY AND FOOD SAFETY

YONG J.C.; SUKWON K. – **Emerging technologies for food quality and food safety evaluation** – CrcPress Editions – March 2011 – ISBN: 9781439815243 – 378 pages

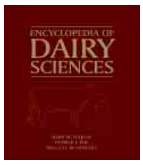
http://www.crcpress.com/product/isbn/9781439815243

This book reviews the scope of food quality parameters such as color, texture, chemical compositions, and flavor. Each chapter describes a specific system for quality evaluation (instrumental techniques, sensory evaluation, computer vision systems, spectroscopy, ultrasound, electronic noses, biosensors and nanotechnology), its principles and its applications to foods.

MILK AND DAIRY PRODUCTS

FUQUAY J.W.; FOX P.F.; McSWEENEY P.H.L. – **Encyclopedia of dairy sciences – 2nd edition** – Elsevier Edition – March 2011 – ISBN: 978-0-12-374402-9 – 4170 pages

http://www.elsevierdirect.com



This second edition has been fully reviewed, revised and updated with the latest developments in dairy science. The biological, chemical, physical, microbiological and technological aspects of milk and dairy products are treated in this book.

FORTHCOMING EVENTS

Classified in chronological order

CHEESE

28-29 September 2011 Moorepark, Irland	Symposium cheese 2011	http://www.teagasc.ie/events/2011/cheese_symposium

MILK AND DAIRY PRODUCTS

17-19 October 2011 Parma, Italy	FIL-IDF world dairy summit 2011	http://www.wds2011.com/

IN THE PRESS – ON THE WEB

Classification in alphabetical order of keywords

ANTIBIOTICS

Reference materials for oxytetracycline in milk

http://www.laboratorytalk.com/news/uka/uka259.html

► LGC Standards has expanded its range of certified reference materials for food safety with two new reference materials for oxytetracycline in cow's milk.

Bioo optimises residue screening in milk and honey

http://www.laboratorytalk.com/news/bfg/bfg139.html

► Bioo Scientific has launched three new kits for the specific detection of oxytetracycline, chlortetracycline and doxycycline to improve the screening for tetracycline contamination in milk; meat and honey samples.

HEALTH CLAIMS

EFSA completes evaluation of further 442 "general function" health claims

http://www.efsa.europa.eu/en/press/news/nda110408.htm

► After three first series of opinions published in October 2009, February and October 2010, EFSA has published the outcome of a fourth series of "general function" health claims. The next set will evaluate the last 600 health claims before the end of June 2011.

LISTERIA

Direct detection kit for pathogenic *Listeria*

http://www.laboratorytalk.com/news/btp/btp102.html

► Swabsure Listeria P kit for presomptive detection of pathogenic *Listeria* from food contact and environmental surfaces was launched in May 2011.

STANDARDISATION

Report of the 5th session of the Codex Committee on contaminants in foods

Report of the 43rd session of the Codex Committee on food additives

Report of the 43rd session of the Codex Committee on pesticide residues

http://www.codexalimentarius.net/web/archives.jsp?lang=FR

► These reports present the conclusions of:
- the 5th session of the Codex Committee on contaminants in foods held in The Hague (Netherlands) from 21 to 25 March 2011,
- the 43rd session of the Codex Committee on food additives held in Xiamen (China) from 14 to 18 March 2011, and
- the 43rd session of the Codex Committee on pesticide held in Beijing (China) from 4 to 9 April 2011.

The conclusions of theses reports will be considered by the 34th session of the Codex Alimentarius that will be held in Geneva, Switzerland from 4 to 9 July 2011.

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