

Activity Report 2016



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Table of contents

Executive summary	2
Declaration forms and sample management.....	3
Evaluation of Dossiers.....	3
The Workshop 2016 of the EURL-FA Authorisation.....	8
Methods on the EURL-FA website.....	8
Diclazuril project – Final Report.....	9
Optiphos project - Progress Report	9
Acknowledgements.....	10
Annex I: List of the NRLs of the EURL-FA network (<i>updated on 21/04/2017 as in Commission Implementing Regulation (EU) 2015/1761</i>)	11
Annex II: List of EURL FAD reports issued in 2016 (<i>listed in anti-chronological order</i>) ..	13

Executive summary

This report presents the main achievements of the European Union Reference Laboratory for feed additives authorisation (later referred as EURL) in 2016. The tasks of the EURL regarding the authorisation of feed additives are specified in Regulation (EC) No 378/2005, last amended by Commission Implementing Regulation (EU) 2015/1761.

The main activities of the EURL in 2016 have been:

- The management of declaration forms
- The sample registration and maintenance of the sample bank of reference feed additives;
- The scientific evaluation of analytical methods submitted by the applicants and drafting corresponding evaluation reports; and
- The organisation of the 16th annual EURL workshop with National Reference Laboratories (NRLs), to discuss topics related to the authorisation of feed additives.

In addition, the EURL was involved in:

- Compilation of the standard operating procedures of recommended methods for their further publication in the EURL-FA website;
- Finalisation of the project to launch the revision of the Community method for the determination of Diclazuril;
- Optiphos project regarding the determination of phytase.

Declaration forms and sample management

When applying for the authorisation of a feed additive, Applicants have to send a Declaration Form (DF) to the EURL. The details included allow the establishment of the fee to be paid. In 2016, a total of 59 DF were processed. Moreover the EURL handled 101 reference samples, of which 42 were new related to new products and 59 were replacement samples.

Evaluation of Dossiers

In 2016 the EURL evaluated 37 applications and issued a total of 37 reports (including two amendments and one corrigendum for 2011, 2012 and 2014 reports, respectively) with the support of the National Reference Laboratories (NRLs). Table 1 presents the number of applications submitted by the Applicants and the number of reports evaluated by the EURL since 2009. The lower number of the reports issued in comparison with the previous two years can be explained by the end of the re-authorisation exercise. Nine (out of 37) reports - mainly related to microorganisms - were evaluated and drafted by the following five NRLs: CRA-W,BE (3); CReAA,IT (3); AGES,AT; SCL,FR and SMUL,DE. The evaluation process was co-ordinated by the EURL.

Table 1 also includes the number of corresponding EFSA opinions and Commission Implementing Regulations (CIR) published in 2009 to 2016 based on the EURL recommendations. The list of all the EURL reports issued in 2016 is provided in Annex II and the reports are available from the EURL webpage:

<https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports>.

Tables 2 and 3 list the EFSA opinions and the CIR published in 2016 based on or including the EURL recommendations.

Table 1. Number of applications evaluated, evaluation reports, EFSA opinions and Commission Implementing Regulations (CIR) issued since 2009

	2009	2010	2011	2012	2013	2014	2015	2016
Applications	24	70	124	92	36	51	50	37
EURL Reports	24	68	87	59	32	44	47	37
EFSA opinions	24	22	54	74	50	34	35	45
CIR	18	20	46	36	39	26	38	21

Table 2. EURL executive summaries included in EFSA opinions published in 2016

	EFSA Journal reference	Feed additives/Active substances	Dossier number for EURL report
1	2016;14(1):4349	Vitamin B 2 (riboflavin and riboflavin 5'-phosphate ester monosodium salt) produced by <i>Bacillus subtilis</i>	2010-0304
2	2016;14(1):4341	A natural mixture of dolomite plus magnesite and magnesium-phyllosilicates (Fluidol)	2012-0043
3	2016;14(1):4342	A natural mixture of illite, montmorillonite and kaolinite (Argile Verte du Velay)	2012-0025
4	2016;14(1):4340	A preparation of <i>Lactobacillus fermentum</i> NCIMB 41636, <i>Lactobacillus plantarum</i> NCIMB 41638 and <i>Lactobacillus rhamnosus</i> NCIMB 41640	2014-0022
5	2016;14(1):4353	Benzoic acid	2010-0147
6	2016;14(1):4339	Eight compounds belonging to chemical group 31 (aliphatic and aromatic hydrocarbons)	2010-0022
7	2016;14(1):4345	L-arginine produced by <i>Corynebacterium glutamicum</i> KCTC 10423BP	2014-0012
8	2016;14(2):4394	Guanidinoacetic acid	2011-0043
9	2016;14(2):4396	Iron compounds (E1): ferrous carbonate; ferric chloride, hexahydrate; ferrous fumarate; ferrous sulphate, heptahydrate; ferrous sulphate, monohydrate; ferrous chelate of amino acids, hydrate; ferrous chelate of glycine, hydrate	2010-0068 2010-0095 2010-0236 2010-0295 2010-0296 2010-0380
10	2016;14(2):4395	Manganese compounds (E5): manganous carbonate; manganous chloride, tetrahydrate; manganous oxide; manganous sulphate, monohydrate; manganese chelate of amino acids, hydrate; manganese chelate of glycine, hydrate	2010-0088 2010-0069 2010-0235
11	2016;14(2):4397	Probiomix B (<i>Lactobacillus plantarum</i> KKP/593/p and <i>Lactobacillus rhamnosus</i> KKP 825)	2010-0405
12	2016;14(2):4398	Selenium compounds (E8) as feed additives for all animal species: sodium selenite	2010-0104 2010-0362 2010-0369
13	2016;14(2):4389	Furfuryl and furan derivatives belonging to chemical group 14	2010-0118
14	2016;14(2):4391	Copper complexes of chlorophylls and copper complexes of chlorophyllins	2010-0358
15	2016;14(2):4391	Pyridine and pyrrole derivatives belonging to chemical group 28	2010-0117
16	2016;14(3):4442	Selenium compounds (E8) as feed additives for all animal species: sodium selenite	2010-0104 2010-0362 2010-0369
17	2016;14(5):4474	Manganese hydroxychloride	2012-0040
18	2016;14(5):4472	Diarr-Stop S Plus® (Na2EDTA, tannin-rich extract of <i>Castanea sativa</i> , thyme oil and oregano oil)	2010-0406
19	2016;14(6):4479	<i>Lactobacillus plantarum</i> DSM 29025	2015-0035
20	2016;14(6):4441	Thiazoles, thiophene and thiazoline belonging to chemical group 29	2010-0116
21	2016;14(6):4475	Secondary alicyclic saturated and unsaturated alcohols, ketones, ketals and esters with ketals containing alicyclic alcohols or ketones and esters containing secondary alicyclic alcohols from chemical group 8	2010-0125
22	2016;14(6):4482	Iron oxide black, red and yellow	2010-0202 2010-0203 2010-0204
23	2016;14(6):4508	Iron compounds (E1) as feed additives for all species: ferric oxide	2010-0068 2010-0095 2010-0236 2010-0295 2010-0296 2010-0380
24	2016;14(6):4507	<i>Bacillus subtilis</i> DSM 28343	2015-0006
25	2016;14(6):4506	<i>Lactobacillus plantarum</i> NCIMB 42150	2015-0013
26	2016;14(6):4512	Alfa,beta-unsaturated straight-chain and branched-chain aliphatic primary alcohols, aldehydes, acids and esters belonging to chemical group 3	2010-0124
27	2016;14(6):4509	Dicopper oxide	2014-0034
28	2016;14(7):4351	BIOSTRONG® 510 (essential oil of thyme and star anise)	2011-0036
29	2016;14(8):4561	Lecithins	2010-0364
30	2016;14(8):4560	Lecithins (Lipidol)	2010-0398
31	2016;14(8):4559	Non-conjugated and accumulated unsaturated straight-chain and branched-chain, aliphatic primary alcohols, aldehydes, acids, acetals and esters belonging to chemical group 4	2010-0041
32	2016;14(8):4557	Aromatic ketones, secondary alcohols and related esters belonging to chemical group 21	2010-0075
33	2016;14(9):4556	<i>Lactobacillus diolivorans</i> DSM 32074	2015-0028
34	2016;14(9):4562	Belfeed B MP/ML (endo-1,4-beta-xylanase)	2010-0285
35	2016;14(9):4555	Lavipan® (<i>Lactococcus lactis</i> B/00039, <i>Carnobacterium divergens</i> KKP 2012p, <i>Lactobacillus casei</i> B/00080, <i>Lactobacillus plantarum</i> B/00081 and <i>Saccharomyces cerevisiae</i> KKP 2059p)	2013-0048
36	2016;14(9):4558	BioPlus 2B® (<i>Bacillus subtilis</i> DSM 5750 and <i>Bacillus licheniformis</i> DSM 5749)	2009-0023
37	2016;14(11):4619	Maltol belonging to chemical group 12	2010-0064
38	2016;14(11):4625	Axtra® PHY 20000 TPT2 (6-phytase)	2015-0048
39	2016;14(11):4613	tartrazine (E 102)	2010-0342
40	2016;14(11):4620	Feedlyve AGL (endo-1,3(4)-beta-glucanase)	2010-0227
41	2016;14(11):4621	Feedlyve AXC (endo-1,4-b-xylanase)	2010-0213
42	2016;14(11):4618	Secondary aliphatic saturated or unsaturated alcohols, ketones, ketals and esters with a second secondary or tertiary oxygenated functional group belonging to chemical group 10	2010-0026
43	2016;14(11):4623	A preparation of algae interspaced bentonite	2014-0047
44	2016;14(11):4616	<i>Lactobacillus brevis</i> NCIMB 42149	2015-0014
45	2016;14(11):4622	3-phytase FLF1000	2015-0026

EFSA opinions on: <http://www.efsa.europa.eu/en/publications/efsajournal.htm>;

EURL reports on: <https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports>

Table 3. Commission Implementing Regulations published in 2016 and supported by the EURL recommendations

	Commission Implementing Regulation (EU) No	Feed additives/active substance	Dossier number for EURL Report
1	2016/104 of 27 January 2016	A preparation of <i>Saccharomyces cerevisiae</i> MUCL 39885	2009-0028
2	2016/329 of 8 March 2016	6-phytase	2012-0044
3	2016/348 of 10 March 2016	The preparation of 6-phytase (EC 3.1.3.26) produced by <i>Komagataella pastoris</i> (DSM 23036)	2010-0008
4	2016/896 of 8 June 2016	Iron sodium tartrates	2012-0035
5	2016/897 of 8 June 2016	Preparation of <i>Bacillus subtilis</i> (C-3102) (DSM 15544)	2009-0013
6	2016/898 of 8 June 2016	A preparation of <i>Bacillus licheniformis</i> (ATCC 53757) and its protease (EC 3.4.21.19)	2013-0017
7	2016/899 of 8 June 2016	6-phytase produced by <i>Trichoderma reesei</i> (ATCC SD-6528)	2013-0049
8	2016/900 of 8 June 2016	Benzoic acid	2010-0029
9	2016/972 of 17 June 2016	L-arginine produced by <i>Corynebacterium glutamicum</i> KCTC 10423BP	2014-0012
10	2016/973 of 17 June 2016	Zinc bislysinate	2014-0021
11	2016/997 of 21 June 2016	Endo-1,4-beta-xylanase EC 3.2.1.8 produced by <i>Trichoderma reesei</i> (ATCC PTA 5588) and endo-1,3(4)-beta-glucanase EC 3.2.1.6 produced by <i>Trichoderma reesei</i> (ATCC SD 2106)	2010-0007
12	2016/1007 of 22 June 2016	Ammonium chloride	2010-0242 2010-0037
13	2016/1095 of 6 July 2016	Zinc acetate dihydrate, Zinc chloride anhydrous, Zinc oxide, Zinc sulphate heptahydrate, Zinc sulphate monohydrate, Zinc chelate of amino acids hydrate, Zinc chelate of protein hydrolysates, Zinc chelate of glycine hydrate (solid) and Zinc chelate of glycine hydrate (liquid)	2010-0059 2010-0063 2010-0072 2010-0142 2010-0228
14	2016/1220 of 26 July 2016	L-threonine produced by <i>Escherichia coli</i>	2010-0058 2010-0081 2013-0028
15	2016/1768 of 4 October 2016	Guanidinoacetic acid	2011-0043
16	2016/1833 of 17 October 2016	A preparation of kidney bean lectins (<i>Phaseolus vulgaris</i> lectins)	2010-0079
17	2016/1881 of 24 October 2016	6-phytase produced by <i>Aspergillus oryzae</i> (DSM 22594)	2011-0042 2010-0019
18	2016/1964 of 9 November 2016	A preparation of dolomite-magnesite and a preparation of montmorillonite-illite	2012-0043 2010-0244
19	2016/2023 of 18 November 2016	Sodium benzoate, potassium sorbate, formic acid and sodium formate	2010-0375 2010-0145 2010-0193 2009-0027
20	2016/2150 of 7 December 2016	The preparations of <i>Lactobacillus plantarum</i> DSM 29025 and <i>Lactobacillus plantarum</i> NCIMB 42150	2015-0035 2015-0013
21	2016/2261 of 15 December 2016	Copper(I) oxide	2014-0034

Commission Implementing Regulations on:

http://ec.europa.eu/food/safety/docs/animal-feed-eu-reg-comm_register_feed_additives_1831-03.pdf

EURL reports on:

<https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports>

Table 4. Categories / functional groups of feed additives evaluated in 2016

Category	Functional Group	2016
1 technological	a preservatives b antioxidants c emulsifiers d stabilisers e thickeners f gelling agents g binders h substances for control of radionuclide contamination i anticaking agents j acidity regulators k silage additives l denaturants m mycotoxin binders	1
2 sensory	a colourants b flavouring compounds	2 3
3 nutritional	a vitamins, pro-vitamins b compounds of trace elements c amino acids d urea and its derivatives	4 4
4 zootechnical	a digestability enhancers b gut flora stabilisers: micro-organisms c substances which favourably affect the environment d other zootechnical additives	8 3 2 1
5 coccidiostats & histomonostats		5
		Total 39

Table 4 presents a detailed overview of the "categories" / "functional groups" evaluated by the EURL in 2016, resulting in 14 zootechnical, 8 nutritional, 7 technological, 5 sensory and 5 coccidiostats & histomonostats dossiers.

As foreseen by Commission Regulation (EC) No 378/2005, every draft "initial" report was reviewed by experts of the various NRLs. Their critical and constructive remarks contributed to the quality of the reports sent by the EURL to the European Food Safety Authority (EFSA) and DG SANTE. These comments are highly appreciated by the EURL and the NRL contributions are systematically acknowledged in the final reports. Figure 1 shows the review activity of the NRLs in 2016, where seven NRLs commented to 20 or more initial reports: PL-PIWET, CZ-UKZUZ, IT-CReAA, AT-AGES, ES-GENCAT, SI-VFUNIV and DE-TLL.

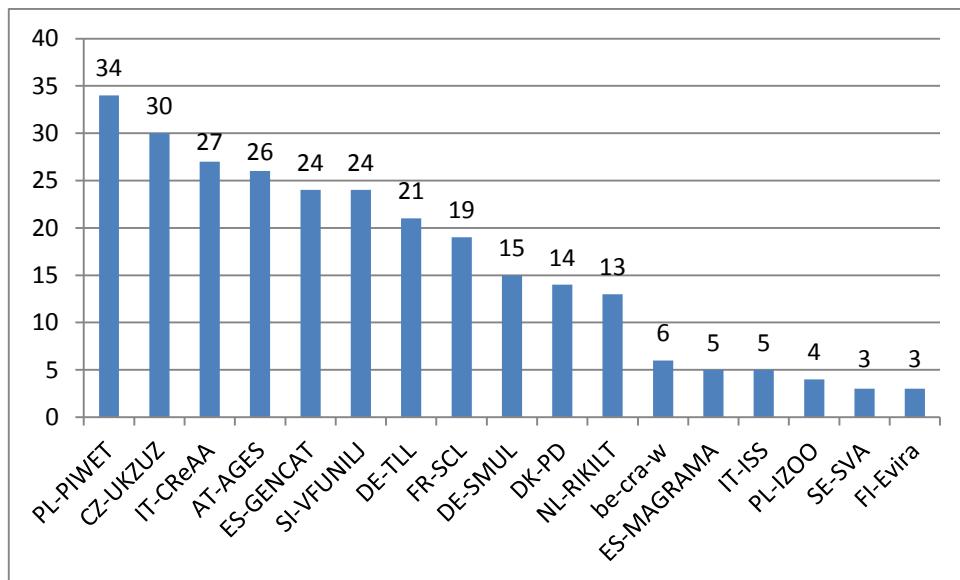


Figure 1 Number of draft reports commented by NRLs during the 2016 review process

PL-PIWET – Państwowy Instytut Weterynaryjny, Puławy (Poland)

CZ-UKZUZ – Ústřední kontrolní a zkušební ústav zemědělský (ÚKZÚZ), Praha (Czech Republic)

IT-CReAA – Centro di referenza nazionale per la sorveglianza ed il controllo degli alimenti per gli animali (CReAA), Torino (Italy)

AT-AGES – Österreichische Agentur für Gesundheit und Ernährungssicherheit (AGES), Wien (Austria)

ES-GENCAT – Laboratori Agroalimentari, Departament d'Agricultura, Ramaderia, PESCA, Alimentació i Medi Natural. Generalitat de Catalunya, Cabrils (Spain)

SI-VFUNIV – Univerza v Ljubljani. Veterinarska fakulteta. Nacionalni veterinarski inštitut. Enota za patologijo prehrane in higieno okolja, Ljubljana (Slovenia)

DE-TLL – Thüringer Landesanstalt für Landwirtschaft (TLL). Abteilung Untersuchungswesen. Jena (Germany)

FR-SCL – Laboratoire de Rennes (SCL L35), Service Commun des Laboratoires DGCCRF et DGDDI, Rennes (France)

DE-SMUL – Staatliche Betriebsgesellschaft für Umwelt und Landwirtschaft. Geschäftsbereich 6 — Labore Landwirtschaft, Nossen (Germany)

DK-PD – Fødevarestyrelsens Laboratorie Aarhus (kemisk) (Denmark)

NL-RIKILT – Wageningen UR, Wageningen (The Netherlands)

BE-CRAW - Centre wallon de Recherches agronomiques (CRA-W), Gembloux (Belgium)

ES-MAGRAMA – Laboratorio Arbitral Agroalimentario. Ministerio de Agricultura, Alimentación y Medio Ambiente, Madrid (Spain)

IT-ISS – Istituto Superiore di Sanità. Dipartimento di Sanità Pubblica Veterinaria e Sicurezza Alimentare, Roma (Italy)

PL-IZOO – Instytut Zootechniki — Państwowy Instytut Badawczy, Krajowe Laboratorium Pasz, Lublin (Poland)

SE-SVA Avdelningen för kemi, miljö och fodersäkerhet, Statens Veterinärmedicinska Anstalt (SVA), Uppsala (Sweden)

FI-EVIRA – Elintarviketurvallisuusvirasto/Livsmedelssäkerhetsverket (Evira), Helsinki/Helsingfors (Finland)

The Workshop 2016 of the EURL-FA Authorisation

The 16th Workshop (WS) of the EURL Feed Additives (EURL-FA) authorisation was organised and held in Brussels on November 21 - 22, 2016. A total of 32 participants, representing 22 National Reference Laboratories (NRLs), DG SANTE, EFSA and the EURL, took part in the workshop. In addition, two representatives from the EU Association of Specialty Feed Ingredients and their Mixtures (FEFANA) attended the public part of the event.

Methods on the EURL-FA website

In 2016, the EURL started to work on a project aiming to display on the EURL website more detailed analytical information, including standard operating procedures of recommended analytical methods for official control of feed additives in the frame of feed additives authorisation. In accordance with the Regulations (EC) 378/2005 and (EC) 1831/2003, the EURL is entitled to make the recommended analytical methods publically available when corresponding feed additives become authorised.

The following achievements are highlighted hereafter:

- creation of an internal database linking all feed additive dossiers, which the EURL received since 2004 (ca. 850), references to EFSA opinions and to Commission Implementing Regulations (CIR) (if issued);
- creation of templates with information, such as FAD number, feed additive (FA) name, the identity number of FA, the names of active substances, hyperlink to the full text and the date of the report, hyperlink to the corresponding CIR, the recommended analytical method, an executive summary of the related EURL report and names and hyperlinks to the files in which standard operating procedures for the determination of active substances in different matrices are described;
- deliverables: 38 CIRs published in 2015 were identified covering 55 FADs; 33 filled templates and 44 SOPs for the determination of feed additives in different matrices, covering the authorised feed additives in 2015, were compiled. The final aim is to put on the EURL website all SOPs of the methods which were recommended by the EURL since 2004.

The full texts of the SOPs will be available on the EURL website only for single-laboratory validated and verified methods for different matrices, i.e. a feed additive, premixtures, feedingstuffs and animal tissues. The methods will be searchable by using several keywords, e.g. identity number or name of the additive, name of an active substance or FAD number. However, the internationally recognised methods such as from ISO, CEN, AOAC, VDLUFA, Food Chemical Codex and Pharmacopoeia will not be published on the EURL website due to the protection of copyrights, while most of the methods from FAO JECFA, Official Community and National methods can be freely accessed from the information sources of the corresponding institutions.

Diclazuril project – Final Report

In 2016, the EURL-FA finalised the JRC Technical Report (EUR 27954, JRC 101940) on the re-validation of a method for the determination of diclazuril by a collaborative study. The report contains the detailed description of the collaborative trial exercise, as well as the updated standard operating procedure (SOP) of the Community method for the determination of Diclazuril in premixtures and feed, included as an annex to the report. The main differences between the old and updated versions of the method are: i) higher amount of solid phase extraction material for clean-up of feed samples (5000 mg vs. 100 mg); and ii) the alternative possibility of using LC-MS based methods under the condition that the performance characteristics of those methods are equivalent (or better) than the ones of the original LC-UV based method.

The report has been sent to DG SANTE for further inclusion of the method in a planned revision of Commission Regulation (EC) No 152/2009.

Optiphos project - Progress Report

The EURL started in 2015 the preparation for an inter-laboratory comparison aiming at the establishment of the conversion factor enabling the labelling control of Optiphos feed products when applying the ISO 30024 analytical method.

At the end of 2015 the EURL selected 10 laboratories from 9 countries for performing the assay (8 laboratories for participating in the full assay, i.e. Optiphos + ISO method, and 2 laboratories for participating in the comparison phase, i.e. ISO method).

During February 2016 the linearity check, was carried out by the Austrian NRL (AGES). The outcome of this assay revealed a big impact of the applied dilution factor on the determined phytase activity and thus the need to fix the dilution factor for each material in order to overcome this effect. In parallel the implementation phase of the assay, involving the participants applying the Optiphos method, has been also launched.

In April 2016 the preparation and characterisation of the Optiphos test materials intended to be used for the assay were successfully finalised.

The evaluation of the feedback from the participant laboratories led to a low rate of "acceptable results" that suggested the need of improving the participants' knowledge on the Optiphos method. Based on that, it has been decided to keep the assay in stand-by and launch an unforeseen training action on the Optiphos method addressed to the laboratories that participated in the implementation phase.

Acknowledgements

The EURL would like to thank our colleagues within DG JRC-Geel for their strong support and interest in EURL-FA activities, related to secretarial support, review of reports and development of tailor-made informatics systems. The efforts and excellent collaboration with the Mail services and the Resources Management Geel are also acknowledged.

We are grateful to all the NRL experts for their valuable contribution in the evaluation of the dossiers and the constructive discussions during the workshop. All this allowed successful evaluations and guaranteed proper dissemination of knowledge and good practices. The list of NRLs is provided in Annex I.

Annex I: List of the NRLs of the EUR-L-FA network

(updated on 21/04/2017 as in Commission Implementing Regulation (EU) 2015/1761)

Country	National Reference Laboratory
	<ul style="list-style-type: none"> - Federaal Laboratorium voor de Voedselveiligheid Tervuren (FLVVT - FAVV). BE - Vlaamse Instelling voor Technologisch Onderzoek (VITO), Mol. BE - Centre wallon de Recherches agronomiques (CRA-W), Gembloux. BE
	<ul style="list-style-type: none"> - Ústřední kontrolní a zkušební ústav zemědělský (ÚKZÚZ), Praha. CZ
	<ul style="list-style-type: none"> - Fødevarestyrelsens Laboratorie Aarhus (kemisk). DK - Fødevarestyrelsens Laboratorie Ringsted (kemisk og mikrobiologisk). DK
	<ul style="list-style-type: none"> - Sachgebiet Futtermittel des Bayrischen Landesamtes für Gesundheit und Lebensmittelsicherheit (LGL), Oberschleißheim. DE - Landwirtschaftliche Untersuchungs- und Forschungsanstalt (LUFA), Speyer. DE - Staatliche Betriebsgesellschaft für Umwelt und Landwirtschaft. Geschäftsbereich 6 - Labore Landwirtschaft, Nossen. DE - Thüringer Landesanstalt für Landwirtschaft (TLL). Abteilung Untersuchungswesen. Jena. DE
	<ul style="list-style-type: none"> - Põllumajandusuuringute Keskus (PMK). Jääkide ja saasteainete labor, Saku, Harjumaa. EE - Põllumajandusuuringute Keskus (PMK), Taimse materjali labor, Saku, Harjumaa. EE
	<ul style="list-style-type: none"> - Laboratorio Arbitral Agroalimentario. Ministerio de Agricultura, Alimentación y Medio Ambiente, Madrid. ES - Laboratori Agroalimentari, Departament d'Agricultura, Ramaderia, PESCA, Alimentació i Medi Natural. Generalitat de Catalunya, Cabrils. ES
	<ul style="list-style-type: none"> - Laboratoire de Rennes (SCL L35), Service Commun des Laboratoires DGCCRF et DGDDI, Rennes. FR
	<ul style="list-style-type: none"> - The State Laboratory, Kildare. IE
	<ul style="list-style-type: none"> - Εργαστήριο Ελέγχου Κυκλοφορίας Ζωοτροφών Θεσσαλονίκης. GR
	<ul style="list-style-type: none"> - Istituto Superiore di Sanità. Dipartimento di Sanità Pubblica Veterinaria e Sicurezza Alimentare, Roma. IT - Centro di referenza nazionale per la sorveglianza ed il controllo degli alimenti per gli animali (CReAA), Torino. IT
	<ul style="list-style-type: none"> - Feedingstuffs Analytical Laboratory, Department of Agriculture, Nicosia. CY

Country	National Reference Laboratory
	<ul style="list-style-type: none"> - Pārtikas drošības, dzīvnieku veselības un vides zinātniskais institūts BIOR, Rīga. LV
	<ul style="list-style-type: none"> - Nacionalinis maisto ir veterinarijos rizikos vertinimo institutas, Vilnius. LT
	<ul style="list-style-type: none"> - Laboratoire de Contrôle et d'essais — ASTA, Ettelbruck. LU
	<ul style="list-style-type: none"> - Nemzeti Élelmiszerlánc-biztonsági Hivatal, Élelmiszer- és Takarmánybiztonsági Igazgatóság, Takarmányvizsgáló Nemzeti Referencia Laboratórium, Budapest. HU
	<ul style="list-style-type: none"> - RIKILT Wageningen UR, Wageningen. NL
	<ul style="list-style-type: none"> - Österreichische Agentur für Gesundheit und Ernährungssicherheit (AGES), Wien. AT
	<ul style="list-style-type: none"> - Instytut Zootechniki — Państwowy Instytut Badawczy, Krajowe Laboratorium Pasz, Lublin. PL - Państwowy Instytut Weterynaryjny, Puławy. PL
	<ul style="list-style-type: none"> - Instituto Nacional de Investigação Agrária e Veterinária, I.P. (INIAV,IP), Lisboa. PT
	<ul style="list-style-type: none"> - Univerza v Ljubljani. Veterinarska fakulteta. Nacionalni veterinarski inštitut. Enota za patologijo prehrane in higieno okolja, Ljubljana. SI - Kmetijski inštitut Slovenije, Ljubljana. SI
	<ul style="list-style-type: none"> - Skúšobné laboratórium analýzy krmív, Ústredný kontrolný a skúšobný ústav poľnohospodársky, Bratislava. SK
	<ul style="list-style-type: none"> - Elintarviketurvallisuusvirasto/Livsmedelssäkerhetsverket (Evira), Helsinki/Helsingfors. FI
	<ul style="list-style-type: none"> - Avdelningen för kemi, miljö och fodersäkerhet, Statens Veterinärmedicinska Anstalt (SVA), Uppsala. SE
	<ul style="list-style-type: none"> - LGC Ltd, Teddington. UK
	<ul style="list-style-type: none"> - The National Institute of Nutrition and Seafood Research (NIFES), Bergen. NO
European Union Reference Laboratory	
	<ul style="list-style-type: none"> - Joint Research Centre of the European Commission. Institute for Reference Materials and Measurements. Geel, Belgium

Annex II: List of EURL FAD reports issued in 2016
(listed in anti-chronological order)

FAD No	Product Name	Active Substance(s)	Published on	NRL
2010-0201	Citranaxanthin (Lucantin CX forte)	Citranaxanthin	14/12/2016	
amendment 2010-0069 2010-0088 2010-0235	Manganese - E5	Manganese chelate of amino acids hydrate; Manganese chelate of glycine hydrate; Manganous oxide; Manganous carbonate; Manganous chloride tetrahydrate; Manganous sulfate monohydrate	05/12/2016	
2016-0031	L-valine produced by Corynebacterium glutamicum CGMCC 11675	L-Valine	16/11/2016	
2016-0030	Preparation of hydroxy analogue of Methionine (HMTBa) and calcium salt of HMTBa	Hydroxy analogue of Methionine (HMTBa)	15/11/2016	
2014-0028	Fra Octazyme C Dry	Endo-1,4-beta-xylanase (3.2.1.8) Endo-1,3(4)-beta-glucanase (3.2.1.6) Endo-1,4-beta-glucanase (3.2.1.4) Manan-endo-1,4-beta-mannosidase (3.2.1.78) Pectinase alpha-galactosidase (3.2.1.22) Protease (3.4.21.62) alpha-amylase (3.2.1.1)	10/11/2016	
Corigendum 2010-0285	Belfeed B MP & Belfeed B ML	Endo 1,4-beta-xylanase (E.C. 3.2.1.8)	03/11/2016	
2016-0037	L-arginine produced by fermentation with Corynebacterium glutamicum KCCM80099	L-arginine	31/10/2016	
2016-0016	Lactobacillus casei DSM 28872	Lactobacillus casei DSM 28872	27/10/2016	
2016-0019	Optiphos®	6-phytase	17/10/2016	
2015-0037	Aviax® 5%	Semduramicin sodium	14/10/2016	
2016-0015	Pediococcus parvulus DSM 28875	Pediococcus parvulus DSM 28875	28/09/2016	IT-CReAA
2016-0017	Coxam®	Amprolium hydrochloride	17/08/2016	
2016-0010	Beltherm®	Endo 1,4-beta-xylanase	16/08/2016	
2016-0002	Carvacrol	Carvacrol	02/08/2016	
2015-0027	Actisaf® Sc 47	Saccharomyces cerevisiae NCYC Sc 47/CNCM I-4407	11/07/2016	IT-CReAA
2016-0003	L-threonine	L-threonine	08/07/2016	
2010-0264	Actisaf® Sc 47	Saccharomyces cerevisiae NCYC Sc 47	08/07/2016	BE-CRA-W

FAD No	Product Name	Active Substance(s)	Published on	NRL
2014-0038	Probion Forte®	Bacillus subtilis (KCCM 10941P), Bacillus coagulans (KCCM 11093P)	28/06/2016	DE-SMUL
2010-0342	Tartrazine	Tartrazine	24/06/2016	
2014-0024	Cumin Cyminum L. (Cumine Tincture)	-	24/06/2016	
2015-0039	Coxar®	Nicarbazin	20/06/2016	
2016-0004	Origanum vulgare L., ssp. hirtum var. Vulkan (DOS 00001)	Oregano essential oil	14/06/2016	
2015-0048	Axtra® PHY 20000 TPT2	6-phytase (EC 3.1.3.26)	25/05/2016	
2016-0005	Phyllite	-	25/05/2016	
2010-0256	Sodium Molybdate	Sodium Molybdate	28/04/2016	
2015-0040	Natuphos® E	6-phytase	28/04/2016	AT-AGES
2015-0034	Lactobacillus plantarum DSM 29024	Lactobacillus plantarum DSM 29024	21/04/2016	IT-CReAA
2015-0035	Lactobacillus plantarum DSM 29025	Lactobacillus plantarum DSM 29025	21/04/2016	FR-SCL
2015-0033	Lactobacillus rhamnosus DSM 29226	Lactobacillus rhamnosus DSM 29226	19/04/2016	BE-CRA-W
2015-0028	Lactobacillus diolivorans DSM 32074	Lactobacillus diolivorans DSM 32074	06/04/2016	BE-CRA-W
2015-0025	Zinc Chelate of Methionine	Zinc Chelate of Methionine	04/03/2016	
2015-0026	Preparation of 3-phytase FLF1000	3-phytase (EC 3.1.3.8)	04/03/2016	
2010-0077	Dry Grape Extract		03/03/2016	
2015-0023	Coxipol®	Clopidol	20/01/2016	
2015-0001	Monteban® G100	Narasin (E765)	19/01/2016	
2010-0227	Feedlyve® AGL	Endo 1,3(4)- β -glucanase	19/01/2016	
amendment 2010-0059 2010-0063 2010-0072 2010-0142 2010-0228	Zinc SANCO Group	Zinc Acetate; Zinc Chloride; Zinc Oxide; Zinc Sulphates; Zinc chelates of amino acids or glycine	08/01/2016	

Reports available from the EURL website: <https://ec.europa.eu/jrc/en/eurl/feed-additives/evaluation-reports>