



Annex 8.1 Table of Parameters and Methods

Parameter	Test procedures (methods)		
	Reference method	Alternative method	Screening
Aflatoxine B1	DIN EN 17375:2006 by High performance liquid chromatographic method with postcolumn derivatization (PCD)	or method shown (by lab) to be equivalent	ELISA
Zearalenone (ZEA)	DIN EN 16877:2017 Animal feeding stuffs - Methods of sampling and analysis - Determination of T-2 and HT-2 toxins, Deoxynivalenol and Zearalenone, in feed materials and compound feed by LC-MS	or method shown (by lab) to be equivalent	ELISA
Deoxynivalenol/ Vomitoxin (DON)	DIN EN 16877:2017 Animal feeding stuffs - Methods of sampling and analysis - Determination of T-2 and HT-2 toxins, Deoxynivalenol and Zearalenone, in feed materials and compound feed by LC-MS	or method shown (by lab) to be equivalent	ELISA
Ochratoxin A (OTA)	DIN EN 16007:2011 by immunoaffinity column clean-up and High Performance Liquid Chromatography with fluorescence detection	or method shown (by lab) to be equivalent	ELISA
Dioxine	Commission regulation (EU) No. 2017/771 Analysis of food - determination of the levels of dioxins and polychlorinated biphenyls in feed - Commission Regulation (EU) 2017/771 of 3 May 2017 amending Regulation (EC) No 152/2009 (ABl. EG L 115/22 of 04.05.2017)	or method shown (by lab) to be equivalent in conformity with EU Directive 2002/70	"bioassay" ¹
PCB (dioxin-like PCB)	Commission regulation (EU) No. 2017/771 Analysis of food - determination of the levels of dioxins and polychlorinated biphenyls in feed - Commission Regulation (EU) 2017/771 of 3 May 2017 amending Regulation (EC) No 152/2009 (ABl. EG L 115/22 of 04.05.2017)	or method shown (by lab) to be equivalent in conformity with EU Directive 2002/70	"bioassay" ¹



Parameter	Test procedures (methods)		
	Reference method	Alternative method	Screening
Non-dioxin-like PCB	Commission regulation (EU) No. 2017/771 Analysis of food - determination of the levels of dioxins and polychlorinated biphenyls in feed – Commission Regulation (EU) 2017/771 of 3 May 2017 amending Regulation (EC) No 152/2009 (ABl. EG L 115/22 of 04.05.2017)	or method shown (by lab) to be equivalent in conformity with EU Directive 2002/70	-
Salmonella	DIN EN ISO 6579: 2007 Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp.	or method shown (by lab) to be equivalent	-
Cadmium (Cd)	DIN EN 17053:2018 Animal feeding stuffs - Methods of sampling and analysis - Determination of trace elements, heavy metals and other elements in feed by ICP-MS (multi-method)	or method shown (by lab) to be equivalent	-
Lead (Pb)	DIN EN 17053:2018 Animal feeding stuffs - Methods of sampling and analysis - Determination of trace elements, heavy metals and other elements in feed by ICP-MS (multi-method)	or method shown (by lab) to be equivalent	-
Arsenic (As)	DIN EN 17053:2018 Animal feeding stuffs - Methods of sampling and analysis - Determination of trace elements, heavy metals and other elements in feed by ICP-MS (multi-method)	or method shown (by lab) to be equivalent	-
Mercury (Hg)	DIN EN 16277:2012 by cold-vapour atomic absorption spectrometry (CVAAS) after microwave pressure digestion	or method shown (by lab) to be equivalent	-
Nickel (Ni)	VDLUFA MB VII 2.2.2.5 (2007) Determination of selected elements in plant material and feed and compound feed by ICP-MS	or method shown (by lab) to be equivalent	-



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	Reference method	Alternative method	Screening
Animal components	<p>Commission regulation (EC) No. 152/2009 Annex VI laying down the methods of sampling and analysis for the official control of feed, amended most recently by regulation (EU) No 51/2013 (ABl. L 20 of 23.1.2013, S. 33)</p> <p>Follow-up method for positive results: PCR qualitative</p>	-	-
Pesticides	<p>Official Collection § 64: ASU L 00.0015 Modular multi-method approach to identifying residual pesticides in feed by GC-MS(/MS) or LC-MS/MS after acetonitrile-extraction/dispersion and clean-up by dispersive SPE (QuEChERS) (ASU F 0057)</p>	-	-
Chlormequat	<p>Official Collection § 64: ASU L 00.00-76 Determination of chlormequat and mepiquat in low-fat foods; LC-MS/MS method</p>	or method shown (by lab) to be equivalent	-
Dithiocarbamate	<p>Official Collection § 64: Determination of dithiocarbamate and thiuram disulfide residues Part 1: Spectrometric method (ASU L 00.00-49/1; F 0053) Part 2: Gas chromatographic method (ASU L 00.00-49/2; F 0054) Part 3: UV-spectral photometrical xanthate method (ASU L 00.00-49/3; F 0055)</p>	or method shown (by lab) to be equivalent	-
Glyphosate	<p>QuPPE - EURL-SRM, CVUA Stuttgart: Quick Method for the Analysis of Residues of numerous Highly Polar Pesticides in Foods of Plant Origin involving Simultaneous Extraction with Methanol and LC-MS/MS Determination (QuPPE-Method); Version 7; December 2012</p>	or method shown (by lab) to be equivalent	-



Qualitätssicherung. Vom Landwirt bis zur Ladentheke.



Parameter	Test procedures (methods)		
	Reference method	Alternative method	Screening
Organochlorine compounds (except dioxins and PCBs)	DIN EN 15741:2009 Determination of OC-pesticides and PCB's by GC/MS DIN EN 15742:2009 Determination of OC-pesticides and PCB's by GC/ECD	or method shown (by lab) to be equivalent	-
PAH (Polycyclic Aromatic Hydrocarbons)	VDLUFA MB VII, 3.3.3.2 Determination of polycyclic aromatic hydrocarbons (PAH) in plant material (GC method)	or method shown (by lab) to be equivalent	-
Antibiotic active substances	Determination by LC MS/MS ²	or method shown (by lab) to be equivalent	-
Methanol	Accredited lab's own method	-	-
Packaging material	Accredited laboratory method for (microscopic) analysing of prohibited substances in accordance with Regulation (EC) No 767/2009 Annex III (in particular point 7)	-	-
Ergot (claviceps purpurea)	Counting (by scheme participant) Calculation of Ergot content in % $= \frac{\text{Weight of ergot fragments in grams}}{\text{Weight of the final sample in grams}} \times 100$	-	-
Hydrocyanic acid	DIN EN 16160:2012 Animal feeding stuffs - Determination of Hydrocyanic acid by HPLC	or demonstrably (by laboratory) equivalent procedure	-

¹ If result is positive, a follow-up with the reference method (or equivalent) has to be carried out.

² The VDLUFA method 14.1.5 for "Determination of selected antibiotics in feedingstuffs by LC-MS/MS" can provide a basis for the method development.

Revision Information Version 01.01.2021

Criteria/requirement	Changes	Date of change
Ergot (claviceps pur-purea)	Enhancement: The formula for calculating ergot content in % has been added.	01.01.2021