

Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV

Signatory to the Multilateral Agreements of
EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the testing laboratory

GEN-IAL GEN - Institut für Angewandte Laboranalysen GmbH
Heuserweg 13-15, 53842 Troisdorf

is competent under the terms of DIN EN ISO/IEC 17025:2005 to carry out tests in the following fields:

**molecular biological examinations of plant species, animal- and animal species,
microorganism, allergens, genetically modifications as well as (GMO) genetically modified
organisms in food- and feed stuff**

The accreditation certificate shall only apply in connection with the notice of accreditation of 13.02.2014 with the accreditation number D-PL-17455-01 and is valid until 12.02.2019. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 7 pages.

Registration number of the certificate: **D-PL-17455-01-00**

Berlin,
13.02.2014

Andrea Valbuena
Head of Division

Translation issued:
03.01.2017


Head of Division

Deutsche Akkreditierungsstelle GmbH

Office Berlin
Spittelmarkt 10
10117 Berlin

Office Frankfurt am Main
Europa-Allee 52
60327 Frankfurt am Main

Office Braunschweig
Bundesallee 100
38116 Braunschweig

The publication of extracts of the accreditation certificate is subject to the prior written approval by Deutsche Akkreditierungsstelle GmbH (DAkS). Exempted is the unchanged form of separate disseminations of the cover sheet by the conformity assessment body mentioned overleaf.

No impression shall be made that the accreditation also extends to fields beyond the scope of accreditation attested by DAkS.

The accreditation was granted pursuant to the Act on the Accreditation Body (AkkStelleG) of 31 July 2009 (Federal Law Gazette I p. 2625) and the Regulation (EC) No 765/2008 of the European Parliament and of the Council of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products (Official Journal of the European Union L 218 of 9 July 2008, p. 30). DAkS is a signatory to the Multilateral Agreements for Mutual Recognition of the European co-operation for Accreditation (EA), International Accreditation Forum (IAF) and International Laboratory Accreditation Cooperation (ILAC). The signatories to these agreements recognise each other's accreditations.

The up-to-date state of membership can be retrieved from the following websites:

EA: www.european-accreditation.org

ILAC: www.ilac.org

IAF: www.iaf.nu

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-17455-01-00 according to DIN EN ISO/IEC 17025:2005

Period of validity: 13.02.2014 to 12.02.2019

Date of issue: 13.02.2014

Holder of certificate:

GEN-IAL GEN - Institut für Angewandte Laboranalysen GmbH
Heuserweg 13-15, 53842 Troisdorf

Tests in the fields:

molecular biological examinations of plant species, animal- and animal species, microorganism, allergens, genetically modifications as well as (GMO) genetically modified organisms in food- and feed stuff

Abbreviations used: see last page

Within the given testing field marked with */, the testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS**

***) the free choice of standard or equivalent testing methods.**

****) the modification, development and refinement of testing methods.**

The listed testing methods are exemplary. The testing laboratory maintains a current list of all testing methods within the flexible scope of accreditation.

1 Molecular biological methods for detection and quantification of genetically modified food by means of PCR *

ASU L 15.05-1 2002-05	Food analysis - detection of genetically modifications in maize (<i>Zea mays</i> L.) by means of PCR (Polymerase Chain Reaction) and restriction digestion analysis or hybridization of the PCR-product (modification: <i>DNA-extraction with commercially available kit and confirmation via „real-time“-hybridisation</i>)
ASU L 00.00.31 2001-07	Food analysis - screening method for detection of genetically modifications in food by determination of DNA-sequences which are frequently found in genetically modified organisms
ASU L 23.01.22-1 1998-03	Food analysis - detection of genetically modifications in soy (<i>Glycine max</i>) by amplification of the modified DNA-Sequence by means of PCR (Polymerase Chain Reaction)
ASU L 29.00-9 2006-09	Food analysis - Qualitative detection of genetically modified DNA-sequences in papaya (<i>Carica papaya</i>) resistant against Papaya-Ring-Spot Virus. Construct specific method by means of PCR (Polymerase Chain Reaction)
ASU L 00.00-116 2007-12	Food analysis - detection of a specific DNA-sequence of <i>Agrobacterium tumefaciens</i> (T-nos), which is frequently found in genetically modified organisms in food. Real-time PCR screening method
ASU L 00.00-105 2006-12	Food analysis - method for detection of genetically modified organisms and products made of them. Quantitative DNA-based method (adoption of the same named standard DIN EN ISO 21570, Nov. 2005)
ASU L 00.00-124 2008-12	Food analysis - detection of a specific DNA-sequence of the bar-gene from <i>Streptomyces hygroscopicus</i> which is frequently found in genetically modified organisms in food. Screening real-time PCR method
ASU L 00.00-125 2008-12	Food analysis - detection of a specific DNA-sequence, CTP2-CP4-EPSPS, for screening of elements typical for genetically modified organisms (GMO) in food; construct specific method by means of real-time PCR
ASU L 00.00-148 Draft 2013	Food analysis - detection of the DNA-sequence of the Figwort-Mosaic Virus promotor (34S pFMV) in food. Screening real-time PCR method

ASU L 00.00-122 2008-06	Food analysis - detection of specific DNA-sequences, frequently found in genetically modified organisms (GVO) Cauliflower Mosaic Virus (CaMV, 35S-promoter, P35S) and Agrobacterium tumefaciens terminator (T-nos) in food; Screening real-time duplex PCR method
ASU L 23.04/03-1 2010-08	Construct-specific real-time PCR-method for detection of a specific genetical modification in linseed (Linum usitatissimum) and linseed products (CDC Triffid, FP967)

2 Further molecular biological methods

2.1 Molecular biological analysis of genetically modified organisms (GMO) in food and feed by means of PCR * *

SOP3 26-01 2005-03	PCR-detection of the pSSUAra/bar-gene cassette in food and feed according to official method collection of LAG (modification: <i>adapted PCR-programm</i>)
SOP3 28-01 2005-05	PCR-detection of the p35S/pat-gene cassette in food and feed according to official method collection of LAG (modification: <i>adapted PCR-programm</i>)
SOP3 29-01 2005-06	Detection of nptII-gene in food and feed endpoint-PCR
SOP3 30-01 2005-06	Detection of CP4-EPSPS-gene in food and feed endpoint-PCR
SOP3 31-01 2005-06	Detection of 35S-promoter und NOS-terminator in food and feed by multiplex-PCR, endpoint -PCR
SOP3 35-01 2007-10	PCR-detection and quantification of the p35S/pat-gene construct in genetically modified plant; real-time PCR method with TaqMan™ principle. JRC-method
SOP3 11-01 2004-08	Real-time PCR-detection and quantification of GMOs in food and feed
SOP3 36-01 2007-02	Event specific detection and quantification of LLRICE62; real-time PCR method with TaqMan™ principle; JRC-method
SOP3 37-01 2007-10	Event specific detection and quantification of TC1507-maize (Herculex™); real-time PCR method with TaqMan™ principle; JRC-method

SOP3 38-01 2007-10	Event specific detection and quantification of LLRICE601. Real-time PCR method with TaqMan™ principle; JRC-method
SOP3 13-01 2002-12	RoundupReady™ soy real-time PCR-quantification in food and feed
SOP3 16-01 2003-03	Bt-176 maize real-time PCR-quantification in food and feed
SOP3 17-01 2003-03	Bt-11 maize real-time PCR-quantification in food and feed
SOP3 18-01 2004-02	MON810 maize real-time PCR-quantification in food and feed
SOP3 25-01 2004-07	35S-promoter real-time PCR-quantification in food and feed
SOP3 56-01 2009-05	Detection of pat- and bar-gene construct in genetically modified plant; Real-time duplex PCR method with TaqMan™ principle. JRC-method
SOP3 57-01 2009-11	Event specific detection and quantification of MON89788 soy („RoundupReady2™“); real-time PCR method with TaqMan™ principle; JRC-method
SOP3 59-01 2009-12	PCR-detection and quantification of the pNOS-nptII -gene construct in genetically modified plant; real-time PCR method with TaqMan™ principle. JRC-method
SOP3 62-01 2010-10	Event specific detection and quantification of RT73 canola; real-time PCR method with TaqMan™ principle; JRC-method
SOP3 63-01 2010-09	Event specific detection and quantification of A2704-12 soy; real-time PCR method with TaqMan™ principle; JRC-method
SOP3 65-01 2010-10	Event specific detection and quantification of A5547-127 soy; real-time PCR method with TaqMan™ principle; JRC-method
SOP3 64-01 2010-09	Event specific detection and quantification of „Amflora™ “ potato (EH92-527-1); real-time PCR method with TaqMan™ principle; JRC-method

SOP3 66-01 2010-10	Event specific detection and quantification of MON88017 maize (Rootworm™); real-time PCR method with TaqMan™ principle; JRC-method
SOP3 68-01 2011-03	Event specific detection and quantification of GA21 maize; real-time PCR method with TaqMan™ principle; JRC-method

2.2 Molecular biological analysis of allergens and other plant species in food and feed by means of real-time PCR * *

SOP3 20-01 2003-12	Species detection of maize with LightCycler® hybridisation format in food and feed
SOP3 19-01 2003-10	Species detection of soy with LightCycler® hybridisation format in food and feed
SOP3 49-01 2008-07	Detection of lupine in food and feed; real-time PCR method with TaqMan™ principle
SOP3 51-01 2008-10	Detection of hazelnut in food and feed; real-time PCR method with TaqMan™ principle
SOP3 52-01 2008-10	Detection of almond in food and feed; real-time PCR method with TaqMan™ principle
SOP3 53-01 2009-01	Detection of celery in food and feed; real-time PCR method with TaqMan™ principle
SOP3 54-01 2009-01	Detection of sesame in food and feed; real-time PCR method with TaqMan™ principle
SOP3 60-01 2009-11	Detection of mustard in food and feed; real-time PCR method with TaqMan™ principle
SOP3 67-01 2010-11	Detection of plant in general in food and feed; real-time PCR method with TaqMan™ principle

2.3 Molecular biological analysis of animal in general and animal species in food and feed by means of real-time PCR **

SOP3 15-01 2004-03	Real-time PCR-detection of animal ingredients in food and feed; SybrGreen™ PCR-method
SOP3 40-01 2007-11	Detection of mammalian and poultry DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 41-01 2007-11	Detection of pig DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 45-01 2008-04	Detection of cattle DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 46-01 2008-05	Detection of sheep DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 47-01 2008-05	Detection of goat DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 48-01 2008-08	Detection of chicken DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 50 2008-10	Detection of turkey DNA in food and feed; real-time PCR method with TaqMan™ principle
SOP3 55 2009-03	Detection of duck DNA in food and feed; real-time PCR method with TaqMan™ principle

2.4 Molecular biological analysis of microorganisms in food and feed by means of real-time PCR **

SOP3 21-02 2004-11	Detection and quantification of PRV (Pseudorabies Virus); real-time PCR method
SOP3 24-01 2005-06	Detection and quantification of Mo/A-MuLV (Moloney Murine Leukemia Virus); real-time PCR method
ASU L 00.00-98 2007-04	Analysis of food - qualitative detection of Salmonella in food; real-time PCR-method

Abbreviations used:

ASU L xx.xx-x	Official German Method Collection § 64 LFGB
DIN	Deutsches Institut für Normung e. V.
DNA	Desoxyribonucleic acid
EN	European Standard
IEC	International Electrotechnical Commission, Genf
ISO	International Organization for Standardization
JRC	Joint Research Center (in Ispra)
LAG	Länderausschuss Gentechnik
LFGB	Lebensmittel-, Bedarfsgegenstände- und Futtermittelgesetzbuch (German Food and Feed Code)
SOP3 xx-xx	Standard Operation Procedure of GEN-IAL GEN - Institut für Angewandte Laboranalysen GmbH