

Deutsche Akkreditierungsstelle

Annex to the Accreditation Certificate D-PL-19235-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 24.08.2023

Date of issue: 13.09.2023

Holder of accreditation certificate:

Impetus GmbH & Co. Bioscience KG
Laboratory for Molecular Biological Analysis
Gottlieb-Daimler-Str. 13, 28237 Bremen

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and confirm generally with the principles of DIN EN ISO 9001.

Tests in the fields:

Molecular biological analysis of foodstuffs, feedstuffs, seeds and textile fibres

Immunological analysis of foodstuffs and feedstuffs

Microbiological and selected physical, physico-chemical and chemical analysis of foodstuffs and feedstuffs

Molecular biological and microbiological analysis of environmental samples in food and feed areas

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at <https://www.dakks.de>.

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

- * The free choice of standard or equivalent testing methods
- ** The modification, development and refinement of testing methods

The test methods listed are given by way of example.

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standards or equivalent testing methods listed here with different issue dates.

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

1 Molecular biological analysis of foodstuffs, feedstuffs, seeds and textile fibres and environmental samples in food and feed areas

1.1 Qualitative detection of genetically modified organisms (GMOs) by PCR in foodstuffs and feedstuffs, seeds **

ASU L 00.00-31 2001-07 Corrigendum 2002-12	Analysis of foodstuffs – Screening methods for the detection of genetically modified DNA sequences in foodstuffs by the detection of DNA sequences frequently occurring in genetically modified organisms
IB-C009 2004-05	Qualitative PCR system for the event-specific detection of StarLink™ maize CBH351
IB-C020 2005-04	Qualitative PCR system for the construct-specific detection of SeedLink rapeseed (InVigor, Ms8, Rf3, Ms8xRf3) and maize

1.2 Qualitative detection of genetically modified organisms in foodstuffs, feedstuffs, seeds and textile fibres

1.2.1 Qualitative detection of genetically modified organisms and cytoplasmic male sterility (CMS) by real-time PCR-in foodstuffs, feedstuffs, seeds and textile fibres **

IWA 32 2019-04	Screening of genetically modified organisms (GMOs) in cotton and textiles
IB-T001 2007-01	Qualitative real-time PCR system for the event-specific detection of LibertyLink™rice 601 (LLRICE601)

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IB-T005 2007-04	Qualitative real-time PCR system for the event-specific detection of Herculex™ maize TC 1507
IB-T006 2013-06	Qualitative real-time PCR system for the event-specific detection of MIR604 maize
IB-T007 2020-05	Qualitative real-time PCR system for the event-specific detection of MON88017 maize
IB-T008 2008-04	Qualitative real-time PCR system for the event-specific detection of DAS-59122-7 maize
IB-T009 2008-04	Qualitative real-time PCR system for the construct-specific detection of BT11 maize
IB-T011 2007-07	Qualitative real-time PCR system for the event-specific detection of 3006-210-23 cotton
IB-T012 2020-04	Qualitative real-time PCR system for the event-specific detection of Roundup Ready® cotton MON1445
IB-T013 2008-07	Qualitative real-time PCR system for the event-specific detection of 281-24-236 cotton
IB-T014 2021-05	Qualitative real-time PCR system for the event-specific detection of Bollgard® cotton MON531
IB-T025 2010-10	Qualitative real-time PCR system for the construct-specific detection of the transition from CTP2 to the CP4 EPSPS gene
IB-T026 2019-07	Qualitative real-time PCR system for the event-specific detection of DP305423-1 soybean
IB-T027 2019-07	Qualitative real-time PCR system for the event-specific detection of DP356043-5 soybean
IB-T029 2019-07	Qualitative real-time PCR system for the event-specific detection of MON89034 maize
IB-T030 2010-09	Qualitative real-time PCR system for the event-specific detection of event 3272 maize
IB-T031 2019-07	Qualitative real-time PCR system for the event-specific detection of MON89788 soybean

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IB-T032 2013-04	Qualitative real-time PCR system for the event-specific detection of Ly038 maize
IB-T034 2019-07	Qualitative real-time PCR system for the event-specific detection of event A2704-12 soybean (LibertyLink)
IB-T035 2013-04	Qualitative real-time PCR system for the construct-specific detection of the transition from the nos promoter to the nptII gene
IB-T047 2011-03	Qualitative real-time PCR system for the event-specific detection of LibertyLink T25 maize
IB-T049 2019-07	Qualitative real-time PCR system for the specific detection of the nptII gene sequence
IB-T051 2019-07	Qualitative real-time PCR system for the event-specific detection of event A5547-127 soybean
IB-T053 2012-02	Qualitative real-time PCR system for the event-specific detection of DP98140 maize
IB-T054 2012-02	Qualitative real-time PCR system for the event-specific detection of MIR162 maize
IB-T056 2012-03	Qualitative real-time PCR system for the event-specific detection of RT73/GT73 rapeseed (Roundup Ready [®] canola)
IB-T057 2012-07	Qualitative real-time PCR system for the construct-specific detection of the transition from SAMS (S-adenosyl-L-methionine synthetase) promoter to the gmHRA gene in DP305423-1 soybean and DP356043-5 soybean
IB-T064 2019-07	Qualitative real-time PCR system for the event-specific detection of BPS-CV127 soybean
IB-T067 2023-02	Qualitative real-time PCR system for the detection of the cry1Ab/cry1Ac DNA sequence
IB-T070 2018-02	Qualitative real-time PCR system for the event-specific detection of MON87701 soybean
IB-T077 2013-05	Qualitative real-time PCR system for the event-specific detection of DAS-40278-9 maize
IB-T078 2019-07	Qualitative real-time PCR system for the event-specific detection of MON87705 soybean

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IB-T079 2017-11	Qualitative real-time PCR system for the event-specific detection of MON87460 maize
IB-T084 2019-08	Qualitative real-time PCR system for the event-specific detection of FG72 soybean
IB-T087 2020-04	Qualitative real-time PCR system for the event-specific detection of T45 rapeseed
IB-T100 2015-07	Qualitative real-time PCR system for the detection of ORF138 as a marker for CMS (cytoplasmic male sterility) in <i>Brassicaceae</i>
IB-T103 2018-02	Qualitative real-time PCR system for the event-specific detection of MON15985 cotton
IB-T104 2014-05	Qualitative real-time PCR system for the event-specific detection of BT63 rice (event TT51)
B-T130 2020-05	Qualitative real-time PCR system for the event-specific detection of MON863 maize (MaxGard)
IB-T141 2017-06	Qualitative real-time PCR system for the event-specific detection of MON87712 soybean
IB-T144 2017-11	Qualitative real-time PCR system for the event-specific detection of MON87427 maize
IB-T166 2020-10	Qualitative real-time PCR system for the event-specific detection of H7-1 sugar beet
IB-T170 2023-02	Qualitative real-time PCR system for the specific detection of the FMV promoter sequence from figwort mosaic virus (FMV)
IB-T175 2021-06	Qualitative real-time PCR system for the specific detection of the dicamba monooxygenase gene(<i>dmo</i>)
IB-T176 2021-07	Qualitative real-time PCR system for the specific detection of the <i>Arabidopsis thaliana</i> SSU promoter (pSSuAra)

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1.2.2 Qualitative detection of genetically modified organisms by multiplex real-time PCR in foodstuffs and feedstuffs, seeds and textile fibres **

IB-T019 2009-03	Qualitative real-time duplex PCR system for the detection of the 35S promoter from cauliflower mosaic virus (CaMV) and the nos terminator from <i>Agrobacterium tumefaciens</i>
IB-T022 2023-02	Qualitative real-time duplex PCR system for the detection of the 35S promoter from cauliflower mosaic virus (CaMV) and the nos terminator from <i>Agrobacterium tumefaciens</i>
IB-T058 2023-02	Qualitative real-time duplex PCR system for the detection of the synPAT gene and the transition from CTP2 to the CP4-EPS gene
IB-T059 2023-02	Qualitative real-time duplex PCR system for the specific detection of the bar gene sequence and the transition from SAMS promoter to the gmHRA gene
IB-T102 2021-06	Qualitative real-time triplex PCR system for the detection of 35S promoter, nos terminator and FMV promoter sequence in sugar beet
IB-T107 2019-07	Qualitative real-time triplex PCR system for the event-specific detection of DAS-40278-9, Ly038 and VCO-01981-5 maize
IB-T125 2016-02	Qualitative real-time duplex PCR system for the event-specific detection of DAS44406 and DAS68416 soybean
IB-T126 2020-05	Qualitative real-time duplex PCR system for the event-specific detection of MON87708 and MON87769 soybean
IB-T135 2023-02	Qualitative real-time duplex PCR system for the detection of 35S terminator from cauliflower mosaic virus (CaMV) and E9 terminator from pea (<i>Pisum sativum</i>)
IB-T137 2017-06	Qualitative real-time duplex PCR system for the event-specific detection of GHB119 and GHB614 cotton
IB-T138 2016-11	Qualitative real-time duplex PCR system for the detection of 35S terminator from cauliflower mosaic virus (CaMV) and synthetic PAT gene (synPAT) in maize
IB-T139 2017-07	Qualitative real-time duplex PCR system for the event-specific detection of DAS81419 and SYHT0H2 soybean
IB-T140 2017-11	Qualitative real-time duplex PCR system for the event-specific detection of MON87751 and MON87754 soybean

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IB-T145 2017-07	Qualitative real-time triplex PCR system for the event-specific detection of DAS40278, Ly038 and DP32138 maize
IB-T146 2021-03	Qualitative real-time duplex PCR system for the event-specific detection of MON88701 and MON88913 cotton
IB-T147 2020-05	Qualitative real-time duplex PCR system for the event-specific detection of LL25 and T304-40 cotton
IB-T148 2020-10	Qualitative real-time duplex PCR system for the event-specific detection of MON87411 and MON87419 maize
IB-T155 2019-04	Qualitative real-time tetraplex PCR system for the event-specific detection of Ms8, Rf3, T45 and RT73 rapeseed
IB-T158 2019-04	Qualitative real-time tetraplex PCR system for the event-specific detection of MON810, MON89034, Herculex TC1507 and NK603 maize
IB-T169 2023-02	Qualitative real-time duplex PCR system for the detection of the synPAT gene and the transition from the optimised transit peptide sequence to the point-mutated epsps gene in cotton
IB-T171 2021-03	Qualitative real-time duplex PCR system for the event-specific detection of MZHGOJG and MZIR098 maize
IB-T172 2021-03	Qualitative real-time duplex PCR system for the event-specific detection of COT102 and DAS81910 cotton
IB-T182 2022-05	Qualitative real-time triplex PCR system for the detection of the nos promoter sequence (AgroBorder I), the flanking sequence of GMO constructs (AgroBorder II) and the CsVMV promoter PAT construct

1.3 Qualitative species detection by sequencing in foodstuffs, feedstuffs and seeds **

ASU L 10.00-12 2012-07	Analysis of foodstuffs – Identification of fish species in raw fish and fish products by analysis of cytochrome b sequences (Modification: <i>All animal species except birds</i>)
ASU L 12.01-03 2012-07	Analysis of foodstuffs – Identification of the crustacean species in raw crustaceans and crustacean products by analysis of the 16S rRNA sequence

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IB-D001 2021-09	Identification of animal species by sequence analysis of a specific fragment of the mitochondrial cytochrome b gene
IB-D004 2021-09	identification of animal species (except birds) by DNA sequence analysis of the specific fragment the mitochondrial tRNA ^{Glu} cytochrome b gene
IB-D036 2019-08	Identification of squids (Coleoidea) by sequence analysis of a specific fragment of the mitochondrial cytochrome b gene
IB-D037 2021-09	Identification of shrimps by sequence analysis of a specific fragment of the mitochondrial cytochrome c oxidase sequence
IB-D038 2021-09	Identification of fishes, squids and mussels by sequence analysis of a specific fragment of the 16S rDNA sequence
IB-D039 2021-09	Identification of fishes by sequence analysis of a specific fragment of the mitochondrial cytochrome c oxidase sequence
IB-D040 2021-05	Identification of eubacteria in foodstuffs, feedstuffs and seeds by sequence analysis of a specific fragment of the 16S rDNA sequence
IB-D041 2023-05	Identification of yeasts and fungi by sequence analysis of a specific fragment of the ITS4 and ITS5 gene sequences
IB-D042 2023-05	Identification of eubacteria (800 bp) by sequence analysis of a specific fragment of the 16S rDNA sequence

1.4 Qualitative species detection by PCR in foodstuffs, feedstuffs, seeds and textile fibres **

IB-A012 2006-03	Qualitative PCR system for the species-specific detection of flax (<i>Linum usitatissimum</i>)
IB-A013 2006-02	Qualitative PCR system for the species-specific detection of hemp (<i>Cannabis sativa</i>)
IB-A015 2006-02	Qualitative PCR system for the species-specific detection of nettle (<i>Urtica dioica</i>)
IB-D016 2004-11	Qualitative PCR screening system for the detection of poultry DNA
IB-D026 2012-02	Qualitative PCR system for the specific detection of rodents

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IB-D027
2020-05 Qualitative PCR system for the species-specific detection of rabbits
(*Lepus* sp.)

**1.5 Qualitative detection of species and sex by real-time PCR in foodstuffs, feedstuffs, seeds
and textile fibres ****

IB-T004
2014-05 Qualitative real-time PCR system for the species-specific detection of
rice (*Oryza sativa*)

IB-T016
2019-07 Qualitative real-time PCR system for the species-specific detection of
chicken (*Gallus gallus*)

IB-T017
2019-08 Qualitative real-time PCR system for the species-specific detection of
pig (*Sus scrofa*)

IB-T018
2020-05 Qualitative real-time PCR system for the detection of mammal DNA
(Mammalia)

IB-T020
2019-07 Qualitative real-time PCR system for the species-specific detection of
cattle (*Bos taurus*)

IB-T023
2016-04 Qualitative real-time PCR system for the species-specific detection of
rapeseed (*Brassica napus*)

IB-T024
2010-04 Qualitative real-time PCR system for the species-specific detection of
sunflower (*Helianthus annuus*)

IB-T028
2020-10 Qualitative real-time PCR system for the species-specific detection of
pistachio (*Pistacia vera*)

IB-T033
2011-07 Qualitative real-time PCR system for the sex determination (XY) of
mammals (especially pig) in meat samples

IB-T037
2020-10 Qualitative real-time PCR system for the species-specific detection of
pea (*Pisum sativum*)

IB-T038
2013-09 Qualitative real-time PCR system for the species-specific detection of
sesame (*Sesamum indicum*)

IB-T040
2016-05 Qualitative real-time PCR system for the species-specific detection of
cashew (*Anacardium occidentale*)

IB-T042
2013-04 Qualitative real-time PCR system for the species-specific detection of
peanut (*Arachis hypogaea*)

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IB-T043 2019-08	Qualitative real-time PCR system for the species-specific detection of lupine (<i>Lupinus</i> sp.)
IB-T044 2013-07	Qualitative real-time PCR system for the species-specific detection of pecan (<i>Carya illinoensis</i>)
IB-T045 2013-04	Qualitative real-time PCR system for the specific detection of macadamia nut (<i>Macadamia</i> sp.)
IB-T052 2017-12	Qualitative real-time PCR system for the general detection of plant material
IB-T055 2023-02	Qualitative real-time PCR system for the detection of a natural infection with cauliflower mosaic virus (CaMV)
IB-T060 2013-11	Qualitative real-time duplex PCR system for the species-specific detection of the plant species rapeseed (<i>Brassica napus</i>) and soybean (<i>Glycine max</i>)
IB-T061 2012-09	Qualitative real-time PCR system for the species-specific detection of goat (<i>Capra hircus</i>)
IB-T062 2014-05	Qualitative real-time PCR system for the species-specific detection of sheep (<i>Ovis aries</i>)
IB-T063 2019-07	Qualitative real-time PCR system for the general detection of fish DNA (Pisces)
IB-T066 2019-07	Qualitative real-time PCR system for the general detection of ruminant DNA (Ruminantia)
IB-T069 2013-04	Qualitative real-time PCR system for the species-specific detection of soybean (<i>Glycine max</i>)
IB-T071 2023-03	Qualitative real-time PCR system for the species-specific detection of ragweed (<i>Ambrosia artemisiifolia</i>)
IB-T072 2019-07	Qualitative real-time PCR system for the species-specific detection of almond (<i>Prunus dulcis</i>)
IB-T074 2013-03	Qualitative real-time PCR system for the species-specific detection of horse (<i>Equus caballus</i>)
IB-T075 2019-07	Qualitative real-time PCR system for the species-specific detection of potato (<i>Solanum tuberosum</i>)

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IB-T076 2013-03	Qualitative real-time PCR system for the species-specific detection of turkey (<i>Meleagris gallopavo</i>)
IB-T080 2019-07	Qualitative real-time PCR system for the detection of black and brown mustard (<i>Brassica nigra</i> and <i>Brassica juncea</i>)
IB-T081 2020-04	Qualitative real-time PCR system for the detection of <i>Katsuwonus pelamis</i> and <i>Thunnus species</i>
IB-T082 2020-05	Qualitative real-time PCR system for the detection of <i>Thunnus species</i>
IB-T083 2019-07	Qualitative real-time PCR system for the detection of white mustard (<i>Sinapis alba</i>)
IB-T085 2019-08	Qualitative real-time PCR system for the species-specific detection of goat (<i>Capra hircus</i>)
IB-T086 2020-04	Qualitative real-time PCR system for the species-specific detection of celery (<i>Apium graveolens</i>)
IB-T088 2014-04	Qualitative real-time PCR system for the species-specific detection of blue whiting (<i>Micromesistius poutassou</i>)
IB-T090 2020-04	Qualitative real-time PCR system for the species-specific detection of herring (<i>Clupea harengus</i>)
IB-T095 2018-01	Qualitative real-time PCR system for the species-specific detection of Alaska pollock (<i>Theragra chalogramma</i>)
IB-T098 2016-05	Qualitative real-time PCR system for the general detection of mitochondrial crustacean DNA (Crustaceae)
IB-T106 2014-05	Qualitative real-time PCR system for the detection of ruminant constituents (TNO Triskelion system)
IB-T108 2014-06	Qualitative real-time PCR system for the species-specific detection of <i>Ambrosia artemisiifolia</i>
IB-T109 2019-08	Qualitative real time PCR system for the species-specific detection of Atlantic salmon (<i>Salmo salar</i>)
IB-T110 2019-08	Qualitative real-time PCR system for the species-specific detection of rainbow trout (<i>Oncorhynchus mykiss</i>)

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IB-T111 2015-01	Qualitative real-time PCR system for the species-specific detection of coconut (<i>Cocos nucifera</i>)
IB-T112 2017-02	Qualitative real-time PCR system for the species-specific detection of goose (<i>Anser anser</i>)
IB-T113 2017-02	Qualitative real-time PCR system for the specific detection of duck (Anatinae)
IB-T117 2016-07	Qualitative real-time PCR system for the species-specific detection of roe deer (<i>Capreolus capreolus</i>)
IB-T118 2020-04	Qualitative real-time PCR system for the specific detection of red and sika deer (<i>Cervus elaphus/Cervus nippon</i>)
IB-T119 2020-05	Qualitative real-time PCR system for the species-specific detection of fallow deer (<i>Dama dama</i>)
IB-T120 2020-04	Qualitative real-time PCR system for the species-specific detection of Pacific oyster (<i>Crassostrea gigas</i>)
IB-T122 2020-04	Qualitative real-time PCR system for the specific detection of octopus (Coleoidae)
IB-T124 2020-05	Qualitative real-time PCR system for the species-specific detection of humpback salmon (<i>Oncorhynchus gorbuscha</i>)
IB-T127 2020-05	Qualitative real-time duplex PCR system for the species-specific detection of hazelnut (<i>Corylus avellana</i>) and walnut (<i>Juglans regia</i>)
IB-T129 2016-07	Qualitative real-time PCR system for the specific detection of mitochondrial mammal DNA (Mammalia)
IB-T131 2019-09	Qualitative real-time PCR system for the specific detection of nuclear poultry DNA
IB-T132 2020-05	Qualitative real-time PCR system for the species detection of the camel family (Camelidae)
IB-T150 2017-12	Qualitative real-time PCR system for the detection of Y-chromosomal (male) DNA of cattle (<i>Bos taurus</i>)
IB-T157 2020-10	Qualitative real-time PCR system for the specific detection of duck (Anatinae)

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IB-T161 2020-04	Qualitative real-time PCR system for the general detection of chordates (except marsupials and fish)
IB-T163 2021-01	Qualitative real-time PCR system for the specific detection of cotton (<i>Gossypium</i> sp.)
IB-T164 2020-04	Qualitative real-time PCR system for the specific detection of Brazil nut (<i>Bertholletia excelsa</i>)
IB-T165 2020-10	Qualitative real-time PCR system for the specific detection of beet (<i>Beta vulgaris</i> subsp. <i>vulgaris</i>)

1.6 Qualitative detection of bacteria by real-time PCR in foodstuffs and feedstuffs and of environmental samples in food and feed areas **

ASU L 00.00-52 2014-02	Analysis of foodstuffs – Method for the detection of Salmonella in foodstuffs – Polymerase chain reaction (adoption of standard of the same name DIN 10135, May 2013 edition) (Modification: <i>Thermal cell disruption shortened to 10 min 95 °C</i>)
ASU L 06.32-1 2013-08	Analysis of foodstuffs – Detection of <i>Campylobacter</i> spp. in minced meat; real-time PCR method
S-062 2014-08	Qualitative real-time PCR method for the detection of the emetic toxin of <i>Bacillus cereus</i> in foodstuffs and feedstuffs
S-064 2022-03	Qualitative real-time PCR method for the detection of <i>Enterobacter sakazakii</i> in foodstuffs and feedstuffs
S-066 2023-07	Qualitative real-time PCR method for the detection of <i>Listeria monocytogenes</i> in foodstuffs, feedstuffs and environmental samples
S-087 2022-02	Qualitative real-time PCR method for the detection of <i>Clostridium perfringens</i> in foodstuffs and feedstuffs
S-101 2020-09	Qualitative real-time PCR method for the detection of <i>Staphylococcus aureus</i> in foodstuffs and feedstuffs

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1.7 Qualitative detection of bacteria by multiplex real-time PCR in foodstuffs, feedstuffs and environmental samples in food and feed areas **

DIN CEN ISO/TS 17919 2014-03	Polymerase chain reaction (PCR) for the detection of food-borne pathogens – Detection of botulinum type A, B, E and F neurotoxin-producing clostridia
BIO-RAD IQ-Check Salmonella II 3578123 2020-10	Qualitative real-time PCR method for the detection of Salmonella spp. in foodstuffs and environmental samples
S-063 2018-02	Qualitative real-time duplex PCR method for the detection of <i>Clostridium botulinum</i> C and D

1.8 Determination of genetically modified organisms by real-time PCR in foodstuffs, feedstuffs and seeds **

IB-Q004 / IB-Q015 2021-05	Quantitative, event-specific detection of Roundup Ready™ soybean
IB-Q011 / IB-Q009 2007-01	Quantitative, event-specific detection of MON810 maize
S-097 2023-04	Quantitative detection of genetically modified living cells of <i>Komagataella pastoris</i> in precursors of foodstuffs and feedstuffs

1.9 Determination of genetically modified organisms and cytoplasmic male sterility (CMS) by digital droplet PCR (ddPCR) in foodstuffs, feedstuffs, seeds and textile fibres **

S-016, IB-T014 / IB T-163 2022-09	Quantitative, event-specific detection of Bollgard® cotton MON531 against the species cotton (<i>Gossypium</i> sp.)
S-016, IB-T103 / IB T-163 2022-09	Quantitative, event-specific detection of MON15985 cotton against the species cotton (<i>Gossypium</i> sp.)
S-016, IB-Q011 / IB-Q009 2022-09	Quantitative, event-specific detection of MON810 maize against the species maize
S-016, IB-T029 / IB-Q009 2022-09	Quantitative, event-specific detection of MON89034 maize against the species maize
S-016, IB-T056 / IB-T023 2022-09	Quantitative, event-specific detection of RT73/GT73 rapeseed (Roundup Ready® canola) against the species rapeseed

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S-016, IB-T087 / IB-T023 2022-09	Quantitative, event-specific detection of T45 rapeseed against the species rapeseed
S-016, IB-Q004 / IB-Q015 2022-09	Quantitative, event-specific detection of RoundupReady™ soybean against the species soybean
S-016, IB-T031 / IB-Q015 2022-09	Quantitative, event-specific detection of MON89788 soybean against the species soybean
S-016, IB-T034 / IB-Q015 2022-09	Quantitative, event-specific detection of A2704-12 soybean (LibertyLink) against the species soybean
IB-T100 / IB-T101 2015-07	Quantitative detection of CMS (cytoplasmic male sterility) and non-CMS in cabbage varieties and their products
IB-T105 2013-09	Quantitative detection of the restorer and non-restorer locus in rapeseed by ddPCR
IB-T116 2013-08	Quantitative detection of CMS (cytoplasmic male sterility) and non-CMS in rapeseed by ddPCR
S-098 2023-04	Quantitative detection of genetically modified cells of <i>Komagataella pastoris</i> in precursors of foodstuffs and feedstuffs
S-099 2023-04	Quantification of free genetically modified cell DNA from microbiologically produced precursors of foodstuffs and feedstuffs by ddPCR

1.10 Determination of plant species of genetically modified organisms in foodstuffs, feedstuffs, seeds and textile fibres by multiplex digital droplet-PCR (ddPCR) **

IB-dQ001 2021-03	Quantitative, event-specific multiplex detection of GTS 40-3-2 (RRRS I), MON89788 (RRS II) and A2704-12 soybean (LibertyLink), as well as for the detection of the plant species soybean (<i>Glycine max</i>) by ddPCR
IB-dQ002 2019-06	Quantitative, event-specific multiplex detection of Ms8, Rf3, T45 and RT73 rapeseed, as well as for the detection of the plant species rapeseed (CruA) by ddPCR
IB-dQ003 2019-09	Duplex system for the identification and quantification of fertile in sterile <i>sorghum</i> seeds by ddPCR
IB-dQ004 2019-10	Quantitative, event-specific duplex detection of MON531 (Bollgard) cotton and MON15985 cotton by ddPCR

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IB-dQ005
2020-07 Duplex system for the identification and quantification of the restorer and non-restorer locus in rapeseed by ddPCR

1.11 Determination of animal and plant species by digital droplet PCR (ddPCR) in foodstuffs, feedstuffs and textile fibres **

S-016, IB-T062 / IB-T161
2022-09 Quantitative determination of the sheep (*Ovis aries*) proportion of total chordate DNA

S-016, IB-T085 / IB-T161
2022-09 Quantitative determination of the goat (*Capra hircus*) proportion of total chordate DNA

S-016, IB-T082 / IB-T081
2022-09 Quantitative determination of the *Katsuwonus pelamis* DNA proportion of total tuna DNA by ddPCR

IB-T133
2016-11 Qualitative system for the specific detection of ruminants (Ruminantia) by ddPCR

IB-T152
2018-02 Quantitative determination of the proportion/ratio of knotted wrack (*Ascophyllum nodosum*) to bladder wrack (*Fucus* spp.) by ddPCR

IB-T162
2020-04 Qualitative system for the specific detection of duck (*Anatinae*) by ddPCR

IB-dQ006
2022-03 Qualitative system for spelt-wheat differentiation and quantification of common wheat by ddPCR

1.12 Quantitative determination of cotton in textile fibres by PCR fragment length (AFLP) analysis

S-042, IB-B008 / IB-B009
2016-02 Quantitative determination of the proportion/ratio of *Gossypium hirsutum* and *Gossypium barbadense* by AFLP analysis

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2 Determination of allergens and risk material (CNS) by enzyme immunoassay (ELISA) in foodstuffs and feedstuffs *

r-biopharm Ridascreen® FAST Gliadin Item no. R7002 2018-02	Enzyme immunoassay for quantitative determination of gliadins and related prolamins
r-biopharm Ridascreen® FAST Milk Item no. R4652 2021-11	Enzyme immunoassay for quantitative determination of milk protein
r-biopharm Ridascreen® FAST Egg Protein Item no. R6402 2022-05	Enzyme immunoassay for quantitative determination of whole egg (powder)
r-biopharm Ridascreen® Risk Material 10/5 Item no. R6703 2010-07	Enzyme immunoassay for quantitative determination of risk material (CNS) in/on raw meat and on contaminated surfaces (Restriction: <i>Here not for surfaces matrix</i>)
r-biopharm Ridascreen® FAST Soya Item no. R7102 2016-07	Enzyme immunoassay for quantitative determination of soy proteins

3 Microbiological analysis of foodstuffs, feedstuffs and environmental samples in food and feed areas

3.1 Detection and determination of bacteria, yeasts and moulds by cultural microbiological analysis of foodstuffs and feedstuffs and of environmental samples in food and feed areas **

ISO 15214 1998-08	Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of mesophilic lactic acid bacteria -- Colony-count technique at 30 degrees C
DIN EN ISO 10272-1 2017-09	Microbiology of the food chain – Horizontal method for the detection and enumeration of <i>Campylobacter</i> spp. – Part 1: Detection method

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DIN EN ISO 10272-2 2017-09	Microbiology of the food chain – Horizontal method for the detection and enumeration of <i>Campylobacter</i> spp. – Part 2: Colony-count technique
DIN EN ISO 11290-1 2017-09	Microbiology of the food chain – Horizontal method for the detection and enumeration of <i>Listeria monocytogenes</i> and of <i>Listeria</i> ssp.– Part 1: Detection method
DIN EN ISO 11290-2 2017-09	Microbiology of the food chain – Horizontal method for the detection and enumeration of <i>Listeria monocytogenes</i> and of <i>Listeria</i> ssp.– Part 2: Enumeration method (Modification: <i>Also use of Brilliance Listeria plates</i>)
DIN EN ISO 16649-3 2018-01	Microbiology of the food chain – Horizontal method for the enumeration of beta-glucuronidase-positive <i>Escherichia coli</i> – Part 3: Detection and most probable number technique using 5-bromo-4-chloro-3-indolyl- β -D-glucuronide
DIN EN ISO 21528-2 2017-09	Microbiology of the food chain – Horizontal method for the detection and enumeration of <i>Enterobacteriaceae</i> – Part 2: Colony-count technique (Modification: <i>Spatula method</i>)
DIN EN ISO 22964 2017-08	Microbiology of the food chain – Horizontal method for the detection of <i>Cronobacter</i> spp.
ASU F 0051 2010-09	Analysis of feedstuffs – Bacterial count of <i>Enterococcus</i> spp. (<i>E. faecium</i>) in feedstuffs (adoption of standard of the same name DIN EN 15788 2009-12)
ASU L 00.00-20 2018-03	Analysis of foodstuffs – Horizontal method for the detection, enumeration and serotyping of salmonella Part 1: Detection of <i>Salmonella</i> spp. (adoption of standard of the same name DIN EN ISO 6579-1 2017-07) (Modification: <i>No serotyping</i>)
ASU L 00.00-33 2006-09	Analysis of foodstuffs – Horizontal method for the enumeration of presumptive <i>Bacillus cereus</i> – Colony-count technique at 30 °C (adoption of standard of the same name DIN EN ISO 7932, 2004-03)
ASU L 00.00-55 2004-12	Analysis of foodstuffs – Method for the enumeration of coagulase-positive staphylococci (<i>Staphylococcus aureus</i> and other species) in foodstuffs – Part 1: Technique using Baird-Parker agar medium (adoption of standard of the same name DIN EN ISO6888-1 2003-12) (Modification: <i>Coagulase test using DrySpotStaphyTECT Plus</i>)

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ASU L 00.00-133/1 2018-03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of <i>Enterobacteriaceae</i> in foodstuffs – Part 1: Detection of <i>Enterobacteriaceae</i> (adoption of standard of the same name DIN EN ISO 21528-1 2017-09) (Modification: <i>Two-stage sample enrichment</i>)
ASU L 00.00-133/2 2018-03	Analysis of foodstuffs – Horizontal method for the detection and enumeration of <i>Enterobacteriaceae</i> in foodstuffs – Part 2: Colony-count technique (adoption of standard of the same name EN ISO 21528-2 2017-09)
ASU L 01.00-37 1991-12	Analysis of foodstuffs – Determination of the number of yeasts and moulds in milk and milk products; reference method (Modification: <i>Spatula method; all foodstuff and feedstuff matrices</i>)
ASU L 06.00-39 1994-05	Analysis of foodstuffs – Determination of mesophilic sulphite-reducing clostridia in meat and meat products - Pour plate method (reference method) (adoption of German standard of the same name DIN 10103 1993-08) (Modification: <i>Spatula method; all foodstuff and feedstuff matrices</i>)
S-050 2022-09	Horizontal method for the determination of total aerobic microbial count in foodstuffs and feedstuffs – Colony-count technique at 30 °C
S-051 2022-09	Colony-count technique for the determination of total anaerobic microbial count in foodstuffs and feedstuffs
S-052 2018-07	Colony-count technique for the determination of <i>Escherichia coli</i> and other coliforms in foodstuffs and feedstuffs
S-053 2014-05	Horizontal method for the determination of coliforms in foodstuffs and feedstuffs
S-057 2022-09	Colony-count technique for the determination of aerobic spore formers in foodstuffs and feedstuffs
S-058 2022-09	Colony-count technique for the determination of anaerobic spore formers in foodstuffs and feedstuffs
S-061 2014-08	Horizontal method for the enumeration of <i>Pseudomonas</i> spp. in foodstuffs and feedstuffs
S-082 2018-07	Cultural method for the detection of methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) in foodstuffs and feedstuffs (after pre-enrichment)

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S-083
2018-07 Cultural method for the detection of ESBL-producing germs in foodstuffs and feedstuffs (after pre-enrichment)

S-092
2018-07 Cultural method for the detection of *Clostridium perfringens* (after pre-enrichment) in foodstuffs and feedstuffs

3.2 Microbiological testing system for the detection of antibiotic residues in foodstuffs and feedstuffs

r-biopharm
Premi®Test
Item no. R3925
2020-07 Microbial screening test for the detection of antibiotic residues in shrimps, fish, eggs, meat (beef, pork, poultry), liver, kidney, urine and feedstuffs

4 Physical, physico-chemical and chemical analysis of foodstuffs and feedstuffs

4.1 Determination of ingredients, additives, mycotoxins and residues of pharmacologically active substances by liquid chromatography (LC) with mass selective detector (MS) in foodstuffs and feedstuffs **

S-079
2023-06 Multi-method for the identification and quantification of mycotoxins in foodstuffs and feedstuffs by LC/MS (clean-up using QuEChERS method)

S-091
2023-01 Method for the identification and quantification of ethoxyquin and ethoxyquin dimer in foodstuffs and feedstuffs by LC/MS

S-100
2022-09 Multi-method for the identification and quantification of BHA and BHT in foodstuffs and feedstuffs by LC/MS

S-102
2023-06 Method for the identification and quantification of residues of veterinary drugs – Chloramphenicol in foodstuffs and feedstuffs by LC/MS

S-109
2023-06 Identification and quantification of total choline in foodstuffs and feedstuffs by LC-MS

S-110
2022-10 Identification and quantification of histamine in foodstuffs by LC-MS

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4.2 Other physical, physico-chemical and chemical analysis of foodstuffs and feedstuffs

S-103 2022-01	Determination of the moisture content in foodstuffs and feedstuffs by moisture analyser
S-104 2022-02	Nitrogen and protein determination in foodstuffs and feedstuffs using the Dumas method

Abbreviations used:

ASU	Official Collection of Methods of Analysis on the basis of Section 64 Lebensmittel- und Futtermittelgesetzbuch (German Food and Feed Act, LFGB)
ddPCR	Digital droplet-PCR
DIN	Deutsches Institut für Normung (German Institute for Standardization)
DNA	Deoxyribonucleic acid
ELISA	Enzyme linked immunosorbent assay
EN	European standard
IB-XXXX	In-house method of Impetus GmbH & Co. Bioscience KG
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
IWA	INTERNATIONAL WORKSHOP AGREEMENT
LC/MS	Liquid chromatography with mass_spectrometry coupling
PCR	Polymerase chain reaction
S-XXX	In-house method of Impetus GmbH & Co. Bioscience KG