

**The Appendix is an integral part of
Certificate of Accreditation No. 187/2025 of 16/04/2025**

Accredited entity according to ČSN EN ISO/IEC 17025:2018:

Výzkumný ústav veterinárního lékařství, v.v.i.

CAB number 1354, Laboratories Centre
Hudcova 296/70, 621 00 Brno - Medlánky

Testing laboratory locations:

- 1. Laboratory – Animal Health and Food Safety** Hudcova 296/70, 621 00 Brno - Medlánky
- 2. Laboratory – Fish Viral Diseases** Hudcova 296/70, 621 00 Brno - Medlánky
- 3. Laboratory – Spermatology and Andrology** Hudcova 296/70, 621 00 Brno - Medlánky
- 4. Laboratory – Bovine Diseases** Hudcova 296/70, 621 00 Brno - Medlánky
- 5. Laboratory – Electron Microscopy** Hudcova 296/70, 621 00 Brno - Medlánky

The laboratory provides opinions and interpretations of the test results.

Detailed information on activities within the scope of accreditation (determined analytes / tested subject / source literature) is given in the section „Specification of the scope of accreditation“.

1. Laboratory – Animal Health and Food Safety

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1	Detection of human noroviruses, adenoviruses, hepatitis A virus, hepatitis E virus by real time RT-PCR method	SOP 108/ A	Biological material, food of animal or plant origin, environmental swabs, drinking, surface, waste and process water	-

¹ asterisk at the ordinal number identifies the tests, which the laboratory is qualified to carry out outside the permanent laboratory premises

² if the document identifying the test procedure is dated, only these specific procedures are used. If the document identifying the test procedure is not dated, the latest valid edition of the specified procedure is used (including any changes)

³ the laboratory does not apply a flexible approach to the scope of accreditation

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (source literature)
1	ISO/TS15216-2: 2013 (E). Microbiology of food and animal feed – Horizontal method for determination of hepatitis A virus and norovirus in food using real time RT-PCR – Part 2, Method for qualitative detection; da Silva AK, Le Saux JC, Parnaudeau S, Pommepuy M, Elimelech M, Le Guyader FS. 2007. Evaluation of removal of noroviruses during wastewater treatment, using real-time reverse transcription-PCR: different behaviors of genogroups I and II. Appl Environ Microbiol. 73(24):7891-7; Svraka S, Duizer E, Vennema H, de Bruin E, van der Veer B, Dorresteyn B, Koopmans M. 2007. Etiological role of viruses in outbreaks of acute gastroenteritis in The Netherlands from 1994 through 2005. J Clin Microbiol. 45(5):1389-94;

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Ordinal test number	Detailed information on activities within the scope of accreditation (source literature)
	Kageyama T, Kojima S, Shinohara M, Uchida K, Fukushi S, Hoshino FB, Takeda N, Katayama K. 2003. Broadly reactive and highly sensitive assay for Norwalk-like viruses based on real-time quantitative reverse transcription-PCR. J Clin Microbiol. 41(4):1548-57; Loisy F, Atmar RL, Guillon P, Le Cann P, Pommepuy M, Le Guyader FS. 2005. Real-time RT-PCR for norovirus screening in shellfish. J Virol Methods. 123(1):1-7; Costafreda MI, Bosch A, Pintó RM (2006). Development, evaluation, and standardization of a real-time TaqMan reverse transcription-PCR assay for quantification of hepatitis A virus in clinical and shellfish samples. Appl Environ Microbiol. 72 (6): 3846-55; Vasickova P, Kralik P, Slana I, Pavlik I (2012). Optimisation of a triplex real time RT-PCR for detection of hepatitis E virus RNA and validation on biological samples. J Virol Methods. 180: 38-42; Jothikumar N, Cromeans TL, Robertson BH, Meng XJ, Hill VR (2006). A broadly reactive one-step real-time RT-PCR assay for rapid and sensitive detection of hepatitis E virus. J Virol Methods. 131, 65-71; Gyarmati P, Mohammed N, Norder H, Blomberg J, Belak S, Widen F (2007). Universal detection of hepatitis E virus by two real-time PCR assays: TaqMan and Primer-Probe energy transfer. J Virol Methods. 146, 226-235; Martínez-Martínez M, Díez-Valcarce M, Hernández M, Rodríguez-Lázaro D. (2011). Design and Application of Nucleic Acid Standards for Quantitative Detection of Enteric Viruses by Real-Time PCR. Food and Environ Virol. 3, 92-98; Wong S., Pabbaraju K., Pang X.L., Lee B.E., Fox J.D. (2008). Detection of a broad range of human adenoviruses in respiratory tract samples using a sensitive multiplex real-time PCR assay. J Med Virol. 80, 856-865; Mikel P., Bartejsová I., Králík P. (2015). Detekce a kvantifikace lidského Adenoviru sérotypu 40 a 41 pomocí metody qPCR. Uplatněná certifikovaná metodika 53/2015. ISBN 978-80-86895-58-1; Vašíčková P., Mikel P., Králík P. (2014). Použití externí kontroly (armored RNA) procesu analýzy vzorků na přítomnost neobalených RNA virů a jejich následnou kvantifikaci. Uplatněná certifikovaná metodika č. 52/2014. ISBN 978-80-86895-57-4;

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
1	Biological material, suspensions of cells, skin, faeces (excrements, droppings), body liquids, tissues, secretions of mucous membranes and glands

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2. Laboratory – Fish Viral Diseases

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1	Processing of fish tissues for virological examination and isolation of viruses pathogenic to fish on cell lines	SOP 201/ A	Biological material (cell suspensions, skin, body fluids, tissues, mucosal and glandular secretions)	-
2	Detection of selected sections of DNA and RNA sequences in fish viruses ³ by PCR method	SOP 202/ A	Biological material (cell suspensions, skin, body fluids, tissues, mucosal and glandular secretions)	-
3	Detection of selected sections of DNA and RNA sequences of fish viruses ⁴ by real time PCR method	SOP 203/ A	Biological material (cell suspensions, skin, body fluids, tissues, mucosal and glandular secretions)	-

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³ the laboratory does not apply a flexible approach to the scope of accreditation

Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (determined analytes)
2	koi herpes virus (KHV), iridoviruses (Ranavirus spp.), infectious pancreatic necrosis virus (IPNV), spring viremia of carp virus (SVCV), infectious hematopoietic necrosis virus (IHNV), viral hemorrhagic septicemia virus (VHSV), carp edema virus (CEV), viruses of the genus Vesiculovirus
3	koi herpesvirus (KHV), infectious pancreatic necrosis virus (IPNV), viral hemorrhagic septicemia virus (VHSV), carp edema virus (CEV)

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Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (source literature)
1	Commission Decision 92/532/EEC; Commission Decision 96/240/EC; Commission Decision 2001/183/EC
2	Koutná M. et al. (2003): Dis.Aquat.Org., 55, 229 – 235; Stone D. M. et al. (2003): Dis. Aquat. Org., 53, 203 - 210. Taksdal T. et al. (2001): Bull. Eur. Assoc. Fish. Pathol., 5, 214 - 215. Vícenová M., Pokorová D., Reschová S., Veselý T. Stanovení viru virové hemoragické septikémie pomocí PCR- metodický návrh v RIV, 2008 Vícenová M., Pokorová D., Reschová S., Veselý T. Stanovení viru infekční hematopoetické nekrózy pomocí PCR- metodický návrh v RIV, 2008 Bercovier H. et al. (2005): BMC Microbiol., 5, 1 – 9; Hyatt A.D. et al. (2000): Arch. Virol. 145, 301 – 331; Way, K. et al. (2017) Dis. Aquat. Org. 126: 155–166;
3	Jonstrup S. P. et al (2013): J. Fish. Dis., 36: 9–23. Purcell M. K. et al (2013) Dis. Aquat. Org., 106:103-115; Gilad O. et al. (2004) Dis. Aquat. Org. 60: 179–187; Way, K et al. (2017) Dis. Aquat. Org. 126: 155–166;

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3. Laboratory – Spermatology and Andrology

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1	Laboratory examination of sperm – macroscopic and microscopic	SOP 301/ A	Animal sperm	-

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Specification of the scope of accreditation:

Ordinal test number	Detailed information on activities within the scope of accreditation (source literature)
1	Věžník Z. a kol., Hodnocení semene pro asistovanou reprodukci a výběr plemeníků. Striktní analýza spermatické morfologie SASMO. VÚVeL Brno, 2000, 142s.; Věžník Z. a kol., Repetitorium spermatologie a andrologie a metodiky spermatoanalýzy. VÚVeL Brno, 2004, 197 s.; Manual for semen analysis using the CASA system CEROS II. HT CASA II Software Guide – Boar, Animal and Equine Breeder, system CEROS II, manufacturer Hamilthon Thorne, Beverly, MA.; Přinosilová P., Kubát J., Kopecká V., Šípek J., Kunetková M. 2014. Program pro detailní hodnocení morfologického obrazu spermií DeSMA (Detailed Sperm Morphology Analysis); World Health Organization 2021. WHO laboratory manual for the examination of human semen. 6th Ed. WHO Press, Geneva, Switzerland. 276 p. ISBN 978-92-4- 003079-4.

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4. Laboratory – Bovine Diseases

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1	Bovine Viral Diarrhea (BVD) – detection of virus and antibodies by ELISA method	SOP 401/ A	Biological material (cell suspensions, skin, faeces (excrements, droppings), body fluids, tissues, mucosal and glandular secretions)	-
2	Infectious Bovine Rhinotracheitis (IBR) – detection of virus and antibodies by ELISA method	SOP 402/ A	Biological material (cell suspensions, skin, faeces (excrements, droppings), body fluids, tissues, mucosal and glandular secretions)	-
3	Paratuberculosis – detection of antibodies by ELISA method	SOP 403/ A	Biological material (cattle, small ruminants)	-
4	Detection of the causal agent of paratuberculosis (PTB) by qPCR	SOP 404/ A	Faeces (excrements, droppings)	-

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Ordinal test number	Detailed information on activities within the scope of accreditation (source literature)
1	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals OIE 2018, chapter 3.4.7. (NB: Version adopted in May 2015)
2	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals OIE 2018, chapter 3.4.11. (NB: Version adopted in May 2017)
3	Manual of Diagnostic Tests and Vaccines for Terrestrial Animals OIE 2018, chapter 3.1.15. (NB: Version adopted in May 2014)
4	Fichtelova, V., Kralova, A., Fleischer, P., Babak, V., Kovarcik, K. (2021): Detection of Mycobacterium avium subspecies paratuberculosis in environmental samples from Czech dairy herds, 66, Vet Med-Czech, 1-7

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5. Laboratory – Electron Microscopy

Tests:

Ordinal number ¹	Test procedure / method name	Test procedure / method identification ²	Tested subject	Degrees of freedom ³
1	Electron microscopic diagnostics of viruses by negative staining method	SOP 501/ A	Biological material (cell suspensions, skin, faeces (excrements, droppings), body fluids, tissues, mucosal and glandular secretions)	-

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Ordinal test number	Detailed information on activities within the scope of accreditation (source literature)
1	Smid B. Valicek L. Kudrna J.: Rod-shaped virus-like particles in intestinal contents of pheasant chicks; Zentralbl Veterinärmed B. 1997 Sep, 44(7): 445-7, PMID:9323932 (PubMed – indexed for MEDLINE)

Explanatory notes:

DNA	Deoxyribonucleic Acid
PCR	Polymerase Chain Reaction
qPCR	Quantification Polymerase Chain Reaction
mRNA	Messenger Ribonucleic Acid
ELISA	Enzyme-Linked Immunoassay
STa	Thermostable Enterotoxin
LT	Thermolabile Enterotoxin
PFGE	Pulsed Field Gel Electrophoresis

"This document is an appendix to the certificate of accreditation. In case of any discrepancies between the English and Czech versions, the Czech version shall prevail, both for the certificate appendix and the certificate itself."