

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

*The Laboratory is qualified to update standards identifying the test procedures.*

**Tests:**

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
1	Enumeration of total microorganisms by culture method	ČSN EN ISO 4833	Food, feedstuffs
2	Enumeration of coliforms by culture method	ČSN ISO 4832	Food, feedstuffs
3	Enumeration of yeasts and moulds by culture method	ČSN ISO 21527	Food, feedstuffs
4	Detection and enumeration of potentially toxinogenic moulds by culture ( <i>Aspergillus flavus</i> , <i>Aspergillus parasiticus</i> )	AHEM 1/2003, SZÚ Guideline	Food, feedstuffs
5	Enumeration of coagulase-positive staphylococci ( <i>St. aureus</i> and other species) Technique using Baird-Parker agar medium	ČSN EN ISO 6888-1	Food, feedstuffs, raw milk
6	Detection of <i>Salmonella</i> by culture method	SOP M01 (ČS EN ISO 6579)	Food, feedstuffs
7	Detection of <i>Enterobacteriaceae</i> by culture method	ČSN ISO 21528-2	Food, feedstuffs
8	Enumeration of <i>Clostridium perfringens</i> by culture method	ČSN EN ISO 7937	Food, feedstuffs
9	Enumeration of lactic acid bacteria by culture method	ČSN ISO 13 721	Meat, meat products
10	Enumeration of beta-glucuronidase-positive <i>Escherichia coli</i> by culture method	ČSN ISO 16649-2	Food, feedstuffs

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
11	Detection of residues of beta-lactam antibiotics by plate diffusion method using <i>Bacillus stearothermophilus varieta calidolactis</i> C 953	SVS ČR Reference Laboratory Guideline of 20.01.1999	Meat, milk, eggs
12	Detection of residues of antibiotics and sulfonamides by four-plate method	SVS ČR Reference Laboratory Guideline of 01.06.2008	Meat, milk, eggs
13	Detection and enumeration of <i>Listeria monocytogenes</i> – detection method (culture)	ČSN ISO 11290-1	Food, feedstuffs
14	Enumeration of <i>Bacillus cereus</i> by culture	ČSN EN ISO 7932	Food, feedstuffs
15 -19	Reserved		
20	Detection of <i>Salmonella</i> by culture method	ČSN ISO 19 250	Drinking, surface water
21	Enumeration of coagulase-positive staphylococci ( <i>Staphylococcus aureus</i> and other species) Technique using Baird-Parker agar medium	Regulation 238/2011 Coll. as amended by Regulation 97/2014; ČSN EN ISO 6888-1	Bathing water
22	Enumeration of culturable microorganisms at 22 °C	ČSN EN ISO 6222	Drinking, bathing water
23	Enumeration of culturable microorganisms at 36 °C	ČSN EN ISO 6222	Drinking, bathing water
24	Detection and enumeration of <i>Escherichia coli</i> and coliform bacteria. Membrane filtration method	ČSN EN ISO 9308-1	Drinking, bathing water
25	Detection and enumeration of thermotolerant coliform bacteria and <i>Escherichia coli</i> Membrane filtration method	ČSN 75 7835	Surface water

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
26	Enumeration of <i>Clostridium perfringens</i> Membrane filtration method	Method 1.6.6 Annex No.6 to Regulation No. 252/2004 Coll.	Drinking, surface water
27	Detection and enumeration of intestinal enterococci. Membrane filtration method	ČSN EN ISO 7899-2	Drinking, bathing water
28	Detection and enumeration of the spores of sulfite- reducing anaerobes (clostridia) Membrane filtration method	ČSN EN 26461-2	Drinking, surface water
29	Detection and enumeration of <i>Pseudomonas</i> <i>aeruginosa</i> Membrane filtration method	ČSN EN ISO 16266	Drinking, bathing water
30	Detection and enumeration of <i>Legionella spp.</i> Membrane filtration method	ČSN ISO 11731-2	Drinking, surface, bathing water
31	Determination of <i>Legionella spp.</i> by culture method	ČSN ISO 11731	Drinking, surface, bathing water
32 -39	Reserved		
40	Enumeration of colony- forming units of yeasts and/or moulds by culture method	ČSN ISO 6611	Milk, milk products
41	Enumeration of total living microorganisms by culture method	Czech Pharmacopoeia, p. 2.6.12	Cosmetics
42	Detection of specified microorganisms by culture method ( <i>Pseudomonas aeruginosa</i> ; <i>Staphylococcus aureus</i> )	ČL 01/2009, p.2.6.13	Cosmetics
43	Detection of <i>Salmonella</i> by culture method	AHEM 1/2008	Sludge, waste water, soil, bottom sediments, biomass

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
44	Check of cleanness of contact plates and swabs	ČSN ISO 18593	Packages, clothes, skin, production facilities environment
45	Enumeration of total microorganisms and moulds in air by aeroscope	SOP SZÚ – ISSN 0862-5956, November 2001	Indoor air
46	Detection and enumeration of thermotolerant coliform bacteria and <i>Escherichia coli</i> by culture method	ČSN 75 7835, AHEM 1/2008	Sludge, waste water, soil, bottom sediments, biomass
47	Detection and enumeration of intestinal enterococci. Membrane filtration method	AHEM 1/2008; chpt.2	Sludge, waste water, soil, bottom sediments, biomass
48-59	Reserved		
60	Determination of nitrogenous substances (raw protein) and nitrogen in feedstuffs and food by titration	SOP 6 (ČSN 467092-4, P.Javorský, F. Krečmar: : Chemical analyses in agricultural laboratories, Prague 1987)	Feedstuffs, food
61	Determination of total phosphorus in feedstuffs and food by spectrophotometry	SOP 11 (ČSN 467092-11, P.Javorský, F. Krečmar: Chemical analyses in agricultural laboratories, Prague 1987)	Food, feedstuffs
62	Determination of dry matter, water content and moisture content by gravimetry	SOP 15 (ČSN 46 7092-3)	Feedstuffs
63	Determination of chloride by titration	SOP 8A (ČSN ISO 1841-2)	Foodstuffs
64	Determination of total fat content in meat and meat products by gravimetry	SOP 29 (ČSN ISO 1443)	Meat, meat products
65	Determination of nitrate by spectrophotometry and nitrate nitrogen by calculation	SOP 31 (ČSN ISO 1841)	Meat, meat products

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
66	Determination of nitrite by spectrophotometry and nitrite nitrogen by calculation	SOP 33 (ČSN EN 1841)	Meat, meat products
67	Determination of dry matter, water content and moisture content by gravimetry	SOP 28 (ČSN 57 6021)	Meat, meat products and sterilized canned products
68	Determination of collagen by spectrophotometry and total protein by titration, determination of pure myosin by calculation	SOP 36 (ČSN ISO 937, AOAC Official Method 990.26 Hydroxyproline in meat and meat products, 1993)	Meat, meat products
69	Determination of boiling through by coagulation test	SOP 16 (Veterinary Laboratory Methods, SVS ČR, Bratislava, 1990)	Meat, meat products
70	Determination of starch by polarimetry	SOP 38 (ČSN 560512 – 16 ČSN 46 7092-21)	Foodstuffs
71	Determination of sugar by titration	SOP 39 (ČSN 560246 – 18 ČSN 560130 – 5 ČSN 560116 - 7 ČSN 560512 – 15 ČSN 46 7092-22)	Foodstuffs
72	Determination of fibre by Bioquant commercial set	SOP 37 (Bioquant commercial set, Merck Ref. 1.12979)	Foodstuffs
73	Determination of energy value by calculation from measured values	SOP 40 (Regulation No. 450/2004 Coll as amended by Regulation No. 330/2009 Coll.)	Foodstuffs
74-79	Reserved		
80	Determination of pH by potentiometry	SOP 4 (ČSN ISO 10523)	Drinking, surface, bathing, waste water
81	Determination of chloride in water by titration	SOP 9 (ČSN ISO 1841-2)	Drinking, surface, bathing, waste water

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
82	Determination of total phosphorus and phosphate in water by spectrophotometry	SOP 10 (ČSN EN ISO 6878)	Drinking, surface, waste water
83	Determination of sulphate in water by gravimetry	SOP 12 (ČSN ISO 9280)	Drinking, surface, waste water
84	Determination of dissolved solids in water by gravimetry	SOP 13 (ČSN 75 7346)	Drinking, surface, waste water
85	Determination of suspended solids in water by gravimetry	SOP 14 (ČSN EN 872)	Drinking, surface, waste water
86	Determination of anionic surfactants by measurement of the methylene blue index by spectrophotometry	SOP 3 (ČSN EN 903)	Drinking, surface, waste water
87	Determination of nitrate by UV spectrophotometry	SOP 26 (Mertens-Massart: Bull.Soc.Chim.Belgens 80, 151-8 y.1971)	Drinking, bathing water
88	Determination of iron in water – spectrophotometric method using 1,10-phenanthroline	SOP 1 (ČSN ISO 6332)	Drinking, waste water
89	Determination of ammonium by spectrophotometry and ammonia nitrogen by calculation	SOP 27 (ČSN ISO 7150-1)	Drinking, waste, bathing water
90*	Determination of free and total chlorine by HACH set and bound chlorine by calculation	SOP 20 (HACH firm publication) ČSN EN ISO 7393-2)	Drinking, bathing water
91*	Determination of water temperature	SOP 22 (ČSN 75 7342)	Drinking, bathing, waste water
92	Determination of nitrite by spectrophotometry and nitrite nitrogen by calculation	SOP 32 (ČSN EN 26,777)	Drinking, waste water
93	Preliminary sensory determination of odour and flavour	SOP 23 (ČSN EN 1622, TNV 75 7340)	Drinking water

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
94	Determination of nitrate by potentiometric method using ion-selective electrode	SOP 5 (J. Veselý et al., Ion-Selective Electrode Analysis, SNTL, Prague, 1979)	Drinking water
95	Titrimetric determination of chemical oxygen demand using permanganate (COD <sub>Mn</sub> )	SOP 2 (ČSN EN ISO 8467, Z1)	Drinking water
96*	Determination of redox potential (ORP) by potentiometry	SOP 21 (ČSN 75 7367)	Drinking, bathing water
97	Determination of nitrogenous substances and nitrogen in waste water by titration according to Kjeldahl	SOP 7 (P.Javorský, F. Krečmar: : Chemical analyses in agricultural laboratories, Prague 1987)	Waste water
98	Determination of biochemical oxygen demand (BOD <sub>5</sub> ) by Hach probe	SOP 25 (ČSN EN 25,814)	Waste water
99	Determination of nitrate by spectrophotometry and calculation of nitrate nitrogen, total nitrogen and inorganic nitrogen	SOP 30 (R.Elton-Bott: Analytica Chimica Acta 108 (1979) 285-291 Pitter: Hydro-chemistry 2009, 4th edition)	Waste water
100	Determination of electrical conductivity	SOP 34 (ČSN EN 27888)	Drinking, bathing, waste water
101	Determination of chemical oxygen demand using dichromate (COD <sub>Cr</sub> )	SOP 35 (ČSN ISO 15705)	Waste water
102	Polarographic determination of the content of cadmium, lead and copper	SOP 41 (DIN 38406 Part 16)	Drinking, surface and ground water
103-109	Reserved		
110	Determination of chloride by titration	SOP 8B (ČSN ISO 1841-2)	Extracts

**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory

U Ovčina 53, Nový Dvůr, 397 01 Písek

Ordinal number <sup>1)</sup>	Test procedure/ method name	Test procedure/ method identification	Tested object
111	Determination of dry matter, water content and moisture content by gravimetry	SOP 24 (ČSN EN 14346 ČSN EN 128 80 ČSN EN 14774-2 ČSN EN 14774-3)	Sludge, waste, solid material  Biomass
112	Determination of gross calorific value by calorimetry and net calorific value by calculation from measured values	SOP 42 (ČSN ISO 1928 ČSN 44 1377 ČSN ISO 687)	Solid fuels
113	Determination of copper, cadmium, lead, zinc, nickel, chromium, arsenic and molybdenum by AAS method	SOP 43 (ČSN EN 16179 ČSN ISO 8288 Uniform working procedures, Testing of Fertilizers – ÚKZÚZ Brno 2012)	Sludge, waste, solid material  Biomass

1) Asterisk at the ordinal number identifies the tests performed **also outside** the Laboratory premises.

**Solid material** ... soil, sand, aggregates

**Extracts** ..... aqueous extracts prepared according to valid legislation (Regulation 294/2005 Coll. and 61/2010 Coll.)

**Biomass** ... vegetable material for further technological processing

**Solid fuels** ... coal, coke, timber, timber chips, saw dust, biomass

**Foodstuffs**... food and raw materials for the production of food, food supplements, feedstuffs



**The Appendix is an integral part of  
Certificate of Accreditation No. 718/2017 of 05/12/2017**

**Accredited entity according to ČSN EN ISO/IEC 17025:2005:**

**Ing. Josef Němec**

Chemical and Microbiological Laboratory  
U Ovčina 53, Nový Dvůr, 397 01 Písek

**Sampling:**

Ordinal number	Sampling procedure name	Sampling procedure identification	Sampled object
1	Drinking and hot water sampling	SOP V.17 (Regulation No. 252/2004 Coll. ČSN EN ISO 5667-1 ČSN EN ISO 5667-3 ČSN EN ISO 19458 ČSN ISO 5667-5 ČSN EN ISO 5667-14)	Drinking, hot water
2	Manual sampling of waste water; sampling by an automatic sampler	SOP V.18 (ČSN EN ISO 5667-1 ČSN EN ISO 5667-3 ČSN ISO 5667-10 chap.4.2.1 ČSN EN ISO 5667-14)	Waste water
3	Bathing water sampling	SOP V.19 (Regulation No. 238/2011 Coll. ČSN EN ISO 5667-1 ČSN EN ISO 5667-3 ČSN EN ISO 19458 ČSN EN ISO 5667-14)	Bathing water (pools)
4	Sampling of areas and object surfaces for the determination of microbial contamination	SOP V.20 (ČSN ISO 18593)	Areas and objects in contact with food
5	Sampling of bottom sediments, sludge, solid materials and biomass	SOP V.21 (ČSN ISO 5667-12, ČSN EN ISO 5667-13, ČSN EN ISO 5667-15, MP MŽP ČR Sampling in Rehabilitation Geology)	Sludge, solid materials, bottom sediments

Used abbreviations:

AHEM	Acta hygienica, epidemiologica et microbiologica (Name of publications of SZÚ Praha)
SOP	Standard Operating Procedure
TNV	Branch Technical Standard of Water Management
ČL	Czech Pharmacopoeia
VLM	Veterinary Laboratory Method
SVS	State Veterinary Administration
ÚKZÚZ	Central Institute for Supervising and Testing in Agriculture