SCOPE OF ACCREDITATION

of the testing laboratory of SHANECO GROUP, Joint stock company, Analytical center

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Item No	Documents establishing rules and methods of research (testing), measurements, including rules and methods of sampling	Name of the object	All-Russian classifier of products by types of economic activity Code	Foreign Economic Activity Commodity Nomenclature of the Customs Union Code	Target specification (parameter)	Target range
1	2	3	4	5	6	7
1. Testing (research), measurements of environmental objects						
1	PND F 14.1:2:3:4.213-05	Natural and waste water	-	-	Turbidity (by coalin)	(0,1 – 5,0) mg/dm³
					Turbidity (by formazin)	(1,0 – 100,0) ETF
2	PND F 14.1:2:4.207-04	Natural and waste water	-	-	Color	(1 – 500) degree of color
3	RD 52.24.496-2025	Treated waste and natural water	-	-	Transparency	(0-30) cm
4	RD 52.24.496-2025	Treated waste and natural water	-	-	Temperature	(0 – 55) ˚C
5	MU 2.1.5.720-98	Surface and underground water; Water from surface water sources used for centralized water supply to the population; Water from centralized water supply systems, including hot water supply; Potable water from centralized water supply; Water from water sources for domestic and recreational use	-	-	Impurities	presence/absence
6	PND F 14.1:2:3:4.123-97 (edition 2004), par.10.2	Drinking, waste, surface and underground water; Water from surface sources used for centralized public water supply; Treated waste water	-	-	Dissolved oxygen	(0,1 – 10,0) mg/dm³

7	PND F 14.1:2:3:4.121-97 (edition 2024)	Drinking, waste, surface, underground and natural water, treated waste water	-	-	pH value (pH)	(1,0 – 14,0) pH units
8	PND F 14.1:2:4.154-99	Drinking, waste, surface, underground water; Water from surface sources for centralized public water supply; Water from centralized water supply systems, including hot water supply; Treated waste water	-	-	Permanganate oxidation (permanganate index)	(0,25 – 100) mgO_2/dm³
9	PND F 14.1:2:3.98-97 (edition 2016)	Natural and waste water	-	-	Total hardness	(0,1 – 50) °Ж
10	PND F 14.1:2.159-2000	Natural and waste water	-	-	Sulfates (Sulfate ion)	(10 – 10000) mg/dm³
11	RD 52.24.360-2022	Treated waste and natural water	-	-	Fluorides (Fluoride ion)	(0,19 – 190) mg/dm^3
12	PND F 14.1:2:4.186-2002, scheme A	Natural, surface, underground, sea and drinking water; Waste water	-	-	Benz(a)pyrene	(0,5 – 500) ng/dm³ (2,0 – 500) ng/dm³
13	PND F 14.1:2:4.128-98 (M 01-05-2012)	Waste, sea and natural water	-	-	Oil products	(0,005 – 50,0) mg/dm³
14	PND F 14.1:2:4.158-2000	Waste and natural water	-	-	Anionic surfactants	(0,025 – 10) mg/dm³ (0,025 – 100) mg/dm³
15	PND F 14.1:2:4.182-02, method B	Waste and natural water	-	-	Mass concentration of phenols (total and volatile)	(0,0005 – 25,0) mg/dm³
16	PND F 14.1:2:4.138-98 (edition 2017)	Mineral water, waste water, atmospheric precipitation, surface water, underground water, drinking water from the municipal water supply, treated waste water	-	-	Potassium (K)	(1 – 5000) mg/dm³
					Sodium (Na)	(1 – 20000) mg/dm³
17	GOST 31957, method A.2	Natural, drinking and waste water; Surface water from sources used for centralized water supply	-	-	Bicarbonate mass concentration	(6,1 – 6100,0) mg/dm³
					Carbonate mass concentration	(6,0 – 6000,0) mg/dm³
					Total alkalinity	(0,1 – 100,0) mmol/dm³
					Free alkalinity	(0,1 – 100,0) mmol/dm³
18	PND F 14.1:2:4.139-98	Drinking and natural water; Waste water	-	-	Iron (Fe)	(0,01 – 15) mg/dm³ (0,1 – 500) mg/dm³
					Cadmium (Cd)	(0,005 – 0,5) mg/dm³ (0,05 – 5,0) mg/dm³
					Cobalt (Co)	(0,015 – 0,5) mg/dm³

						(0,15 – 20) mg/dm³
					Manganese (Mn)	(0,01 – 5,0) mg/dm³ (0,01 – 20) mg/dm³
					Copper (Cu)	(0,01 – 10) mg/dm³ (0,1 – 100) mg/dm³
					Nickel (Ni)	(0,015 – 1,0) mg/dm³ (0,15 – 20) mg/dm³
					Lead (Pb)	(0,02 – 0,5) mg/dm³ (0,1 – 5,0) mg/dm³
					Chromium (Cr)	(0,02 – 10) mg/dm³ (0,2 – 500) mg/dm³
					Zinc (Zn)	(0,004 – 0,2) mg/dm³ (0,04 – 500) mg/dm³
19	PND F 14.1:2:4.137-98 (edition 2017)	Drinking and natural water; Waste water	-	-	Calcium (Ca)	(0,2 – 5000) mg/dm³ (1,0 – 5000) mg/dm³
					Magnesium (Mg)	(0,04 – 5000) mg/dm³
20	PND F 14.1:2:4.254-09 (edition 2017)	Drinking and natural water; Waste water	-	-	Suspended solids	(0,5 – 5000) mg/dm³ (0,5 – 50000) mg/dm³
21	PND F 14.1:2.15-95	Drinking, waste and surface water	-	-	Anionic surfactants	(0,01 – 10) mg/dm³
22	PND F 14.1:2:3:4.112-2023	Drinking, waste and natural water	-	-	Phosphates (phosphate-ions)	(0,05 – 80) mg/dm^3
23	PND F 14.1:2.56-96	Waste and natural water	-	-	Cyanides	(0,005 – 0,25) mg/dm^3
24	PND F 14.1:2:4.168-2000	Drinking, natural and treated waste water	-	-	Oil products	(0,02 – 2,0) mg/dm^3
25	PND F 14.1:2:3:4.3-2023	Drinking, waste, surface, underground and natural water	-	-	Nitrite ions	(0,02 – 3,0) mg/dm^3
26	PND F 14.1:2:4.4-95	Drinking, waste and natural water	-	-	Nitrate ions	(0,1 – 100) mg/dm^3
27	GOST 18165, method B	Drinking, natural and treated waste water	-	-	Aluminium	(0,04 – 0,56) mg/dm^3
28	MUK 4.1.1469-03	Drinking, waste and natural water; Water from sources for domestic and recreational use	-	-	Mercury (Hg)	(0,00001 – 0,01) mg/dm^3
29	PND F 14.1:2:3.1-95	Waste and treated waste water, natural water	-	-	Ammonium ions	(0,5 – 150) mg/dm^3
30	PND F 14.1:2:4.215-06	Drinking, waste and natural water	-	-	Silicon	(0,5 – 16) mg/dm^3
31	PND F 14.1:2:3.96-97	Waste and natural water	-	-	Chlorides	(10 – 5000) mg/dm^3

32	PND F 14.1:2:3:4.111-97 (edition 2020)	Drinking, waste and surface water	-	-	Chlorides	(5 – 25000) mg/dm^3
33	RD 52.24.361-2008	Treated waste water; Natural water	-	-	Chlorides	(12,0 - 355) mg/dm^3
34	PND F 14.1:2:4.261-10 (edition 2015)	Drinking water; Natural water; Wastewater; Treated wastewater; Swimming pool and water park water; Process water; Snow cover	-	-	Dry matter	(1,0 - 35000) mg/dm^3
35	GOST R 55227	Waste water; Drinking water; Natural waters	-	-	Formaldehyde	(0,05 - 400) mg/dm^3 (0,025 - 25) mg/dm^3
36	Methodology for measuring cadmium, lead, and copper content in drinking, natural, and treated wastewater using stripping voltammetry (FR.1.31.2011.09388)	Drinking water; Natural waters; Treated waste water	-	-	Mass concentration of cadmium (Cd)	(0,0005 - 0,5) mg/dm^3 (0,0010 - 0,5) mg/dm^3
					Mass concentration of copper (Cu)	(0,0005 - 0,5) mg/dm^3 (0,0010 - 0,5) mg/dm^3
					Mass concentration of lead (Pb)	(0,0005 - 0,5) mg/dm^3 (0,0010 - 0,5) mg/dm^3
37	Methodology for measuring arsenic content in drinking, natural, and treated wastewater using stripping voltammetry (FR.1.31.2011.09385)	Drinking water; Natural waters; Treated waste water	-	-	Mass concentration of arsenic (As)	(0,0010 - 0,2) mg/dm^3 (0,02 - 1,2) mg/dm^3
38	Methodology for measuring mercury content in drinking, natural, and treated wastewater using stripping voltammetry (FR.1.31.2011.09386)	Treated waste water; Natural waters; Drinking water	-	-	Mass concentration of mercury (Hg)	(0,2 – 100) mkg/dm^3 (0,005 – 10) mkg/dm^3
39	RD 52.24.470-2014	Natural waters; Treated waste water	-	-	Calcium (Ca)	(0,5 - 100,0) mg/dm^3
					Magnesium (Mg)	(0,1 - 20,0) mg/dm^3
40	FR.1.31.2010.07282	Drinking water; Natural waters; Treated waste water	-	-	Mass concentration of bismuth (Bi)	(0,010 - 0,5) mg/dm^3 (0,010 - 0,5) mg/dm^3 (0,010 - 0,5) mg/dm^3
					Mass concentration of tin (Sn)	(0,005 - 0,5) mg/dm^3 (0,005 - 0,5) mg/dm^3 (0,005 - 0,5) mg/dm^3
					Mass concentration of lead (Pb)	(0,0005 - 0,5) mg/dm^3 (0,0005 - 0,5) mg/dm^3 (0,0010 - 0,5) mg/dm^3
					Mass concentration of antimony (Sb)	(0,005 - 0,5) mg/dm^3

						(0,005 - 0,5) mg/dm^3 (0,005 - 0,10) mg/dm^3
41	FR.1.31.2006.02565	Drinking water; Natural waters; Treated waste water	-	-	Mass concentration of manganese (Mn)	(0,010 - 0,5) mg/dm^3 (0,005 - 0,40) mg/dm^3 (0,020 - 0,5) mg/dm^3
42	FR.1.31.2011.09384	Drinking water; Treated waste water; Natural water	-	-	Mass concentration of zinc (Zn)	(0,0010 – 10) mg/dm^3
43	pH-meter “MARK-903” Operating Manual VR48.00.000RE	Water; Solutions; Aqueous extracts	-	-	Oxidation-reduction potential (ORP)	(-1000,0 - 1000,0) mV
44	Portable Conductivity Meter "STARTER 300C" Operating Manual	Water; Solutions; Aqueous extracts	-	-	Specific electrical conductivity	(0,0 - 199,9) mSm/sm
45	PND F 14.1:2:4.187-02 (edition 2010)	Drinking water; Waste water; Natural waters	-	-	Mass concentration of formaldehyde	(0,02 - 0,5) mg/dm^3
46	RD 52.18.636-2002	Wastewater; Surface water; Treated waste water	-	-	Mass concentration of mercury (Hg)	(0,00001 - 0,01) mg/dm^3
47	PND F 14.1:2:4.29-95 (edition 2010)	Drinking water; Waste water; Natural waters	-	-	Mass concentration of iron (Fe)	(0,05 - 5,0) mg/dm^3
48	PND F 14.1:2:4.181-02 (edition 2010)	Drinking water; Waste water; Natural waters	-	-	Mass concentration of aluminum (Al)	(0,01 - 50,0) mg/dm^3
49	PND F 14.1:2:4.36-95 (edition 2010)	Drinking water; Waste water; Natural waters	-	-	Mass concentration of boron (B)	(0,05 - 5,0) mg/dm^3
50	PND F 14.1:2.47-96 (edition 2013)	Waste water; Natural waters;	-	-	Mass concentration of molybdenum (Mo)	(0,001 – 4) mg/dm^3
51	RD 52.24.403-2018	Treated waste water; Natural water	-	-	Mass concentration of calcium ions	(1,0 – 2000) mg/dm^3
52	PND F 14.1:2:4.188-02 (edition 2011)	Drinking water; Waste water; Natural waters	-	-	Mass concentration of manganese (Mn)	(0,01 - 2,5) mg/dm^3
53	RD 52.24.531-2016	Treated waste water; Natural water	-	-	Chemical Oxygen Demand (COD)	(5,0 - 50,0) mg/dm^3
54	Methodology M 01-35-2006 (edition 2011)	Drinking water; Water from domestic and recreational water sources Water from surface water sources used for	-	-	Mass concentration of beryllium (Be)	(0,1 - 50) mkg/dm^3

		centralized water supply to the population				
55	RD 52.24.395-2017	Treated waste water; Natural water	-	-	Mass concentration of magnesium ions	Estimated value: - (0,12 – 605,0) mg/dm³
					Hardness	(0.060 - 50.0) °F
56	PND F 14.1:2:3.172-2000	Waste water; Surface water; Groundwater; Treated waste water; Natural water	-	-	Mass concentration of total mercury	(0,0015 - 60,0) mg/dm^3
57	NDP 10.1:2:3.131-2016 (Edition 2022)	Drinking water; Natural waters	-	-	Biochemical oxygen demand (BOD5)	(0,5 – 1000) mg/dm^3
					Biochemical oxygen consumption after n days of incubation (total BOD)	(0,5 – 1000) mg/dm^3
		Waste water	-	-	Biochemical oxygen demand after *n* days of incubation (total BOD)	(1,0 – 80000) mg/dm^3
					Biochemical oxygen demand (BOD5)	(1,0 – 80000) mg/dm^3
58	MU 31-14/06	Mineral waters; Drinking water; Waste water; Natural waters; Process water media; Aqueous washing fluids and feed solutions	-	-	Mass concentration of cobalt (Co)	(0,0005 - 0,50) mg/dm^3 (0,5 - 4,0) mg/dm^3
					Mass concentration of nickel (Ni)	(0,0005 - 0,50) mg/dm^3 (0,5 - 8,0) mg/dm^3
59	PND F 14.1:2.49-96 (edition 2004)	Waste water; Natural waters	-	-	Mass concentration of arsenic ions	(0,05 - 0,8) mg/dm^3
60	PND F 14.1:2:4.178-02 (edition 2019)	Mineral waters; Drinking water; Wastewater; Drinking water from a centralized water supply; Drinking water from a non-centralized water supply; Natural waters	-	-	Mass concentration of hydrogen sulfide	Estimated value: - (0.0021 - 10.63) mg/dm³
					Total mass concentration of hydrogen sulfide, hydrosulfide and sulfide ions, calculated per sulfide ion	(0,002 – 10) mg/dm^3
61	RD 52.24.493-2020	Natural waters; Purified wastewater	-	-	Hydrocarbonates	(10,0 - 500,0) mg/dm^3
					Alkalinity	(0,170 - 8,20) mmol/dm^3

62	PND F 16.1:2:2.2:2.3:3.39-2003 (2012 edition)	Soils; Bottom sediments; Sewage sludge (soils and waste); Grounds	-	-	Benz(a)pyrene	(0,005 - 2,0) mg/kg
63	PND F 16.1:2.2:2.3:3.58-08	Bottom sediments; Solid waste; Sewage sludge (soils and waste); Activated sludge; Liquid waste; Sludge	-	-	Mass fraction of moisture	(0,05 – 99) %
64	GOST 26485, Sec. 4.3	Soils; Overburden	-	-	Exchangeable (mobile) aluminum	(0,05 - 0,6) mmol/100g
65	GOST 26489	Soils; Overburden	-	-	Mass fraction of ammonium nitrogen	(1,0 - 60,0) mln^{-1}
66	GOST 12536, p. 4.3	Grounds	-	-	Granulometric composition	(0 – 100) %
67	GOST 12536, p. 4.2	Grounds	-	-	Granulometric composition	(0 – 100) %
68	GOST 26213, p. 1	Soils; Overburden	-	-	Mass fraction of organic matter	(0,1 - 15,0) %
69	GOST 17.4.4.01, p. 4.1	Soils	-	-	Cation exchange capacity	(0,1 - 50,0) mmol/100g
70	GOST 26212	Soils; Overburden;	-	-	Hydrolytic acidity	(0,23 – 145) mmol/100g
71	GOST 26488	Soils; Overburden	-	-	Nitrate ion	(1,0 - 30,0) mln^{-1}
72	GOST R 54650	Soils; Overburden	-	-	Mobile phosphorus	(1,0 - 1000,0) mln^{-1}
73	GOST R 58594	Overburden; Soils	-	-	Metabolic acidity	(0,1 - 145) mmol/100g
74	M-MVI-80-2008, p. 4	Soils; Bottom sediments; Grounds	-	-	Zinc (Zn)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Chromium (Cr)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Lead (Pb)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Nickel (Ni)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Copper (Cu)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Manganese (Mn)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Magnesium (Mg)	(5,0 - 500000,0) mg/kg (mln^{-1})
					Cobalt (Co)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Calcium (Ca)	(5,0 - 5000,0) mg/kg (mln^{-1})
					Cadmium (Cd)	(1,0 - 5000,0) mg/kg (mln^{-1})
					Iron (Fe)	(5,0 - 5000,0) mg/kg (mln^{-1})
					Aluminum (Al)	(5,0 - 500000,0) mg/kg (mln^{-1})
					Lead (Pb)	(1,0 - 5000,0) mg/kg (mln^{-1})

					Sodium (Na)	(5,0 - 500000,0) mg/kg (mln $^{-1}$)
					Potassium (K)	(5,0 - 500000,0) mg/kg (mln $^{-1}$)
75	GOST 26490	Soils; Overburden	-	-	Mass fraction of sulfur (S)	(1,0 - 24,0) mln-1
76	GOST 27821	Soils	-	-	Sum of absorbed bases	(0,1 - 30,0) mmol/100g
77	GOST 26424	Soils	-	-	Number of equivalents of carbonate ion	(0,1 - 1000) mmol/100g
					Number of equivalents of bicarbonate ion	(0,1 – 1000) mmol/100g
					Mass fraction of bicarbonate ion	(0,0061 – 61) %
					Mass fraction of carbonate ion	(0,003 – 30) %
78	PND F 16.1.1-96	Soils	-	-	Mercury (Hg)	(0,02 - 2,0) mg/kg
79	MUK 4.1.1471-03	Soils; Natural building materials; Solid waste	-	-	Mercury (Hg)	(0,02 - 20,0) mg/kg
80	GOST 26425, p. 1	Soils	-	-	Chlorides	(0,1 - 50,0) mmol/100g (0,004 - 1,775) %
81	GOST 26425, p.2	Soils	-	-	Chlorides	(0,1 - 50,0) mmol/100g (0,004 - 1,775) %
82	PND F 16.2.2:2.3:3.30-02	Bottom sediments; Sewage sludge (soils and waste); Sludge; Activated sludge; Industrial waste; Household waste	-	-	Ammonium nitrogen	(10,0 – 1000) mg/dm^3 (20 – 2000) mg/kg (mln^{-1})
83	PND F 16.2.2:2.3:3.34-02	Bottom sediments; Solid waste Sewage sludge (soils and waste); Activated sludge; Liquid waste; Sludge	-	-	Calcium (Ca)	(10,0 - 100000,0) mg/dm^3 (10,0 - 100000,0) mln^{-1} (10,0 - 100000,0) mg/kg
					Magnesium (Mg)	(10,0 - 100000,0) mg/dm^3 (10,0 - 100000,0) mln^{-1} (10,0 - 100000,0) mg/kg
84	PND F 16.1:2.3:2.2:3.57-08	Soil; Bottom sediments; Sewage sludge (soils and waste); Sludge; Activated sludge; Waste	-	-	Aluminum	(0,05 - 1,5) %
85	PND F 16.1:2.3:3.44-05	Soils;	-	-	Volatile phenols	(0,05 – 4,0) mg/kg

		Sewage sludge (soils and waste)				(0,05 – 80,0) mg/kg
86	PND F 16.1:2.21-98	Soils; Grounds	-	-	Petroleum products	(5,0 – 20000) mln^{-1}
87	PND F 16.1:2.2.22-98 \9edition 2005)	Grounds; Bottom sediments; Soils			Petroleum products	(50 – 100000) mg/kg
88	PND F 16.1:2:2.2:3.66-10	Bottom sediments; Soils	-	-	Anionic surfactants (AS)	(0,2 – 100) mln^{-1}
89	PND F 16.1:2:2.2:3.67-10	Soil; Bottom sediments; Grounds; Activated sludge; Industrial waste; Household waste	-	-	Mass fraction of nitrogen nitrates	(0,23 – 23) mln^{-1}
90	GOST 26483	Soils; Overburden	-	-	pH of the salt extract	(1,0 – 14) pH units
91	GOST 26423	Soils	-	-	Specific electrical conductivity of the aqueous extract	(0 - 1999,0) mSm/sm
92	PND F 16.2.2:2.3:3.33-02	Solid waste; Sewage sludge (soils and waste); Activated sludge; Liquid waste; Bottom sediments; Sludge	-	-	Hydrogen index (pH)	(1,0 - 14,0) units of pH
93	GOST 26423	Soils; Overburden	-	-	pH of aqueous extract	(1,0 – 14) units of pH
94	PND F 16.1:2:2.2:3.51-08	Soil; Grounds; Bottom sediments; Activated sludge; Household waste; Industrial waste	-	-	Mass fraction of nitrite nitrogen	(0,037 - 0,56) mg/kg
95	PND F 16.1:2:2.2:3.52-08	Soil; Grounds; Bottom sediments; Waste	-	-	Mass fraction of acid-soluble forms of phosphate ions	(25,0 – 500) mg/kg
96	PND F 16.1:2:2.2:3.37-2002 (edition 2011)	Soil; Grounds; Bottom sediments	-	-	Gross sulfur content (S)	(80 – 5000) mln^{-1}

97	Guidelines for determining alkaline-hydrolyzable nitrogen in soil using the Kornfield method	Soil	-	-	Alkaline-hydrolyzable nitrogen content according to Kornfield	(1,0 – 100) mg/kg
98	M 3-2017 Quantitative chemical analysis of soils. Methodology for measuring mass fraction of water-soluble forms of fluorides in soil samples by direct potentiometric method (FR.1.31.2017.27474)	Soil	-	-	Fluorides (fluoride ions)	(1,0 – 190) mln^{-1}
99	PND F 16.1:2.3:3.45-05	Soil; Sewage sludge (soils and waste); Waste	-	-	Formaldehyde	(0,05 - 5,0) mg/kg (0,05 - 100) mg/kg
100	PND F 16.1:2:2.2:3.48-06 (MU 31-11/05)	Soil; Grounds; Bottom sediments; Activated sludge; Sapropel	-	-	Cadmium (Cd)	(0,1 – 20) mg/kg
					Manganese (Mn)	(50 – 3000) mg/kg
					Copper (Cu)	(1,0 – 100) mg/kg
					Arsenic (As)	(0,1 – 40) mg/kg
					Mercury (Hg)	(0,1 – 30) mg/kg
					Lead (Pb)	(0,5 – 60) mg/kg
					Zinc (Zn)	(1,0 – 100) mg/kg
101	M 4-2017 Methodology for measurement of the mass fraction of cyanides (including those in the form of complex compounds) in samples of soils, subsoils, bottom sediments, sludge, wastewater sludge, liquid and solid waste from production and consumption using a photometric method with pyridine and barbituric acid (FR.1.31.2017.27246)	Soil; Grounds; Bottom sediments; Activated sludge; Sewage sludge (soils and waste); Waste; Stable/solid waste; Household waste	-	-	Cyanides	(0,5 – 130) mln^{-1}
102	GOST 26423	Soil; Overburden; Enclosing rocks	-	-	Dense residue of aqueous extract	(0,1 - 10,0) %
103	GOST 26950, p. 2	Soil; Overburden; Enclosing rocks	-	-	Exchangeable sodium	(0,1 – 20) mmol/100g
104	GOST 26426	Soil; Overburden; Enclosing rocks	-	-	Number of equivalents of sulfates (sulfate ions)	(0,5 – 1000) mmol/100g
105	GOST 17.5.4.02	Soil; Overburden; Enclosing rocks	-	-	The amount of toxic salts	Estimated indicator: - (0,05 – 3,0) %
106	PND F 16.3.55-08	Solid waste	-	-	Morphological composition	(0,025 – 100) %
107	MI-SHANECO-001-2025	Bottom sediments	-	-	Mass fraction of volatile phenols	(0,05 - 80,0) mg/kg

108	MI-SHANEKO-002-2025	Soils; Grounds; Bottom sediments	-	-	pH of aqueous extract	(1,0 - 14,0) units pH
109	MI-SHANEKO-003-2025	Soils; Overburden; Enclosing rocks	-	-	Mass fraction of ammonium nitrogen	(1,0 - 60,0) mln^{-1}
110	MI-SHANECO-004-2025	Soils; Overburden; Enclosing rocks	-	-	Exchangeable (mobile) aluminum	(0,010 - 0,60) mmol/100g
111	MI-SHANEKO-005-2025	Soils; Grounds; Bottom sediments	-	-	pH of the salt extract	(1,0 - 14,0) units pH
112	MI-SHANEKO-006-2025	Soils; Overburden; Enclosing rocks	-	-	Mass concentration of carbonate ions and hydrocarbonate ions	(1,0 - 50,0) mmol/100g
113	MI-SHANECO-007-2025	Soils	-	-	Cation exchange capacity	(0,1 – 200) mmol/100g
114	MI-SHANECO-008-2025	Soils; Overburden; Enclosing rocks	-	-	Hydrolytic acidity	(0,23 – 145) mmol/100g
115	MI-SHANECO-009-2025	Soils; Enclosing rocks; Overburden	-	-	Metabolic acidity	(0,05 – 25) mmol/100g
116	MI-SHANECO-010-2025	Soils; Overburden; Enclosing rocks	-	-	Mass fraction of organic matter	(0,1 – 15) %
117	MI-SHANECO-011-2025	Soils; Overburden; Enclosing rocks	-	-	Mass fraction of mobile sulfur	(0,1 – 24) mln^{-1}
118	MI-SHANECO-012-2025	Soils	-	-	Mass concentration of chloride ions	(0,1 – 25) mmol/100g
119	MI-SHANECO-013-2025, Method A	Soils; Overburden; Enclosing rocks	-	-	Mass fraction of mobile phosphorus compounds	(0,1 – 1000) mln^{-1}
120	MI-SHANECO-013-2025, Method B	Soils; Overburden; Enclosing rocks	-	-	Mass fraction of mobile phosphorus compounds	(0,1 – 250) mln^{-1}
121	MI-SHANECO-013-2025, Method V	Soils; Overburden; Enclosing rocks	-	-	Mass fraction of mobile phosphorus compounds	(0,1 – 80) mln^{-1}
122	R 7b/192-2016	Soils; Grounds; Solid waste;	-	-	Mass fraction of magnesium (Mg)	(10,0 – 200000) mln^{-1} (0,001 - 20,0) %

		Bottom sediments; Sludge; Activated sludge; Sewage sludge			Mass fraction of calcium (Ca)	(10,0 – 200000) mln^{-1} (0,001 - 20,0) %
		Liquid waste			Mass concentration of magnesium (Mg)	(10,0 – 200000) mg/dm^3 (0,001 - 20,0) %
					Mass concentration of calcium (Ca)	(10,0 – 200000) mg/dm^3 (0,001 - 20,0) %
123	R 7b/193-2016	Soils; Grounds; Bottom sediments; Activated sludge; Sewage sludge	-	-	Mass fraction of total mercury	(0,0010 - 10,0) %
124	R 7b/194-2016	Soils; Grounds; Solid waste; Liquid waste; Bottom sediments; Sewage sludge; Activated sludge; Sludge	-	-	Mass fraction of ammonium ions	(10,0 – 250000) mln^{-1} (0,0010 – 25) % (10,0 – 250000) mln^{-1}
					Mass concentration of ammonium ions	(10,0 – 250000) mg/dm^3
125	RD 52.24.609-2013	Bottom sediments	-	-	Consistency (Description)	-
					Smell (Description)	-
					Inclusions	presence/absence
					Color (Description)	-
					Type of bottom sediments by material composition	-
					Temperature	(0,1 – 20) ˚C
126	FR.1.31.2010.07281	Soil	-	-	Nickel (Ni)	(0,5 – 50) $mg/kg\ mln^{-1}$
127	GOST R 59024	Water	-	-	Sampling	-
128	GOST R 56237	Drinking water	-	-	Sampling	-
129	GOST R 70282	Ice; Precipitation	-	-	Sampling	-
130	PND F 12.15.1-08	Waste water;	-	-	Sampling	-
131	R 52.24.353-2012	Surface water; Treated waste water	-	-	Sampling	-
132	GOST R 58595	Soils	-	-	Sampling	-
133	GOST 17.4.3.01	Soils	-	-	Sampling	-
134	GOST 12071	Soils	-	-	Sampling	-
135	GOST 17.4.4.02	Soils	-	-	Sampling	-
136	GOST 12071	Soils	-	-	Sampling	-
137	PND F 12.1:2:2.2:2.3:3.2-03	Soils;	-	-	Sampling	-

		Bottom sediments; Solid waste; Sewage sludge (soils and waste); Activated sludge; Liquid waste; Grounds; Sludges				
I38	GOST 17.1.5.01	Bottom sediments	-	-	Sampling	-
I39	GOST R 53123	Soils	-	-	Sampling	-
I40	PND F 12.4.2.1-99	Waste from physical and chemical processes of mineral raw materials processing	-	-	Sampling	-
I41	GOST ISO 9612	Rooms / Industrial buildings	-	-	Equivalent sound level for an 8-hour working day (LEX, 8h)	(24 – 139) dB
I42	GOST R 53964	Grounds; Rooms / Buildings	-	-	Vibration level	(41 – 180) dB
I43	GOST 31191.1	Rooms / Buildings; Vehicles	-	-	Total vibration level. Root means square vibration acceleration values	(41 – 180) dB
I44	GOST 22283	Building areas (residential areas); Area near airports (airfields)	-	-	Maximum sound level	(24 – 139) dB
					Equivalent sound level	(24 – 139) dB
I45	GOST 23337	Residential zone areas; Building areas (residential areas); Rooms / Residential buildings; Rooms / Public buildings	-	-	Equivalent sound level	(24 – 139) dB
					Maximum sound level	(24 – 139) dB
					Sound pressure levels in octave or one-third octave frequency bands	(24 – 139) dB
I46	MU 3911-85	Rooms / Industrial buildings	-	-	Overall vibration level. Root means square vibration acceleration values	(41 – 180) dB
					Equivalent corrected vibration level	(41 – 180) dB
I47	4381-003-76596538-06 RE	Residential areas; Territories of the production zone; Recreational areas; Building areas (residential	-	-	Overall vibration level. Root means square vibration acceleration values	(41 – 180) dB
					Equivalent corrected	(41 – 180) dB

		areas); Sanitary protection zones; Rooms / Residential buildings; Rooms / Public buildings; Rooms / Industrial buildings			vibration level	
					Maximum sound level	(24 – 139) dBA
					Sound level	(24 – 139) dB
					Infrasound level	(24 – 139) dBA
					Equivalent sound level	(24 – 139) dBA
148	MI PKF-14-015	Building areas (residential areas)	-	-	Maximum sound level	(24 – 139) dB rel. 20 mkPa
					Equivalent sound level	(24 – 139) dB rel. 20 mkPa
149	MI PKF-14-007	Residential premises/buildings; Public premises/buildings	-	-	Vibration acceleration	(58 – 174) dB rel. 1 mkm/s²
150	MUK 4.3.2491-09	Industrial premises/buildings	-	-	Electric field strength industrial frequency of 50 Hz	(0,01 – 100,000) B/m
151	MI PKF-10-003	Residential areas; Industrial zone territories; Recreational zones; Agricultural territories; Residential premises/buildings; Public premises/buildings; Industrial premises/buildings	-	-	Electric field strength	(0,01 – 100,000) B/m
152	MI PKF-10-003	Residential areas; Industrial zone territories; Recreational zones; Agricultural territories; Residential premises/buildings; Public premises/buildings; Industrial premises/buildings	-	-	Magnetic field strength	(0,01 – 5000) A/m
153	MUK 4.3.2491-09	Industrial premises/buildings	-	-	Magnetic field strength of alternating current at industrial frequency of 50 Hz	(0,01 – 5000) A/m
154	MI PKF-09-002	Industrial premises/buildings	-	-	Electric field strength at industrial frequency of 50 Hz	(0,1 – 30) kV/m

155	MI PKF-15-023	Residential premises/Buildings; Public Premises/Buildings	-	-	Electric field strength in the frequency range from 45 Hz to 55 Hz	(0,001 – 100) kV/m
156	MI PKF-15-024	Residential premises/Buildings; Industrial Premises/Buildings	-	-	Magnetic field strength in the frequency range from 45 Hz to 55 Hz	(0,005 – 5000) A/m
157	TE1.415313.003RE	Solid waste; Industrial waste; Residential zone territories; Industrial zone territories; Recreational zones; Construction site territories; Territories of building plots (residential territory); Residential premises/Buildings; Public premises/Buildings	-	-	Ambient gamma radiation dose equivalent capacity	(0,05 – 100) mk^{3}v/h
158	FVKM.412113.028RE	Solid waste; Industrial waste; Residential zone territories; Industrial zone territories; Construction site territories; Territories of building plots (residential territory); Residential premises/Buildings; Public premises/Buildings; Industrial premises/Buildings	-	-	Ambient gamma radiation dose equivalent capacity	(0,1 – 3000000) mk^{3}v/h
159	MVI 40090.6K816	Land, including soils; Territories of residential areas; Territories of industrial areas; Territories of construction sites; Territories of building plots (residential area)	-	-	Radon flux density from the surface	(3 – 100000) mBq/(m2 * s)
160	MU 2.6.1.038-2015	Territories of construction sites; Territories of building plots (residential area)	-	-	Radon flux density from the ground surface	(3 – 100000) mBq/(m2 * s)
161	MU 2.6.1.037-2015	Residential premises/Buildings; Public premises / Buildings;	-	-	Volumetric radon activity	(30 – 200000) Bk/m^3

		Industrial premises/Buildings				
I62	Operating manual FMKT 136132.134RE	Territories of construction sites; Territories of building plots (residential area)	-	-	Radon flux density from the ground surface	(3 – 100000) mBq/(m2 * s)
I63	Operating manual FMKT. 136132.134RE	Residential premises/Buildings; Public premises / Buildings; Industrial premises/Buildings	-	-	Volumetric radon activity	(30 – 200000) Bk/m^3
					Equivalent equilibrium volume activity (EROA) of radon	(10 – 20000) Bk/m^3
					Equivalent equilibrium volume activity (EROA) of a toron	(0,5 – 10000) Bk/m^3
I64	Aerosol radiometer RAA-10 Operating manual MGFK968620.010 RE	Residential premises/Buildings; Public premises / Buildings; Industrial premises/Buildings	-	-	Equivalent equilibrium volumetric radon activity	(10 – 10000) Bk/m^3
I65	Aerosol radiometer RAA-10 Operating manual MGFC 968620.010RE	Residential premises/Buildings; Public premises/Buildings; Industrial Premises/Buildings; Public areas	-	-	Volumetric radon activity	(30 – 200000) Bk/m^3
					Equivalent equilibrium volume activity (EROA) of a toron	(0,5 – 10000) Bk/m^3
I66	PKDU.411000. 001. 02 RE Edition EFB-110A 018.2022	Territories of building plots (residential area); Sanitary protection zones; Residential premises/Buildings; Public premises/Buildings; Industrial premises/Buildings; Residential area territories; Industrial zone territories	-	-	Maximum sound level	(22 - 139)
					Equivalent sound level	(22 - 139) dBA
					Sound pressure levels in octave or third octave frequency bands	(22 - 139) dBA
					Sound pressure levels in octave frequency bands with geometric mean frequencies (2-16) Hz	(22 - 139) dBA
I67	PKDU.411000. 001. 02 RE Revision EFB-110A 018.2022	Residential zone territories; Industrial zone territories; Territories of building plots (residential territory); Sanitary protection zones; Residential premises/Buildings; Public premises/Buildings;	-	-	Corrected vibration acceleration value	(29 – 157) dBA
					Root-mean-square value vibration acceleration value in octave frequency bands	(29 - 157) dBA

		Industrial premises/Buildings				
I68	MI PKF-12-006 Revision 15	Residential zone territories; Industrial zone territories; Territories of building plots (residential territory); Sanitary protection zones; Residential premises/Buildings ; Public premises/Buildings; Industrial premises/Buildings	-	-	Sound pressure levels in octave or third octave frequency bands	(22 - 139) dBA
					Maximum sound level	(22 - 139) dBA
					Equivalent sound level	(22 - 139 (dBA)
					Sound pressure level in octaves (one-third octave) frequency bands in the range 31,5- 16000 Hz (25-20000 Hz)	(13 - 139) dB (11 - 139) dB
					Sound pressure levels in octave frequency bands with geometric mean frequencies (2-16) Hz	(20 - 139 (dB)
I69	MR 2.6.1.0333-23	Residential premises/Buildings; Industrial premises/Buildings; Public premises/Buildings;	-	-	Equivalent equilibrium volume activity (EROA) of a toron	(0,5 - 10000) Bq/m^3
					Equivalent equilibrium volume activity (EROA) of radon	(10 - 20000) Bq/m^3
					Radon flux density	(3 - 100000) MBq /(m^2 * s)
					Ambient gamma radiation dose equivalent capacity	(0.05 - 300) mSv * h^{-1}
I70	MR 2.6.1.0361-24	Premises/Buildings of residential use; Premises/Buildings of public use; Premises/Buildings of industrial use; Premises/Buildings of administrative and household use; Territories of building plots (residential territory); Public areas; Soils;	-	-	Radon flux density	(3 - 100000) MBq / (m^2 * s)
					Specific activity of Th-232	(8 – 50000000) Bq / kg
					Specific activity of Ra-226	(8 - 50000000) Bq / kg
					Specific activity of K-40	(40 - 50000000) Bq / kg
					Specific activity of Cs-137	(3 - 50000000) Bq / kg
					Ambient gamma radiation dose equivalent capacity	(0,05 - 300) mSv * h^{-1}
					Specific effective activity of the device	-
I71	FR.1.40.2017.25774 Methodology for measuring radionuclide activity using a scintillation gamma-spectrometer with “Progress” software	Soil; Soils; Bottom sediments; Activated sludge; Rock; Overburden; Host rocks;	-	-	Specific activity of Cs-137	(3 – 50000000) Bq / kg
					Specific activity of K-40	(40 – 50000000) Bq/ kg
					Specific activity of Ra-226	(8 - 50000000) Bq / kg

		Mineral materials; Biological objects; Waste; Industrial waste; Natural construction materials			Specific activity of Th- 232	(8 - 50000000) Bq / kg
					Specific effective activity of the device	-
172	FR.1.38.2018.30875 Method for measuring total alpha and total beta activity of radionuclides in thick-layer counting samples using the RKS-01A "Abelia" alpha-beta radiometer	Water; Drinking water; Natural water; Mineral water	-	-	Total alpha activity	(0,02 – 10000) Bq
					Total beta activity	(0,01 – 100,000) Bq
173	FR.1.40.2013.15386 Radiation monitoring methodology: gross alpha- and beta-activity of natural waters (fresh and mineralized). Sample preparation and measuremen performance	Water; Drinking water; Natural water; Mineral water	-	-	Total alpha activity	(0,02 – 10000) Bq
					Total beta activity	(0,01 – 100000) Bq

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