



ORDER

№ A 411

Sofia, 28.09.2023

Pursuant to Art. 10, para. 1, item 2a of the Law on National Accreditation of Conformity Assessment Bodies, in connecton with amendment of an element of the certificate content, according to item 4.3.8. f) of the BAS QR 2 Accreditation Procedure, report reg. № 175/50 ЛИ/18/В/25.09.2023 and EA BAS order reg. № A 410/28.09.2023, I hereby

AMEND

EA BAS order reg. № A 377/05.09.2023

**of Sofiyska voda AD
Laboratory Testing Complex**

Management address:

1618 Sofia, 159, Tsar Boris III Blvd, Interpred Business Center Tsar Boris, floors 2 and 3

Laboratory addresses:

Office 1: Drinking Water Unit, 1517 Sofia, Bunkera, 2, Hotnishki Vodopad Str.,
PSPV Bistritsa

Office 2: Waste Water Unit, 1278 Sofia, Benkovski, SPSOV Kubratovo

OFFICE 1: Drinking Water Unit, PSPV Bistritsa

To perform testing of:

Type of the scope: *Flexible for a part of the scope*

№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
1.	I. Water – drinking water (for drinking and household use, bottled table water, bottled spring water, bottled mineral water) (1); Water – spring and mineral water from the source (2); Water – surface water (3); Water – ground water (4);	1.1. pH	БДС EN ISO 10523 (1), (2), (3), (4), (6)
1.2. Alkalinity – total/ Alkalinity-composite / Alkalinity – total (as CaCO ₃) /Alkalinity – total (as HCO ₃)		БДС EN ISO 9963-1 (1), (2), (3), (4)	
1.3. Benzene		ВЛМ № PW-45/20.09.2016 (1), (2), (3), (4)	
1.4. Bromates		ВЛМ № PW-36/01.11.2012 (1), (2), (3), (4), (6)	
1.5. BOD ₅		БДС EN 1899-2 (1), (2), (3), (4)	

Type of the scope: *Flexible for a part of the scope*

№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
	Water – wastewater (5), Water from swimming pools (6)	1.6. Taste	БДС 8451 (1)
1.7. Electrical conductivity		БДС EN 27888 (1), (2), (3), (4)	
1.8. Mercury		ВЛМ № PW/ WW-01/ 22.05.2020 (1), (2), (3), (4), (5)	
1.9. Odor		БДС 8451 (1) ВЛМ PW/Log 03/15.08.2022, (2), (3), (4), (6)	
1.10. Turbidity		БДС EN ISO 7027-1 (1), (2), (3), (4)	
1.11. Nitrite		ВЛМ № PW- 07/12.05.2008 (1), (2), (3), (4), (6)	
1.12. Total hardness		БДС 3775 (1) ВЛМ PW/WW-02/27.07.2022 (2), (3), (4), (6)	
1.13. Total organic carbon (TOC) Dissolved organic carbon (DOC)/ Total inorganic carbon		БДС EN 1484 (1), (2), (3), (4)	
1.14. Permanganate Oxidizability/ Permanganate Index		БДС 3413 (1) БДС EN ISO 8467 (1), (2), (3), (4), (6)	
1.15. Polycyclic aromatic hydrocarbons /Benzo[a]pyrene Benzo[b]fluoranthene Benzo[k]fluoranthene Benzo[ghi] perylene Indeno[1,2,3-cd]pyrene/		ISO 28540 (1), (2), (3), (4)	
1.16. Dissolved oxygen		БДС EN ISO 5814 (1), (2), (3), (4) ISO 17289 (1), (2), (3), (4)	
1.17. Free chlorine/ total chlorine		БДС EN ISO 7393-2 (1), (2), (3), (4), (5), (6)	
1.18. Suspended solids		БДС EN 872 (1), (2), (3), (4), (6)	
1.19. Sulfates		EPA 375.4 (1), (2), (3), (4)	
1.20. Temperature		БДС 8451 (1) ВЛМ PW/Log 03/15.08.2022, (2), (3), (4), (6)	
1.21. Fluorides		ВЛМ № PW-10/13.05.2008 (1), (2), (3), (4)	
1.22. Phosphate / Phosphorus in phosphates/Phosphates as diphosphorus pentoxide		БДС EN ISO 6878 (1), (2), (3), (4), (6)	
1.23. Haloalkanes Chloroform Bromoform Bromodichloromethane Dibromochloromethane 1,2--Dichloroethane Trichloroethene Tetrachloroethene		ВЛМ №PW-38/01.06.2014 (1), (2), (3), (4), (6)	
1.24. Volatile organic compounds*		EPA 8260C (1), (2), (3), (4)	

Type of the scope: *Flexible for a part of the scope*

№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
			БДС EN ISO 15680 (1), (2), (3), (4)
		1.25. Pesticides* Organochlorine pesticides; Organophosphorus pesticides; Nitrogen-containing pesticides	ВЛМ №PW-29/01.09.2010 (1), (2), (3), (4) БДС EN 12918 (1), (2), (3), (4)
		1.26. COD	ISO 15705 (1), (2), (3), (4)
		1.27. Chromium – Hexavalent / Chromium – trivalent	APHA Method 3500- Cr (1), (2), (3), (4)
		1.28. Cyanides /free, easily liberatable/	ISO 6703-2 (1), (2), (3), (4)
		1.29. Cyanides (total)	БДС ISO 6703-1 (1), (2), (3), (4)
		1.30. Color	БДС EN ISO 7887 (1), (2), (3), (4), (6)
		1.31. Concentration of: - Aluminium, - Antimony, - Arsenic, - Barium, - Beryllium, - Boron, - Cadmium, - Calcium, - Chromium, - Cobalt, - Copper, - Iron/dissolved Iron, - Lead, - Lithium, - Magnesium, - Manganese, - Mercury, - Molybdenum, - Nickel, - Phosphorus, - Potassium, - Selenium, - Silver, - Sodium, - Strontium, - Tin, - Uranium, - Vanadium, - Zinc	БДС EN ISO 17294-2 (1), (2), (3), (4), (6)
		1.32. Concentration of: - Aluminium - Antimony - Arsenic - Barium - Boron - Beryllium - Vanadium - Iron /dissolved Iron - Tin - Cadmium	БДС EN ISO 11885 (1), (2), (3), (4), (5), (6)

Type of the scope: *Flexible for a part of the scope*

№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
		<ul style="list-style-type: none"> - Potassium - Calcium - Cobalt - Lithium - Magnesium - Manganese - Copper - Molybdenum - Sodium - Nickel - Lead - Selenium - Silver - Strontium - Phosphorus - Chromium - Zinc 	
		1.33. Concentration of: <ul style="list-style-type: none"> - Arsenic - Antimony - Selenium 	ВЛМ №PW-39/08.07.2014 (1), (2), (3), (4), (6)
		1.34. Concentration of: <ul style="list-style-type: none"> - Nitrates/ Nitrate nitrogen - Nitrites/ Nitrite nitrogen - Sulfates - Fluorides - Phosphate/ Phosphorus in Phosphates/ Phosphates as diphosphorus pentoxide - Chlorides 	БДС EN ISO 10304-1 (1), (2), (3), (4), (6)
		1.35. Concentration of: <ul style="list-style-type: none"> - Ammonium ions/ Ammonium nitrogen/ Nitrogen - ammonic - Calcium, - Sodium, - Magnesium 	БДС EN ISO 14911 (1), (2), (3), (4), (6)
		1.36. Concentration of: <ul style="list-style-type: none"> - Chlorates - Chlorites 	БДС EN ISO 10304-4 (1), (2), (3), (4), (6)
		MICROBIOLOGICAL TESTING OF WATER	
		1.37. Number of enterococci/ fecal streptococcus	БДС EN ISO 7899-2 (1), (2), (3), (4), (6)
		1.38. Number of the spores of sulfite-reducing anaerobes / Number of Clostridium perfringens (including spores)	БДС EN 26461-2 (1), (2), (3), (4)
		1.39. Clostridium perfringens	ISO 14189 (1), (2), (3), (4), (6)
		1.40. Number of coliform bacteria, Escherichia coli	БДС EN ISO 9308-1 (1), (2), (6)
		1.41. Number of coliform bacteria, Escherichia coli	БДС EN ISO 9308-2 (1), (3), (4)
		1.42. Number of coliform bacteria, Fecal coliforms, Escherichia coli	ВЛМ № PW-40/ 01.05.2014 (1), (2), (3), (4)

Type of the scope: Flexible for a part of the scope

№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
		1.43. Number of culturable microorganisms (Microbial count at 22°C and 37°C)	БДС EN ISO 6222 (1), (2), (3), (4), (6)
		1.44. Number of Pseudomonas aeruginosa	БДС EN ISO 16266 (1), (2), (3), (4), (6)
		1.45. Salmonella	ISO 19250 (E) (1), (2), (3), (4)
		1.46. Coliforms (titer)/ Fecal coliforms (titer)/ Escherichia coli (titer)	БДС 17335, Cl. 7 (6)
		1.47. Enterococci (titer)	БДС 17335, Cl. 8 (6)
		1.48. Staphylococci (titer)/ and Staphylococcus aureus (8)	БДС 17335, Cl. 9 (6)
		1.49. Microbial count at 37°C / Number of culturable microorganisms	БДС 17335, Cl. 6 (6)
		1.50. Somatic coliphages	БДС EN ISO 10705-2 (1), (2), (3), (4), (6) ISO 10705-3 Water quality - Detection and enumeration of bacteriophages - part 3: Validation of methods for concentration of bacteriophages from water (1), (2), (3), (4), (6)
		1.51. Legionella / Legionella spp	БДС EN ISO 11731 (1), (2), (3), (4), (6)
2.	II. Sludge – Solid (1) Liquid (2)	II.1. Mercury	ВЛМ № WW-60/30.04.2014 (1), (2)
		II.2. Concentration of: - Aluminium - Arsenic, - Chromium, - Copper, - Lead, - Molybdenum, - Nickel, - Zinc, - Selenium, - Iron, - Manganese, - Calcium, - Magnesium, - Phosphorus, - Potassium, - Cadmium	БДС EN 16170 (1), (2)
3.	III. Bleach	III.1. Active chlorine in bleach	ВЛМ №PW-27/31.07.2009
4.	IV. Aluminum-based coagulants	IV. 1. Concentration of Aluminum (Al)/ Aluminium(III) oxide (Al ₂ O ₃)	БДС EN 1302/AC, Cl. A.1

OFFICE 1: Drinking Water Unit, PSPV Bistritsa**To perform sampling of:**

Type of the scope: Flexible for a part of the scope		
№	Product	Sampling methods (standard/validated methods)
1	2	3
1.	Water – Drinking water, surface water, ground water, spring water, mineral water, swimming pools	БДС ISO 5667- 4 ISO 5667 - 5 ISO 5667- 6 ISO 19458 БДС ISO 5667-11 БДС 17335, cl. 2 БДС ISO 5667-21
2.	Aluminum-based coagulants	БДС EN 17034, Item 5

OFFICE 2: Waste Water Unit, SPSOV Kubratovo**To perform testing of:**

Type of the scope: Flexible for a part of the scope			
№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
1.	I. Water – drinking water (for drinking and household use, bottled table water, bottled spring water, bottled mineral water) (1); Water – spring and mineral water from the source (2); Water – surface water (3); Water – ground water (4); Water – wastewater (5), Water from swimming pools (6)	1.1. pH	БДС EN ISO 10523 (5)
		1.2. Ammonia / Ammonium ions/ Ammonium nitrogen/ Nitrogen - ammoniac	БДС 17.1.4 .10, Cl. 3 (5)
		1.3. Kjeldahl nitrogen/Organic nitrogen (Kjeldahl)	БДС EN 25663 (3), (5)
		1.4. Nitrogen – total	ВЛМ № WW- 21/27.05.2009 (1), (2), (3), (4), (5)
		1.5. Nitrogen - total (as a sum of Kjeldahl nitrogen, Nitrate nitrogen and Nitrite nitrogen)	БДС EN 25663 (5) БДС EN ISO 13395 (5) БДС EN ISO 10304-1 (5)
		1.6. Anionic synthetic surfactants	БДС 17.1.4.25 (1), (2), (3), (4), (5), (6)
		1.7. Alkalinity – total / Alkalinity - composite / Alkalinity – total (as CaCO ₃) / Alkalinity – total (as HCO ₃)	БДС EN ISO 9963-1 (5)
		1.8. BOD ₅	БДС EN 1899-2 (5)
			БДС EN ISO 5815-1 (3), (4), (5)
		1.9. Hydrocarbon oil index	БДС EN ISO 9377-2 (3), (4), (5)
		1.10. Electric conductivity	БДС EN 27888 (5)
		1.11. EOC-DE	ВЛМ № WW-03/ 26.05.2008 (5)
		1.12. Mercury	ВЛМ № PW/ WW -01/ 22.05.2020 (5)
		1.13. Concentration of: - Nitrates/ Nitrate nitrogen - Nitrites/ Nitrite nitrogen	БДС EN ISO 13395 (5)
		1.14. Total hardness	ВЛМ № PW/WW-02/ 27.07.2022 (5)
	1.15. Permanganate	БДС 17.1.4.16 (5)	

Type of the scope: *Flexible for a part of the scope*

№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
		oxidizability	
		1.16. Dissolved oxygen	БДС EN ISO 5814 (5)
		1.17. Dry residue/ dissolved solids	БДС 17.1.4.04 (3), (4), (5)
		1.18. Suspended solids	БДС EN 872 (5)
		1.19. Sulfates	EPA 375.4 (5)
		1.20. Sulfides	ISO 10530 (1), (2), (3), (4), (5)
		1.21. Sulfides/ Hydrogen sulfide	БДС 17.1.4.09 (3), (4), (5)
		1.22. Temperature	БДС 17.1.4.01 (5)
		1.23. Phenols	EPA 420.1 (5) EPA 8041A (1), (2), (3), (4), (5) EPA 3510C (1), (2), (3), (4), (5)
		1.24. Fluorides	ВЛМ № WW- 15/27.05.2008 (5)
		1.25. Phosphates / Phosphorus in Phosphates/Total Phosphorus	БДС EN ISO 6878 (5)
		1.26. Chlorides	БДС 17.1.4.24, Cl. 1 (5)
		1.37. COD	ISO 15705 (3), (4), (5)
		1.28. Chromium - hexavalent/ Chromium - trivalent	APHA Method 3500- Cr (5)
		1.29. Cyanides (free, easily liberatable)	ISO 6703-2 (5)
		1.30. Cyanides (total)	БДС ISO 6703-1 (5)
		1.31. Concentration of: - Aluminium - Antimony - Arsenic - Barium - Boron - Beryllium - Vanadium - Iron /dissolved Iron - Tin - Cadmium - Potassium - Calcium - Cobalt - Lithium - Magnesium - Manganese - Copper - Molybdenum - Sodium - Nickel - Lead - Selenium - Silver - Strontium - Phosphorus - Chromium - Zinc	БДС EN ISO 11885 (5)

Type of the scope: <i>Flexible for a part of the scope</i>			
Nº	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
1		1.32. Concentration of: - Nitrates/ Nitrite nitrogen - Nitrites /Nitrite nitrogen - Sulfates - Fluorides - Phosphates / Phosphorus in Phosphates/ Phosphates as diphosphorus pentoxide - Chlorides	БДС EN ISO 10304-1 (5), (6)
		1.33. Concentration of: - Ammonium ions/ Ammonium nitrogen/ Nitrogen - ammoniac - Calcium, - Sodium, - Magnesium	БДС EN ISO 14911 (5), (6)
		1.34. AOX	БДС EN ISO 9562 (1), (3), (4), (5)
		1.35. Chloroform-extractable compounds	ВЛМ №WW-76/01.01.2020 (1), (2), (3), (4), (5), (6)
2.	II. Sludge Solid (1) Liquid (2) Treated biowaste (3) Soils (4)	II.1. pH	БДС EN ISO 10523 (2) БДС EN ISO 10390 (1), (2), (3), (4)
		II.2. Kjeldal nitrogen	БДС EN 13342 (1), (2)
		II.3. Ammonium Nitrogen	БДС ISO 5664 (1), (2)
		II.4. Nitrates/ Nitrate nitrogen	БДС EN ISO 13395 (1), (2), (3), (4) БДС EN ISO 10304-1 (1), (2), (3), (4)
		II.5. Mercury	ВЛМ № WW-60/30.04.2014 (1), (2), (3), (4)
		II.6. FOS/TAC ratio	ВЛМ № WW- 71/25.08.2016
		II.7. Dry residue/humidity (water content)	БДС EN 12880 (1), (2), (3), (4)
		II.8. Loss on ignition/ Residue on ignition	БДС EN 15935 (1), (2), (3), (4)
		II.9. Concentration of: - Aluminium - Arsenic, - Chromium, - Copper, - Lead, - Molybdenum, - Nickel, - Zinc, - Selenium, - Iron, - Manganese, - Calcium, - Magnesium, - Phosphorus, - Potassium, - Cadmium	БДС EN 16170 (1), (2), (3), (4)
		11.10. - Phosphorus as P ₂ O ₅ (Exchange forms obtained in BaCl ₂ extracts)	ISO 22036 (1), (2), (3), (4)

Type of the scope: <i>Flexible for a part of the scope</i>			
№	Tested products	Type of test / characteristic	Testing methods (standard / validated methods)
1	2	3	4
		- Potassium as K ₂ O (Exchange forms obtained in BaCl ₂)	
		II.11. Sulfates/Sulfur in Sulfates	БДС ISO 11048 (1), (2), (3), (4) БДС EN ISO 10304-1 (1), (2), (3), (4)
		MICROBIOLOGICAL AND PARASITOLOGICAL TESTS OF SLUDGE	
		II.12. Escherichia coli	СД CEN/TR 16193 (1), (2), (3), (4)
		II.13. Salmonella spp.	СД CEN/TR 15215-3 (1), (2), (3), (4) ВЛМ № WW- 78/01.06.2021 (1), (2), (3), (4)
		II. 14. Clostridium perfringens	ВЛМ № WW-46/ 01.10.2010 (1), (2), (3), (4)
		II.15. Viable helminth eggs	ВЛМ № WW - 45/01.10.2010 (1), (2), (3), (4)
3.	III. Iron (III) chloride	III.1. Concentration of Iron (III) chloride	ВЛМ № WW -67/10.03.2015
		IV. 1. Concentration of Aluminum (Al)/ Aluminium (III) oxide (Al ₂ O ₃)	БДС EN 1302/AC, Cl. A.1
		IV.2. Insoluble matter	БДС EN 1302/AC, Cl. A. 13
		IV.3. Concentration of: - Chromium (Cr) - Nickel (Ni) - Cadmium (Cd) - Lead (Pb) - Arsenic (As) - Selenium (Se) - Antimony (Sb) - Iron (Fe)	БДС EN 1302/AC, Cl. A. 14 (Ni, Pb, Cd, Cr) A.15 (As, Se, Sb) Annex B, B.2 (for Iron)
4.	IV. Aluminum-based coagulants	IV.4. Concentration of: Manganese (Mn) Calcium (Ca)	ВЛМ № WW-74/01.01.2020
		IV.5. Concentration of: Mercury (Hg)	ВЛМ № WW-75/01.01.2020

OFFICE 2: Waste Water Unit, SPSOV Kubratovo

To perform sampling of:

Type of the scope: <i>Flexible for a part of the scope</i>		
№	Product	Sampling methods (standard/validated methods)
1	2	3
1	Water – Wastewater	БДС ISO 5667-10
2	Sludge – Solid, Liquid	БДС EN ISO 5667-13
3	Iron (III) chloride	БДС EN 17215, Item 5

Flexible Scope:

Implementing a new version of standards/documents or standards / documents replacing them is allowed. An updated list of standards/documents and their dated versions is provided by laboratory.

* Within the framework of its competence the laboratory is authorized to determine all characteristics (column 3) that are applicable to the product group (column 2), having checked/ascertained and ensured compliance with certified reference materials/reference materials and having used calibrated equipment. The laboratory will maintain a detailed, dated list of the products and the characteristics of the products that fall within the scope of the accreditation.

Fixed scope references:

1. ВЛМ № WW-21/27.05.2009; Nitrogen (total). Spectrophotometric method for the determination of Nitrogen -Total in water
2. ВЛМ № PW-39/08.07.2014: Determination of Arsenic, Selenium, Antimony in water by ICP-OES and hydride system.
3. ВЛМ № PW-45/20.09.2016 Determination of Benzene in water
4. ВЛМ № PW-36/01.11.2012 Water quality. Determination of Bromate in water with Ion Chromatography.
5. ВЛМ № PW-40/01.05.2014 Detection and enumeration the number of e- coli, coliform bacteria and fecal coliforms in water. Membrane filtration method.
6. ВЛМ № PW-07/12.05.2008. Nitrite. Spectrophotometric method for determining Nitrite in water.
7. ВЛМ № PW-10/13.05.2008 Fluorides. Spectrophotometric method for the determination of Fluorides in water.
8. ВЛМ № PW-38/01.06.2014 Determination of highly volatile halogenated hydrocarbons in water by GC-MS/MS.
9. ВЛМ № PW-29/01.09.2010: Determination of the content of pesticides in water with GC-MS/MS.
10. ВЛМ № WW-03/26.05.2008 Extractable organic compounds with diethyl ether- (EOC-DE). Gravimetric method for the determination of EOC-DE in wastewater.
11. ВЛМ № WW-15/27.05.2008 Fluoride. Spectrophotometric method for the determination of Fluoride in wastewater
12. ВЛМ № WW-60/30.04.2014 Determination of Mercury in sludge, biowaste and soils by ICP-OES and hydride systems
13. ВЛМ № WW-71/25.08.2016 Determination of the FOS/TAC ratio (volatile fatty acids to buffer capacity ratio) in sludge
14. ВЛМ № WW- 46/01.10.2010 Detection of Clostridium perfringens in sludge, soils and treated biowastes. Macro-method (most probable number) by inoculation into selective liquid medium
15. ВЛМ № WW - 45/01.10.2010 Detection and enumeration of viable helminth eggs - floatation method.
16. ВЛМ № PW -27/31.07.2009 Determining the content of active chlorine in bleach.
17. ВЛМ № WW -67/10.03.2015 Determination of the concentration of ferric chloride.
18. ВЛМ № WW-74/01.01.2020 Analysis of elements in aluminum-based coagulant
19. ВЛМ № WW-75/01.01.2020 Analysis of mercury in aluminum-based coagulant with hydride system.
20. ВЛМ № PW/ WW-01/22.05.2020 Method for determining Mercury in water by ICP-OES and hydride system.
21. ВЛМ № WW-76/01.01.2020 Determination of chloroform-extractable compounds
22. ВЛМ № WW- 78/01.06.2021 Method for proving presence/absence of Salmonella spp. via PCR in real time.
23. ВЛМ № PW/WW-02/27.07.2022 Determination of total hardness of water
24. ВЛМ № PW/Log-03/15.08.2022 Determination of odor and temperature

I ORDER

To issue the certificate of accreditation reg. № 50 ЛИ/28.09.2023, valid until 16.08.2026, and this order as an integral part of it.

The certificate of accreditation with the enclosure to be received by the Manager / representative of the Sofiyska voda AD, the head of Laboratory Testing Complex, at Sofiyska voda AD, or other authorized person in the office of EA BAS.

Upon receipt of the certificate and the enclosure issued, the accredited person is obliged to return to EA BAS the originals of accreditation certificate № 50 ЛИ/05.09.2023 valid until 16.08.2026 and its enclosure – EA BAS order reg. № A 377/05.09.2023.

This order shall be notified to the Sofiyska voda AD, within 3 (three) days from its issuance.

Eng. Irena Borislavova

Executive Director of EA BAS

