Version 1/Revision 1- 2022/08/01



## QL 5.0-4 Laboratory activities performed in LAKOS with fixed and flexible scope

#### 1. EXPERIENCE

|       | Description of   | Test type/            | Test  | t methods (standard/validated)   |                    |
|-------|--|-----------------------|---|--|--------------------|
| By Nº | tested products  | characteristic        | Identification                              | Designation  | Type of scope      |
| 1     | 2  | 3                     | 4   | 5  | 6                  |
| I.    | Waters, waste (1);                                     |                       | БДС EN ISO 10523:2012<br>(1, 2, 3, 4, 5, 6) | Water quality. Method For determining pH   | FLEXIBL<br>E SCOPE |
|       | Waters, running surface (2);                           | 1. Active reaction/pH | БДС 3424:1981 ( 4 )                         | Drinking water. Method For determining pH  | FLEXIBLE<br>SCOPE  |
|       | Waters, coastal sea (3); Waters,                       |                       | EPA 150.1 :1982 (1, 2, 3, 4, 5, 6)          | pH   | FLEXIBLE<br>SCOPE  |
|       | drinking (4)<br>Waters, lake (5)<br>Waters, ground (6) | 2. Temperature        | БДС 17.1.4.01:1977 (1)                      | Nature protection. Hydrosphere. Water quality indicators. A method For determining scent, color and temperature                                | FLEXIBLE<br>SCOPE  |
|       |  | ·                     | VILM 34:2021 (1, 2, 3, 4, 5, 6)             | Water quality. Method For measuring temperature in water   | FIXED<br>SCOPE     |
|       |  | 3. 1 Total dry solids | БДС 17.1.4.04:1980 (1, 2, 4,                | Nature protection. Hydrosphere. Water quality indicators. Method For determining the content   | FLEXIBLE SCOPE     |
|       |  | 3.2 Dissolved solids  | 5, 6)                                       | of total solids, undissolved and dissolved solids  |                    |
|       |  | 3.3 Suspended solids  | БДС 17.1.4.04:1980 (1, 2, 4, 5, 6)          | Nature protection. Hydrosphere. Water quality indicators. Method For determining the content of total solids, undissolved and dissolved solids | FLEXIBLE<br>SCOPE  |
|       |  | Undissolved solids    | БДС EN 872 :2006 (1, 2, 4, 5, 6)            | Water quality. Determination of suspended solids. Method with filtration through glass fiber filters.  | FLEXIBLE<br>SCOPE  |
|       |  |                       | БДС 17.1.4.24:1980 (1, 2, 5, 6)             | Nature protection. Hydrosphere. Water quality indicators. Method For determining chloride content  | FLEXIBLE<br>SCOPE  |
|       |  | 4. Chlorides          | ISO 9297:1989 (1, 2, 4, 5, 6)               | Water quality. Determination of chlorides. Titration with silver nitrate solution with potassium chromate indicator /Mohr's method/            | FLEXIBLE<br>SCOPE  |



|  |  |   | _                 |
|--|--|---|-------------------|
|  | БДС EN ISO 10304-1:2009<br>(1, 2, 4, 5, 6) | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
| 5. 1 . Total chlorine                                  | БДС EN ISO 7393-3:2001 (1, 2, 4, 5, 6)     | Water quality. Determination of nitrate content. Spectrophotometric method with sulfosalicylic acid.  | FLEXIBLE<br>SCOPE |
| 5.2 . Free chlorine<br>5.3 . Residual free<br>chlorine | VILM 21 :2007 (1, 2, 4 , 5, 6 )            | Water quality. Determination of free ( residual ) chlorine in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
| 6. COD/<br>Bichromatic oxidation                       | ISO 15705 :2002 (1, 2,4,5,6)               | Water quality. Determination of COD. Micromethod in closed vessels .  | FLEXIBLE<br>SCOPE |
| 7. 1 Ammonium  | БДС ISO 7150-1:2002 (1, 2, 4, 5, 6)        | Water quality. Determination of ammonium. Manual spectrometric method.  | FLEXIBLE<br>SCOPE |
| 7.2 Ammonium ions                                      | БДС ISO 7150-1:2002 (1, 2, 4, 5, 6)        | Water quality. Determination of ammonium. Manual spectrometric method.  | FLEXIBLE<br>SCOPE |
| 7.3 Ammoniacal nitrogen                                | VILM 29:2011 (1, 2, 3, 4, 5, 6)            | Water quality. Determination of ammonium ions and ammonium nitrogen in water and aqueous extract of waste (eluates)   | FIXED<br>SCOPE    |
|  | БДС EN 26777:1997 (1, 2, 4, 5, 6)          | Water quality. Determination of nitrite content Molecular absorption spectrometric method.  | FLEXIBLE<br>SCOPE |
| 8. Nitrites /  | VILM 30:2011 (1, 2, 3, 4, 5, 6)            | Water quality. Determination of nitrites and nitrogen nitrite in water and aqueous extract of waste (eluates)   | FIXED<br>SCOPE    |
| Nitrite-nitrogen                                       | БДС EN ISO 10304-1:2009<br>(1,2,4,5,6)     | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
| 9. Nitrates/<br>Nitrate-nitrogen                       | БДС ISO 7890-3:1998 (1, 2, 4, 5, 6)        | Water quality. Determination of nitrate content. Spectrophotometric method with sulfosalicylic  | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



|  |                            |  | acid.   |                   |
|--|----------------------------|--|---|-------------------|
|  |                            | VILM 11:2006 (1, 2, 4, 5, 6)               | Water quality. Determination of nitrates and nitrate nitrogen in water and aqueous extract of waste (eluates)   | FIXED<br>SCOPE    |
|  |                            | VILM 15:2007 (3)                           | Water quality. Determination of nitrates and nitrate nitrogen in seawater   | FIXED<br>SCOPE    |
|  |                            | БДС EN ISO 10304-1:2009<br>(1, 2, 4, 5, 6) | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
|  | 10. Sulfides/              | БДС 17.1.4.09:1979 (1, 2, 5, 6)            | Nature protection. Hydrosphere. Water quality indicators. Method For determining the content of dissolved sulfides and free hydrogen sulfide.   | FLEXIBLE<br>SCOPE |
|  | Hydrogen sulfide           | VILM 16:2006 (1, 2, 4, 5, 6)               | Water quality. Determination of sulfides and hydrogen sulfide in water  | FIXED<br>SCOPE    |
|  |                            | ISO 11083:1994 (1, 2, 4, 5, 6)             | Water quality. Method For determining the content of chromium (hexavalent).   | FLEXIBLE<br>SCOPE |
|  | 11.1<br>Hexavalent         | VILM 03:2005 (1, 2, 3, 4, 5, 6)            | Water quality. Determination of chromium in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
|  | chromium                   | БДС 17.1.4.17:1979 (1, 2, 5, 6)            | Nature protection. Hydrosphere. Water quality indicators. Method For determining chromium content (total, hexavalent and trivalent).  | FLEXIBLE<br>SCOPE |
|  | 11.2 T : 1.1               | VILM 03 :2005 (1, 2, 3, 4, 5, 6)           | Water quality. Determination of chromium in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
|  | 11.2 Trivalent<br>chromium | БДС 17.1.4.17:1979 (1, 2, 5, 6)            | Nature protection. Hydrosphere. Water quality indicators. Method For determining chromium content (total, hexavalent and trivalent).  | FLEXIBLE<br>SCOPE |
|  |                            | VILM 03 :2005 (1, 2, 3, 4, 5, 6)           | Water quality. Determination of chromium in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
|  | 11.3 Total chromium        | БДС 17.1.4.17:1979<br>(1, 2, 5, 6)         | Nature protection. Hydrosphere. Water quality indicators. Method For determining chromium content (total, hexavalent and trivalent).  | FLEXIBLE<br>SCOPE |



|  |   | БДС EN ISO 11885:2009<br>(1, 2, 4, 5, 6) | Water quality. Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)  | FLEXIBLE<br>SCOPE |
|--|---|--|--|-------------------|
|  | 12. Iron dissolved/                           | БДС ISO 6332:2002 (1, 2, 4, 5, 6)        | Water quality. Determination of iron. A spectrometric method with 1,10-phenanthroline  | FLEXIBLE<br>SCOPE |
|  | Iron total                                    | БДС EN ISO 11885:2009 (1, 2, 4,5,6)      | Water quality. Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)  | FLEXIBLE<br>SCOPE |
|  |   | БДС EN 1899-2 :2004 (1,2,3,<br>4,5,6)    | Water quality. Determination of biochemical oxygen demand after n days (BODn). Part 2: Method For undiluted samples.   | FLEXIBLE<br>SCOPE |
|  | 13. Biochemical oxygen demand $BOD_5$         | БДС EN ISO 5815-1:2019<br>(1,2,3,4,5,6)  | Water quality. Determination of biochemical oxygen demand after n days (BODn). Part 1: Dilution and seeding method with the addition of allylthiourea (ISO 5815-1:2019).   | FLEXIBLE<br>SCOPE |
|  |   | ISO 5815-2:2003 (1, 2, 3, 4, 5, 6)       | Water quality. Determination of biochemical oxygen consumption after n days (BODn). Part 2: Method For undiluted samples   | FLEXIBLE<br>SCOPE |
|  | 14. 1 Nitrogen total/<br>Total bound nitrogen | ISO 20236:2018 (1, 2, 3, 4, 5, 6)        | Water quality. Determination of total organic carbon (TOC), dissolved organic carbon (DOC), total bound nitrogen (TNb) and dissolved bound nitrogen (DNb) after high temperature catalytic oxidation combustion (ISO 20236:2018) | FLEXIBLE<br>SCOPE |
|  | 14.2 Total Kjeldahl<br>nitrogen               | БДС E N 25663 :2000 (1, 2, 4, 5, 6)      | Water quality. Determination of nitrogen by Kjeldahl. Method after mineralization with selenium  | FLEXIBLE<br>SCOPE |
|  | muogen  | ERA 351.3:1978 (2, 5)                    | Nitrogen, Kjeldahl, General (colorimetric, titrimetric, potentiometric)  | FLEXIBLE<br>SCOPE |
|  | 15. Petroleum                                 | VILM 01:20 21 (1, 2, 3, 4, 5, 6)         | Water quality. Determination of extractable substances and oil products in water   | FIXED<br>SCOPE    |
|  | products/<br>Hydrocarbon index                | EPA 1664B:2010 (1, 2, 4, 5, 6)           | Determination of n-Hexane Extractable Substances (HEM; Oils and Fats) and Silica Gel Treated Products (SGT-HEM; Non-Polar Material)  | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



|   | +  |  |                   |
|---|--|--|-------------------|
|   |  | by Extraction and Gravimetry   |                   |
|   | БДС EN ISO 9377-2:2004 (1, 2, 5, 6)                                | Water quality. Determination of hydrocarbon index For petroleum products. Part 2: Method by solvent extraction and gas chromatography (ISO 9377-2:2000)  | FLEXIBLE<br>SCOPE |
| 16. 1 Phenols   | БДС ISO 6439:2002<br>(1, 2, 4, 5)                                  | Water quality. Determination of phenolic index. Spectrometric method with 4-aminoantipyrine after distillation   | FLEXIBLE<br>SCOPE |
|   | VILM 20:2007 (1, 2, 5, 6)  | Water quality. Determination of phenols in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
| 16.2 Phenol index                                       | БДС ISO 6439:2002<br>(1, 2, 3, 4, 5)                               | Water quality. Determination of phenolic index. Spectrometric method with 4-aminoantipyrine after distillation   | FLEXIBLE<br>SCOPE |
| 17. 1 Total phosphorus (P t)                            | БДС E N ISO 6878:2005<br>(1, 2, 3, 4, 5, 6)                        | Water quality. Determination of phosphorus. Spectrometric method with ammonium molybdate.  | FLEXIBLE<br>SCOPE |
| 17.2 Phosphorus such as phosphates (PO <sub>4</sub> - ) |  | Water quality. Determination of phosphates and total phosphorus in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
| 17.3 Phosphates (PO 4)                                  | БДС E N ISO 6878:2005  | Water quality. Determination of phosphorus. Spectrometric method with ammonium molybdate.  | FLEXIBLE<br>SCOPE |
| 17.4 Phosphates (such as P)                             | (1,2,3,4,5,6)<br>VILM 12:2006                                      | Water quality. Determination of phosphates and total phosphorus in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
| 17.5 Orthophosphate                                     | - (1, 2, 3, 4, 5, 6)<br>БДС EN ISO 10304-1:2009<br>(1, 2, 4, 5, 6) | Water quality. Determination of Dissolved Anions by Ion Liquid Chromatography. Part 1: Determination of bromides, chlorides, fluorides, nitrates, nitrites, phosphates and sulphates (ISO 10304-1:2007). | FLEXIBLE<br>SCOPE |
| 18. Content of Items<br>18.1. Aluminum/Al               | БДС EN ISO 11885 :2009<br>(1, 2, 4, 5, 6)                          | Water quality. Determination of selected elements by inductively coupled plasma optical  | FLEXIBLE SCOPE    |

Version 1/Revision 1- 2022/08/01



| 18.2. Arse  | n/As        |                                     | emission spectrometry (ICP-OES)  |                   |
|-------------|-------------|-------------------------------------|--|-------------------|
| 18.3. Antir |             |                                     | composition spectrometry (10) = 10)  |                   |
| 18.4. Bariu |             |                                     |  |                   |
| 18.5. Bor/l |             |                                     |  |                   |
| 18.6. Seler |             |                                     |  |                   |
| 18.7. Cadn  |             |                                     |  |                   |
| 18.8. Potas |             |                                     |  |                   |
| 18.9. Coba  | lt/Co       |                                     |  |                   |
| 18.10.      |             |                                     |  |                   |
| Manganese   | e/Mn        |                                     |  |                   |
| 18.11.      |             |                                     |  |                   |
| Molybdenu   | m/Mo        |                                     |  |                   |
| 18.12. Sod  | lium/Na     |                                     |  |                   |
| 18.13. Nicl | kel/Ni      |                                     |  |                   |
| 18.14. Cop  | per/Cu      |                                     |  |                   |
| 18.15. Zinc | c/Zn        |                                     |  |                   |
| 18.16. Lea  | d/Pb        |                                     |  |                   |
| 18.17. Silv | er /Ag      |                                     |  |                   |
| 18.18. Van  | iadium/ V   |                                     |  |                   |
| 18.19 . Tin | / Sn        |                                     |  |                   |
| 18.20 . Be  | ryllium/Be  |                                     |  |                   |
| 18.21. Tha  | IIIIIm / II | EPA 6010C :2007<br>(1, 2, 4, 5, 6)  | Inductively coupled plasma-atomic emission spectrometry  | FLEXIBLE<br>SCOPE |
| 19. Mercur  |             | VILM 28 :2013<br>(1, 2, 4 , 5, 6 )  | Water quality. Determination of mercury by ICP  – OES in water and aqueous waste extract (eluates)               | FIXED<br>SCOPE    |
|             | I           | EPA 6010C :2007<br>(1, 2, 4, 5, 6)  | Inductively coupled plasma-atomic emission spectrometry  | FLEXIBLE<br>SCOPE |
| 20.1. Cyan  | IMAC Traa   | VILM 17:2006<br>(1, 2, 3, 4, 5, 6)  | Water quality. Determination of total cyanides and free cyanides in water and aqueous extract of waste (eluates) | FIXED<br>SCOPE    |
| 20.2. Cyan  | IIMAS TOTAL | VILM 17 :2006<br>(1, 2, 3, 4, 5, 6) | Water quality. Determination of total cyanides and free cyanides in water and aqueous extract                    | FIXED<br>SCOPE    |

Version 1/Revision 1- 2022/08/01



|  |                      |   | of waste (eluates)  |                   |
|--|----------------------|---|---|-------------------|
|  |                      | БДС 17.1.4.14:1979<br>(1, 2, 5, 6)                | Nature protection. Hydrosphere. Water quality indicators. Method For determining the cyanide content  | FLEXIBLE<br>SCOPE |
|  |                      | БДС EN ISO 7887:2012-<br>Method A (2, 4, 5)       | Water quality. Research and determination of color.   | SCOPE             |
|  | 21.1. Color          | БДС 17.1.4.01:1977 (1)                            | Nature protection. Hydrosphere. Water quality indicators. A method For determining odourl, color and temperature  | FLEXIBLE<br>SCOPE |
|  |                      | БДС 8451:1977 (4)                                 | Drinking water. Determination of color, taste and odour, temperature and transparency   | FLEXIBLE<br>SCOPE |
|  | 21.2. Odour          | БДС 17.1.4.01:1977 (1)                            | Nature protection. Hydrosphere. Water quality indicators. A method For determining odour, color and temperature   | FLEXIBLE<br>SCOPE |
|  |                      | БДС 8451:1977 (4)                                 | Drinking water. Determination of color, taste and odour, temperature and transparency   | FLEXIBLE<br>SCOPE |
|  | 21.3. Taste          | БДС 8451:1977 (4)                                 | Drinking water. Determination of color, taste and odour, temperature and transparency   | FLEXIBLE<br>SCOPE |
|  | 22 Disselved evugen  | БДС EN 25813:2004<br>(1, 2, 3, 4, 5, 6)           | Water quality. Determination of dissolved oxygen. Iodometric method.  | FLEXIBLE<br>SCOPE |
|  | 22. Dissolved oxygen | ISO 5813:1983<br>(1, 2, 3, 4, 5, 6)               | Water quality. Determination of dissolved oxygen. Iodometric method   | FLEXIBLE SCOPE    |
|  |                      | БДС 17.1.4.03:1977<br>(1, 2, 5, 6)                | Nature protection. Hydrosphere. Water quality indicators. Method For determining the content of sulfate ions  | SCOPE             |
|  | 23.1. Sulphates      | VILM 31:2016<br>(1, 2, 3, 4, 5, 6)                | Water quality. Determination of sulfates and their Forms in water and water extraction of waste (eluates)   | FIXED<br>SCOPE    |
|  | 25.1. Sulphuces      | ISO 15923-1:2013-Method<br>(G)<br>(1, 2, 4, 5, 6) | Water quality - Determination of selected parameters by discrete analytical systems. Part 1: Ammonium, Nitrates, Nitrites, Chlorides, Orthophosphates, Sulphates and Silicates with photometric detection | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01

|  | БДС EN ISO 10304-1:2009<br>(1, 2, 4, 5, 6) | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
|--|--|---|-------------------|
| 23.2. Sulphates such as sulphur        | VILM 31 :2016<br>(1, 2, 3, 4, 5, 6)        | Water quality. Determination of sulfates and their Forms in water and water extraction of waste (eluates)   | FIXED<br>SCOPE    |
| 24.1 Permanganate oxidation            | БДС 17.1.4.16:1979<br>(1, 2, 5, 6)         | Nature protection. Hydrosphere. Water quality indicators. Method For determination of permanganate oxidizability  | FLEXIBLE<br>SCOPE |
| 24.2 Permanganate index                | БДС EN ISO 8467:2001<br>(2, 4, 5, 6)       | Water quality. Determination of permanganate index  | FLEXIBLE<br>SCOPE |
| 2 5 .1. Total<br>hardness              | БДС ISO 6059:2002<br>(2, 4,5,6)            | Water quality. Determination of the sum of calcium and magnesium. Titrimetric method with EDTA  | FLEXIBLE<br>SCOPE |
| naruness                               | ERA 130.2:1982 (1)                         | Hardness, total (mg/L as CaCO3), (titrimetric, EDTA)  | FLEXIBLE<br>SCOPE |
| 25. 2. Permanent (                     | БДС ISO 6059:2002<br>(2, 4,5, 6)           | Water quality. Determination of the sum of calcium and magnesium. Titrimetric method with EDTA  | FLEXIBLE<br>SCOPE |
| non-carbonate )<br>hardness            | БДС EN ISO 9963-1:2000<br>(1, 2, 4, 5, 6)  | Water quality. Determination of alkalinity. Part 1: Determination of total alkalinity and its constituents and parts.   | FLEXIBLE<br>SCOPE |
| 2 5 .3. Temporary (carbonate) hardness | БДС EN ISO 9963-1:2000<br>(1, 2, 4, 5, 6)  | Water quality. Determination of alkalinity. Part 1: Determination of total alkalinity and its constituents and parts.   | FLEXIBLE<br>SCOPE |
| 2 6 . Extractable                      | VILM 01:20 21<br>(1, 2, 3, 4, 5, 6)        | Water quality. Determination of extractable substances and oil products in water  | FIXED<br>SCOPE    |
| substances                             | EPA 1664B:2010<br>(1, 2, 4, 5, 6)          | Determination of n-Hexane Extractable<br>Substances (HEM; Oils and Fats) and Silica Gel<br>Treated Products (SGT-HEM; Non-Polar Material)   | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



|   |  | by Extraction and Gravimetry   |                   |
|---|--|--|-------------------|
|   | БДС 17.1.4.25:1980<br>(1, 2, 5, 6)           | Nature protection. Hydrosphere. Water quality  |                   |
| 2 7 . Anionic<br>surfactants ,<br>SPAThe/ | 1 6/10 EN 9031/004                           | Water quality. Determination of anionic surfactants by methylene blue index measurement - MBAS (ISO 7875-1:1984, with changes) | FLEXIBLE<br>SCOPE |
|   | ISO 7875-1:1996<br>(1, 2, 4, 5,6)            | Water quality. Spectrometric determination of the content of anionic synthetic surfactants (asurfactants).                     | FLEXIBLE<br>SCOPE |
| 2 8 . Total A<br>Composite A              | **   **                                      | constituents and parts.  | FLEXIBLE<br>SCOPE |
| 29 . Carbon<br>(such as Ca                | 1  | Water quality. Determination of alkalinity. Part 1: Determination of total alkalinity and its constituents and parts.          | FLEXIBLE<br>SCOPE |
| 3 0 . Hydrog carbonates                   | gen БДС EN ISO 9963-1:200<br>(1, 2, 4, 5, 6) | Water quality. Determination of alkalinity. Part 1: Determination of total alkalinity and its constituents and parts.          | FLEXIBLE<br>SCOPE |
|   | БДС ISO 605 8 :2002<br>(1, 2, 4, 5, 6)       | Water quality. Determination of calcium content.  Titrimetric method with EDTA   | FLEXIBLE<br>SCOPE |
| 31 . Calcium                              |  | Water quality. Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)        | FLEXIBLE<br>SCOPE |
| 32 . Magnes                               | БДС EN ISO 11885:2009<br>( 1, 2, 4, 5, 6 )   | Water quality. Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES)        | FLEXIBLE<br>SCOPE |
| 33 . fluoride                             | VILM 13 :2006<br>(1, 2, 3, 4, 5, 6)          | Water quality. Determination of fluorides in water and aqueous extraction of waste (eluates)                                   | FIXED<br>SCOPE    |
| Fluorides (s                              | ,  | Drinking water. Methods For determining the content of fluorine  | FLEXIBLE<br>SCOPE |
|   | БДС EN ISO 10304-1:20                        | 09 Water quality. Determination of Dissolved Anions  | FLEXIBLE          |



|     |                              |  | (1, 2, 4, 5, 6)                             | by Ion Liquid Chromatography. Part 1: Determination of bromides, chlorides, fluorides, nitrates, nitrites, phosphates and sulphates (ISO 10304-1:2007)  | SCOPE             |
|-----|------------------------------|--|---|---|-------------------|
|     |                              | 34 . Conductivity/<br>Specific conductivity          | БДС EN 27888:2000<br>(1, 2, 3, 4, 5, 6)     | Water quality. Determination of electrical conductivity.  | FLEXIBLE<br>SCOPE |
|     |                              | 35 . Total organic<br>carbon /<br>TOC /              | VILM 22:2007 (1, 2, 4, 5, 6)                | Water quality. Determination of total organic carbon in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
|     |                              | Dissolved organic carbon                             | БДС EN 1484:2001 (1, 2, 3, 4, 5, 6)         | Water analysis. Guidelines For the determination of total organic carbon (TOC) and soluble organic carbon (DOC)   | FLEXIBLE<br>SCOPE |
|     |                              | 3 6 . Oils and fats                                  | EPA 1664B:2010(1,2,3,4,5,6)                 | Determination of n-Hexane Extractable Substances (HEM; Oils and Fats) and Silica Gel Treated Products (SGT-HEM; Non-Polar Material) by Extraction and Gravimetry  | FLEXIBLE<br>SCOPE |
|     |                              | 37. Turbidity  | БДС EN ISO 7027 -1:2016 (1, 2, 4, 5, 6)     | Water quality. Determination of turbidity. Part 1: Quantitative methods (ISO 7027-1:2016)   | FLEXIBLE<br>SCOPE |
|     |                              | 38. Bromates   | VILM 02 : 2015 (4, 6)                       | Water quality. Determination of bromates in water   | FIXED<br>SCOPE    |
|     |                              | 39. Adsorbable organic halides/AOX                   | VILM 04 :2016 (1, 2, 4, 5, 6)               | Water quality. Determination of adsorbable organic halides (AOH) in water   | FIXED<br>SCOPE    |
|     |                              | 4 0 . Bromides                                       | БДС EN ISO 10304-1 :2009<br>(1, 2, 4, 5, 6) | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
| II. | Air, atmospheric - emissions | 1. Nitric oxide/ NO                                  | VILM 23:2016                                | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
|     |                              | 2 . 1 Nitrogen oxides<br>/NOx (NO, NO <sub>2</sub> ) | VILM 23:2016                                | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |

Version 1/Revision 1- 2022/08/01



|  | БДС EN 14792 :2017 | Emissions from stationary sources.  Determination of the mass concentration of nitrogen oxides. Standard reference method: chemiluminescence                | FLEXIBLE<br>SCOPE |
|--|--------------------|---|-------------------|
| 2. 2 Nitrogen dioxide<br>/ NO <sub>2</sub> | VILM 23:2016       | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
| 3 . Hydrogen sulfide /H $_2$ S             | VILM 23:2016       | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
| 4 . Sulfur dioxide /SO                     | VILM 23:2016       | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | SCOPE             |
| 2  | БДС EN 14791 :2017 | Emissions from stationary sources.  Determination of the mass concentration of sulfur oxides. Standard reference method                                     | FLEXIBLE<br>SCOPE |
| 5 . Carbon monoxide                        | VILM 23:2016       | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
| /CO  | БДС EN 15058 :2017 | Emissions from stationary sources.  Determination of mass concentration of carbon monoxide. Standard reference method: non-dispersive infrared spectrometry | FLEXIBLE<br>SCOPE |
| 6 . Carbon dioxide<br>/CO <sub>2</sub>     | VILM 23:2016       | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
|  | VILM 23:2016       | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
| 7 . Oxygen /O <sub>2</sub>                 | БДС EN 14789 :2017 | Emissions from stationary sources.  Determination of the volume concentration of oxygen. Standard reference method.  Paramagnetism                          | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



| 8.1 . Hydrocarbons , expressed as total carbon 8.2 . Hydrocarbons, CH 4 | VILM 23:2016             | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
|---|--------------------------|---|-------------------|
| 8.3 Organic compounds expressed as total organic carbon/TOC             | БДС EN 12619:2013        | Emissions from stationary sources.  Determination of mass concentration of total gaseous organic carbon. Continuous method with a flame ionization detector             | FLEXIBLE<br>SCOPE |
| 9 . Parameters of gaseous/air streams: 9.1. Velocity                    | VILM 23:2016             | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
|   | ISO 10780 :1994          | Stationary sources of emissions. Speed measurement  | FLEXIBLE<br>SCOPE |
|   | БДС EN ISO 16911-1 :2013 | Emissions from stationary sources. Manual and automatic determination of velocity and volume flow in gas pipelines. Part 1: Manual comparison method (ISO 16911-1:2013) |                   |
|   | ISO 10780 :1994          | Stationary sources of emissions. Speed measurement  | FLEXIBLE<br>SCOPE |
| 9.2. Flowrate   | VILM 23:2016             | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE    |
|   | БДС EN ISO 16911-1:2013  | Emissions from stationary sources. Manual and automatic determination of velocity and volume flow in gas pipelines. Part 1: Manual comparison method (ISO 16911-1:2013) | FLEXIBLE<br>SCOPE |
| 9.3. Temperature  | БДС EN ISO 16911-1:2013  | Emissions from stationary sources. Manual and automatic determination of velocity and volume flow in gas pipelines. Part 1: Manual comparison method (ISO 16911-1:2013) | FLEXIBLE<br>SCOPE |
|   | VILM 23:2016             | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow  |                   |

Version 1/Revision 1- 2022/08/01



|  |  |                         | parameters  |                    |
|--|--|-------------------------|---|--------------------|
|  | 9.4.1. Pressure<br>9.4.2. Barometric   | БДС EN ISO 16911-1:2013 | Emissions from stationary sources. Manual and automatic determination of velocity and volume flow in gas pipelines. Part 1: Manual comparison method (ISO 16911-1:2013) | FLEXIBLE<br>SCOPE  |
|  | pressure   | VILM 23:2016            | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE     |
|  | O.F. Maiatura  | БДС EN 14790:2017       | Emissions from stationary sources.  Determination of water vapor in pipelines.  Standard reference method   | FLEXIBL<br>E SCOPE |
|  | 9.5. Moisture  | VILM 23:2016            | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | FIXED<br>SCOPE     |
|  | 10. Total dust of  | БДС ISO 9096:2017       | Emissions from stationary sources. Manual determination of the mass concentration of dust particles   | SCOPE              |
|  | ducted gaseous/<br>air streams   | БДС EN 13284-1 :2017    | Emissions from stationary sources. Determination of the mass concentration of dust in the low range. Part 1: Manual gravimetric method.                                 | FLEXIBLE<br>SCOPE  |
|  | 11. Hydrogen/H <sub>2</sub>  | VILM 23:2016            | Stationary sources of emissions. Measurement of harmful substances (pollutants) and gas flow parameters   | SCOPE              |
|  | 12. Formaldehyde   | EPA 323 :2010           | Determination of Formaldehyde content in emissions from stationary sources  | FLEXIBLE SCOPE     |
|  | 13. Content of elements in emissions / Inorganic dust substances 13.1. Arsenic/ As 13.2. Cadmium /Cd 13.3. Chromium /Cr 13.4. Copper /Cu | БДС E N 14385:2004      | Emissions from stationary sources.  Determination of total emission of As, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, TI and V   | FLEXIBLE<br>SCOPE  |

Version 1/Revision 1- 2022/08/01



|  | 10514                  |   |  |          |
|--|------------------------|---|--|----------|
|  | 13.5. Manganese /      |   |  |          |
|  | Mn<br>13.6. Nickel /Ni |   |  |          |
|  | 13.7. Lead / Pb        |   |  |          |
|  | 13.8. Antimony /Sb     |   |  |          |
|  | 13.9. Thallium /Tl     |   |  |          |
|  | 13.10. Vanadium /V     |   |  |          |
|  | 13.1 1 . Cobalt /Co    |   |  |          |
|  | 13.1 2 . Tin /Sn       |   | Stationary sources of emissions. Determining the                 | FIXED    |
|  | 13.13. Tellurium/Te    |   | content of elements  | SCOPE    |
|  |                        | VILM 05 :2016                               | GOTTESTIC OF CHANGE  | 000.2    |
|  | 13.1 4 . Zinc / Zn     |   |  |          |
|  | 13.15. Selenium /Se    |   |  |          |
|  | 13.16. Mercury / Hg    | БДС E N 13211:2004                          | Air quality. Stationary sources of emissions. A                  | FLEXIBLE |
|  |                        |   | manual method For determining the concentration of total mercury | SCOPE    |
|  |                        |   | Stationary sources of emissions. Determining the                 | FIXED    |
|  |                        | VILM 05:2016                                | content of elements  | SCOPE    |
|  |                        |   | Nature protection. Atmosphere. Emission quality                  | FLEXIBLE |
|  |                        | БДС 17.2.4.12 :1980                         | indicators. Method For determining hydrogen                      | SCOPE    |
|  | 14. Hydrogen           |   | fluoride content   |          |
|  | fluoride               |   | Emissions from stationary sources.                               | FLEXIBLE |
|  | Hadride                | S ) ( FN/   S   / 340   / 0 / 0             | Determination of mass concentration of fluoride                  | SCOPE    |
|  |                        | compounds expressed as HF. Standard referen |  |          |
|  |                        |   | method.  | ELEVADUE |
|  | 15. Ammonium /NH 3     | БДС 17.2.4.05 :1979                         | Nature protection. Atmosphere. Emission quality                  | FLEXIBLE |
|  | 15. Aminomum /NH 3     | БДС 17.2.4.05 :1979                         | indicators. Methods For determining ammonia content              | SCOPE    |
|  |                        |   | Nature protection. Atmosphere. Emission quality                  | FLEXIBLE |
|  | 16. Phenol             | БДС 17.2.4.11 :1980                         | indicators. Method For determining the phenol                    | SCOPE    |
|  |                        |   | content  | 55012    |
|  | 17. Hydrogen           | БДС EN 1911:2010                            | Stationary sources of emissions. Determination                   | FLEXIBLE |
|  | chloride /HCl          | рдс см 1911.2010                            | of the weight concentration of gaseous chlorides                 | SCOPE    |

Version 1/Revision 1- 2022/08/01



|       |       |  |                         | expressed as HCI. Standard comparative method   |                   |
|-------|-------|--|-------------------------|---|-------------------|
|       |       | 18. Sulphur trioxide/<br>SO <sub>3</sub>   | БДС 17.2.4.09 :1979     | Nature protection. Atmosphere. Emission quality indicators. Method For determining the content of sulfur trioxide | FLEXIBLE<br>SCOPE |
|       |       | 19. Aerosols of sulphuric acid   | EPA 8:2017              | Determination of sulfuric acid and sulfur dioxide aerosols from stationary emission sources                       | FLEXIBLE<br>SCOPE |
|       |       | 20.1 Quality Assurance Level - 2 (QAL 2 ) For Automated Measuring Systems (AMS) 20.2 Annual Surveillance Tests (AST) | БДС EN 14181:2015       | Emissions from stationary sources. Quality assurance of automated measurement systems                             | FLEXIBLE<br>SCOPE |
| III . | Waste | 1. Active reaction/<br>pH /<br>pH ( H <sub>2</sub> O ) /<br>pH (CaCl <sub>2</sub> )                                  | БДС EN ISO 10523:2012   | Water quality. Method For determining pH  | FLEXIBLE<br>SCOPE |
|       |       | 2. Conductivity/<br>Specific conductivity  | БДС EN 27888:2000       | Water quality. Determination of electrical conductivity.  | FLEXIBLE<br>SCOPE |
|       |       | 3. Loss on ignitition  | БДС EN 15935 :2021      | Sludge, waste, treated biowaste and soils.  Determination of heating losses                                       | FLEXIBLE<br>SCOPE |
|       |       | 4. Dry solids (dry   | ISO 11465:1993          | Soil quality. Determination of dry matter and moisture content.   | FLEXIBLE SCOPE    |
|       |       | residue)/ Moisture<br>(moisture contents)  | БДС EN 12880:2003       | Characterization of sediments. Determination of dry matter and water content                                      | FLEXIBLE SCOPE    |
|       |       | 5. Element content<br>5.1. Arsen/As<br>5.2 Antimony/Sb<br>5.3 Barium/Ba<br>5.4 Selenium/Se                           | БДС EN ISO 11 885 :2009 |   |                   |

Version 1/Revision 1- 2022/08/01



|                | - /0.1                |  |          |
|----------------|-----------------------|--|----------|
| 5.5 Cadmiun    | ·                     |  |          |
| 5.6 Molybder   |                       |  |          |
| 5.7 Nickel/Ni  |                       |  |          |
| 5.8 Copper/C   | Cu                    |  |          |
| 5.9 Lead/Pb    |                       |  |          |
| 5.10 Zinc/Zn   |                       |  |          |
| 5.11 Vanadiu   | ım/V                  |  |          |
| 5.12 Calcium   | n/Ca                  | Water quality. Determination of selected       | FLEXIBLE |
| 5.13 Magnes    | ium/Mg                | elements by inductively coupled plasma optical | SCOPE    |
| 5.14 Phosph    | orus/P                | emission spectrometry (ICP-OES)                |          |
| 5.15 Sulfur (  | total)/S              |  |          |
| 5.16 Cobalt/   | Co                    |  |          |
| 5.17 Mangar    | ese/Mn                |  |          |
| 5.18 Boron/E   |                       |  |          |
| 5.19 Sodium    | /Na                   |  |          |
| 5.20 Potassii  | um/K                  |  |          |
| 6 . Chromiur   | n total               |  |          |
|                | VIII M 02 2005        | Water quality. Determination of chromium in    | FIXED    |
| 7 . Chromiur   | n VILM 03:2005        | water and aqueous extract of waste (eluates)   | SCOPE    |
| hexavalent     | 100 11002 1001        | Water quality. Method For determining the      |          |
|                | ISO 11083:1994        | content of chromium (hexavalent).              | SCOPE    |
|                | F.R.C. 100 (222-2002  | Water quality. Determination of iron. A        |          |
|                | БДС ISO 6332:2002     | spectrometric method with 1,10-phenanthroline  | SCOPE    |
| 8 . Iron       |                       | Water quality. Determination of selected       | FLEXIBLE |
|                | БДС EN ISO 11885:2009 | elements by inductively coupled plasma optical | SCOPE    |
|                |                       | emission spectrometry (ICP-OES)                |          |
|                |                       | Water quality. Determination of chlorides.     | FLEXIBLE |
|                | ISO 9297:1989         | Titration with silver nitrate solution with    | SCOPE    |
| 9 . Chlorides  |                       | potassium chromate indicator / Mohr's method/. |          |
| j . Ciliorides |                       | Nature protection. Hydrosphere. Water quality  | FLEXIBLE |
|                | БДС 17.1.4.24:1980    | indicators. Method For determining chloride    | SCOPE    |
|                |                       | content  |          |





|                      | БДС EN ISO 10304-1:2004 | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
|----------------------|-------------------------|---|-------------------|
|                      | БДС 17.1.4.03 :1977     | Nature protection. Hydrosphere. Water quality indicators. Method For determining the content of sulfate ions  | FLEXIBLE<br>SCOPE |
|                      | VILM 31:2016            | Water quality. Determination of sulfates and their Forms in water and water extraction of waste (eluates)   | FIXED<br>SCOPE    |
| 10 . Sulphates       | БДС ISO 11048:2002      | Soil quality. Determination of water- and acid-<br>soluble sulphates.   | FLEXIBLE<br>SCOPE |
|                      | БДС EN ISO 10304-1:2004 | Water quality. Determination of Dissolved Anions by Ion Liquid Chromatography. Part 1: Determination of bromides, chlorides, fluorides, nitrates, nitrites, phosphates and sulphates (ISO 10304-1:2007)             | FLEXIBLE<br>SCOPE |
|                      | VILM 13 :2006           | Water quality. Determination of fluorides in water and aqueous extraction of waste (eluates)  | FIXED<br>SCOPE    |
| 11 . Fluorides       | БДС EN ISO 10304-1:2004 | Water quality. Determination of Dissolved Anions by Ion Liquid Chromatography. Part 1: Determination of bromides, chlorides, fluorides, nitrates, nitrites, phosphates and sulphates (ISO 10304-1:2007)             | FLEXIBLE<br>SCOPE |
|                      | VILM 11:2006            | Water quality. Determination of nitrates and nitrate nitrogen in water and aqueous extract of waste (eluates)   |                   |
| 12 . Nitrates<br>БДС | БДС EN ISO 10304-1:2004 | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



|                               |                         | Water quality. Determination of nitrite content   | FLEXIBLE          |
|-------------------------------|-------------------------|---|-------------------|
|                               | БДС EN 26777:1997       | Molecular absorption spectrometric method.  | SCOPE             |
| 12 Nituites                   | VILM 30:2011            | Water quality. Determination of nitrites and nitrogen nitrite in water and aqueous extract of waste (eluates)   | FIXED<br>SCOPE    |
| 13 . Nitrites                 | БДС EN ISO 10304-1:2004 | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
|                               | БДС EN ISO 6878:2005    | Water quality. Determination of phosphorus. Spectrometric method with ammonium molybdate.   | FLEXIBLE<br>SCOPE |
| 14 . Phosphates               | VILM 12:2006            | Water quality. Determination of phosphates and total phosphorus in water and aqueous extract of waste (eluates)   | FIXED<br>SCOPE    |
|                               | БДС EN ISO 10304-1:2004 | Water quality. Determination of Dissolved Anions by Ion Liquid Chromatography. Part 1: Determination of bromides, chlorides, fluorides, nitrates, nitrites, phosphates and sulphates (ISO 10304-1:2007)             | FLEXIBLE<br>SCOPE |
| 15. Kjeldahl nitrog           | en БДС EN 16169 :2012   | Sludges, treated biowastes and soils.  Determination of nitrogen by Kjeldahl  | FLEXIBLE<br>SCOPE |
| 16 .1 Cyanides free           | e VILM 17:2006          | Water quality. Determination of total cyanides and free cyanides in water and aqueous extract of waste (eluates)  | FIXED<br>SCOPE    |
| 16.2 Cyanides tota            | БДС 17.1.4.14:1979      | Nature protection. Hydrosphere. Water quality indicators. Method For determining the cyanide content  | FLEXIBLE<br>SCOPE |
| 17 . Phenols/<br>Phenol index | БДС ISO 6439:2002       | Water quality. Determination of phenolic index. Spectrometric method with 4-aminoantipyrine after distillation  | FLEXIBLE<br>SCOPE |
|                               | VILM 20:2007            | Water quality. Determination of phenols in water  | FIXED             |

Version 1/Revision 1- 2022/08/01



|   |   |                            | and aqueous extract of waste (eluates)   | SCOPE             |
|---|---|----------------------------|--|-------------------|
|   |   |                            | Water quality. Determination of total organic  | FIXED             |
|   |   | VILM 22:2007               | carbon in water and aqueous extract of waste (eluates)   | SCOPE             |
|   | otal carbon (TC)/<br>  Organic Carbon<br>  C )        | БДС EN 1484:2001           | Water analysis. Guidelines For the determination of total organic carbon (TOC) and soluble organic carbon (DOC)                                    | FLEXIBLE<br>SCOPE |
|   |   | БДС EN 15936:2022          | Soils, waste, processed biowaste and sludge. Determination of total organic carbon (TOC) by dry combustion.  | FLEXIBLE<br>SCOPE |
| 19.                                     | Dissolved   | VILM 22:2007               | Water quality. Determination of total organic carbon in water and aqueous extract of waste (eluates)   | FIXED<br>SCOPE    |
| organ                                   | organic carbon /DOC                                   | БДС EN 1484:2001           | Water analysis. Guidelines For the determination of total organic carbon (TOC) and soluble organic carbon (DOC)                                    | FLEXIBLE<br>SCOPE |
| Total                                   | 20. Dissolved solids/<br>Total of dissolved<br>solids | БДС 17.1.4.04:1980, item 3 | Nature protection. Hydrosphere. Water quality indicators. Method For determining the content of total solids, undissolved and dissolved substances | FLEXIBLE<br>SCOPE |
| Solids                                  |   | БДС EN 15216:2021          | Ecological matrices. Determination of total dissolved solids (TDS) in water and eluates  | FLEXIBLE<br>SCOPE |
| 21.                                     | 21 . Mercury / Hg                                     | VILM 28 :2013              | Water quality. Determination of mercury by ICP – OES in water and aqueous waste extract (eluates)  | FIXED<br>SCOPE    |
|   |   | EPA 6010C:2007             | Inductively coupled plasma-atomic emission spectrometry  | FLEXIBLE<br>SCOPE |
| 22. A                                   | Ammonium/ NH <sub>4</sub>                             | БДС ISO 7150-1:2002        | Water quality. Determination of ammonium. Manual spectrometric method.   | FLEXIBLE<br>SCOPE |
|   | 23. Petroleum products/                               | БДС EN 14345 :2005         | Characterized by waste. Determination of hydrocarbon content by gravimetry   | FLEXIBLE<br>SCOPE |
| 1 | ocarbons ( TPH)                                       | БДС EN 14039:2005          | Characterization of waste. Determination of the hydrocarbon content in the range of C10 to C40   | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



|     |                            |   |                              | by gas chromatography   |                   |
|-----|----------------------------|---|------------------------------|---|-------------------|
|     |                            | 2 4 . Acid -<br>neutralization<br>capacity/ANC  | SD CEN/TS 15364 :2012        | Characterization of waste. Leaching behavior tests. Acid and neutralization capacity test   | FLEXIBLE<br>SCOPE |
|     |                            | 25.1 Sulphate<br>Sulphur<br>25.2 Sulfide Sulfur | VILM 31:2016                 | Water quality. Determination of sulfates and their Forms in water and water extraction of waste (eluates)   | FIXED<br>SCOPE    |
|     |                            | 26. Thallium                                    | EPA 6010C :2007              | Inductively coupled plasma-atomic emission spectrometry   | FLEXIBLE<br>SCOPE |
|     |                            | 27. Bromides                                    | БДС EN ISO 10304-1 :2009     | Water quality. Determination of Dissolved Anions<br>by Ion Liquid Chromatography. Part 1:<br>Determination of bromides, chlorides, fluorides,<br>nitrates, nitrites, phosphates and sulphates (ISO<br>10304-1:2007) | FLEXIBLE<br>SCOPE |
| IV. | Noise                      | 1. Equivalent sound power level                 | БДС ISO 8297:2005            | Acoustics. Determining the sound power levels of<br>an industrial plant with multiple noise sources<br>For estimating the sound pressure levels in the<br>environment   | FLEXIBLE<br>SCOPE |
|     |                            |   | VILM 33:2011                 | Validated in-laboratory methodology For determining the total sound power emitted into the environment by an industrial enterprise and determining the noise level at the point of impact                           | FIXED<br>SCOPE    |
|     |                            | 2. Level of total                               | БДС ISO 8297:2005            | Acoustics. Determining the sound power levels of<br>an industrial plant with multiple noise sources<br>For estimating the sound pressure levels in the<br>environment   | FLEXIBLE<br>SCOPE |
|     |                            | sound power                                     | VILM 33:2011                 | Validated in-laboratory methodology For determining the total sound power emitted into the environment by an industrial enterprise and determining the noise level at the point of impact                           | FIXED<br>SCOPE    |
| V.  | Soils (1) , sediments (2), | 1. Petroleum products/<br>Hydrocarbons ( TPH)   | БДС EN 14345 :2005 (1, 2, 3) | Characterized by waste. Determination of hydrocarbon content by gravimetry  | FLEXIBLE<br>SCOPE |
|     | treated biowaste           | Trydrocarbons (TPH)                             | БДС EN ISO 16703:2011 (1,    | Soil quality. Determination of hydrocarbons in  | FLEXIBLE          |

Version 1/Revision 1- 2022/08/01



| :<br>- compost;  |  | 2, 3)                            | the C10 to C40 range by gas chromatography (ISO 16703:2004)   | SCOPE              |
|--|--|----------------------------------|---|--------------------|
| - stabilized organic fraction; - fermentation product; | 2. Active reaction/<br>pH /<br>pH( H <sub>2</sub> O ) /<br>pH (CaCl <sub>2</sub> ) | БДС EN ISO 10390:2022 (1, 2, 3)  | Soils, treated biowastes and sludges. Determination of pH   | FLEXIBLE<br>SCOPE* |
| - organic soil improver                                | 3. Conductivity/ Specific conductivity   | C D CEN/TS 15937 :2013 (1, 2, 3) | Sludges, treated biowaste and soils - determination of specific electrical conductivity   | FLEXIBLE<br>SCOPE  |
| (3)  | 4. Dry solid / moisture content  | БДС EN 15934:2012 (1, 2, 3)      | Sludges, treated biowaste, soils and waste - calculation of the amount of dry fraction after determination of dry residues or water content | FLEXIBLE<br>SCOPE  |
|  | 5. Loss of ignitition  | БДС EN 15935:2021 (1, 2, 3)      | Sludge, waste, treated biowaste and soils.  Determination of heating losses   | FLEXIBLE<br>SCOPE  |
|  | 6. 1 Content of organic substance/   | БДС EN 15 936:2022 (1, 2, 3)     | Soils, waste, treated biowaste and sludge. Determination of total organic carbon (TOC) content by dry combustion                            | FLEXIBLE<br>SCOPE  |
|  | Total Organic Carbon (<br>TOC )<br>6.2 Humus<br>6.3 Total Carbon                   | БДС 11302:1973 (1, 2, 3)         | Construction soils. Method For determining organic substances.  | FLEXIBLE<br>SCOPE  |
|  | (TC)   | ISO 10694:1995 (1, 2, 3)         | Soil quality - Determination of organic and total carbon after dry burning (elemental analysis)   | FLEXIBLE SCOPE     |
|  | 7. Total nitrogen (Kjeldahl)   | БДС EN 16169:2012 (1, 2, 3)      | Sludges, treated biowastes and soils.  Determination of nitrogen by Kjeldahl  | FLEXIBLE SCOPE     |
|  | Extracted forms of 8.1 Ammoniacal nitrogen (NH 4-N)                                | БДС ISO 7150-1 :2002 (1, 2, 3)   | Water quality. Determination of ammonium. Manual spectrometric method.  | FLEXIBLE<br>SCOPE  |
|  | 8.2 Nitrite nitrogen (<br>NO <sub>2</sub> -N )                                     | БДС EN 26777 :1997 (1, 2, 3)     | Water quality. Determination of nitrite content Molecular absorption spectrometric method.  | FLEXIBLE SCOPE     |
|  | 8.3 Nitrate nitrogen (<br>NO 3 -N )  | БДС ISO 7890-3 :1998 (1, 2, 3)   | Water quality. Determination of nitrate content. Spectrophotometric method with sulFixed scopesalicylic acid.                               | FLEXIBLE<br>SCOPE  |

Version 1/Revision 1- 2022/08/01



| 9 . Elements contents 9.1 Arsenic/As 9.2 Antimony/Sb 9.3 Selenium/Se 9.4 Cadmium/Cd 9.5 Nickel/Ni 9.6 Copper/Cu 9.7 Lead/Pb 9.8 Zinc/Zn 9.9 Manganese/M n 9.10 Calcium/ Ca 9.11 Calcium Oxide/CaO 9.12 Magnesium (total)/ Mg 9.13 Phosphorus/P(total) 9.14 Sulphur/ S (total) 9.15 Cobalt/So 9.16 Sodium/ Na 9.17 Potassium (total)/K 9.18 Chromium/ Cr 9.19 Iron/ Fe 9.20 Aluminum /Al 9.21 Boron/B 9.22 Mercury/ Hg | БДС EN ISO 22036:2024<br>(1, 2, 3) | Solid matrices relative to ambient environment. Define Elements Using of optical emission spectrometry with inductively coupled plasma (ICP-OES) (ISO 22036:2024) | FLEXIBLE<br>SCOPE* |
|---|------------------------------------|---|--------------------|
| 10.1. Phosphorus<br>10.2. Phosphorus –<br>exchangeable Forms  | БДС ISO 11263 :2002 (1, 2, 3)      | Soil quality. Determination of phosphorus. Spectrometric determination of phosphorus soluble in sodium bicarbonate solution                                       | FLEXIBLE<br>SCOPE  |

Version 1/Revision 1- 2022/08/01



| recalculated as P <sub>2</sub> O <sup>5</sup> 10.3. Phosphates   | VILM 35:2021 (1, 2, 3)          | Soils, sediments and treated biowaste.  Determination of exchangeable Forms of phosphorus   | FIXED<br>SCOPE    |
|--|---------------------------------|---|-------------------|
| 11.1. Water soluble sulphates, recalculated as   | VILM 31 :2016 (1, 2, 3)         | Water quality. Determination of sulphates and their Forms in water and water extraction of waste (eluates)                                | SCOPE             |
| sulphur<br>11.2. Sulphates   | БДС ISO 11048:2002 (1, 2, 3)    | Soil quality. Determination of water- and acid-soluble sulphates.   | FLEXIBLE<br>SCOPE |
| 12.<br>Impurities/Stones   | SD CEN/TS 16202 :2013 (1, 2, 3) | Sludges, treated biowastes and soils.  Determination of impurities and stones   | FLEXIBLE<br>SCOPE |
| 13.1 . Sodium, exchangeable Forms 13.2 . Potassium, exchangeable Forms recalculated as K 2 O 13.3 . Calcium, exchangeable Forms 13.4 . Magnesium, exchangeable Forms |                                 | Soil quality. Determination of actual cation exchange capacity and baseline saturation level of barium chloride solution (ISO 11260:2018) | FLEXIBLE<br>SCOPE |
| 14.1 Density 14.2 Bulk density   | БДС EN 12580 :2023 (3)          | Soil improvers and growing media.  Determination of quantity  | FLEXIBLE<br>SCOPE |
| 15.1 Particle size<br>1 5.2 Particle<br>maximum size   | БДС EN 15428 :2007 (1, 2, 3)    | Soil improvers and growing media.  Determination of particle size distribution  | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



#### QL 5.0-4 Laboratory activities performed in LAKOS with fixed and flexible scope

#### 2. SAMPLING/SAMPLING FROM:

|       | Name of the                  |  | Test methods  |                   |
|-------|------------------------------|--|---|-------------------|
| By Nº | tested products              | Identification                             | Designation   | Range<br>type     |
| 1     | 2                            | 3  | 4   | 5                 |
| 1     | Air, atmospheric - emissions | БДС EN 13284-1:2017                        | Emissions from stationary sources. Determination of the mass concentration of dust in the low range. Part 1: Manual gravimetric method        | FLEXIBLE<br>SCOPE |
|       |                              | БДС ISO 9096 :2017                         | Emissions from stationary sources. Manual determination of the mass concentration of dust particles.  | FLEXIBLE<br>SCOPE |
|       |                              | БДС EN 14790 :2017                         | Emissions from stationary sources. Determination of water vapor in pipelines. Standard reference method                                       | FLEXIBLE<br>SCOPE |
|       |                              | EPA 323 :2020- item 6÷6.6; item 7.1        | Measurement of Formaldehyde Emissions From Natural Gas-Fired<br>Stationary Sources—Acetyl Acetone Derivitization Method                       | FLEXIBLE<br>SCOPE |
|       |                              | VILM 05:2016-cl.8                          | Stationary sources of emissions. Determining the content of elements  | FIXED<br>SCOPE    |
|       |                              | БДС 17.2.4.12:1980-cl.2                    | Nature protection. Atmosphere. Emission quality indicators. Method For determining hydrogen fluoride content                                  | FLEXIBLE<br>SCOPE |
|       |                              | БДС 17.2.4.05:1979-according to the annex  | Nature protection. Atmosphere. Emission quality indicators. Methods For determining ammonia content   | FLEXIBLE<br>SCOPE |
|       |                              | БДС EN 14791 :2017 - item 6, item<br>7     | Emissions from stationary sources. Determination of the mass concentration of sulfur oxides. Standard reference method                        | FLEXIBLE<br>SCOPE |
|       |                              | БДС EN 1911 :2010 - item 5                 | Stationary sources of emissions. Determination of the weight concentration of gaseous chlorides expressed as HCl. Standard comparative method | FLEXIBLE<br>SCOPE |
|       |                              | БДС 17.2.4.11:1980 - according to annex    | Nature protection. Atmosphere. Emission quality indicators. Method For determining the phenol content   | FLEXIBLE<br>SCOPE |
|       |                              | БДС 17.2.4.09:1979 - according to annex    | Nature protection. Atmosphere. Emission quality indicators. Method For determining the content of sulfur trioxide                             | FLEXIBLE<br>SCOPE |
|       |                              | EPA 8 :2019-cl.8                           | DETERMINATION OF SULFURIC ACID AND SULFUR DIOXIDE EMISSIONS FROM STATIONARY SOURCES   | FLEXIBLE<br>SCOPE |
|       |                              | БДС EN 13211 :2004-cl.5.3÷ 5.12;<br>Item 7 | Air quality. Stationary sources of emissions. A manual method For determining the concentration of total mercury                              | FLEXIBLE<br>SCOPE |
|       |                              | SD CEN/TS 17340 :2020 - item 6,            | Emissions from stationary sources. Determination of mass concentration of fluoride compounds expressed as HF. Standard reference method.      | FLEXIBLE<br>SCOPE |

Version 1/Revision 1- 2022/08/01



#### QL 5.0-4 Laboratory activities performed in LAKOS with fixed and flexible scope

|    |                        | item 7                    |  |                   |
|----|------------------------|---------------------------|--|-------------------|
| 2  | Soils                  | БДС 17.4.5.01:1985        | Nature protection. Soil. General requirements For sampling   |                   |
|    |                        | БДС ISO 18400-102:2019    | Soil quality. Taking samples. Part 102: Selection and application of sampling techniques (ISO 18400-102:2017)                          | FLEXIBLE<br>SCOPE |
| 3  | Waste                  | ASTM D 5658 -20           | Sampling of unconsolidated ( bulk ) waste.   | FLEXIBLE<br>SCOPE |
|    |                        | ASTM D 5679 -16           | Sampling of consolidated (monolithic) solid waste in drums or similar containers.  | FLEXIBLE<br>SCOPE |
|    |                        | SD CEN/TR 15310-2 :2007   | Characterization of waste. Sampling of waste materials. Part 2: Guidance on sampling techniques  | FLEXIBLE<br>SCOPE |
| 4  | Waters, lakes          | БДС ISO 5667-4:2016       | Water quality. Taking samples. Part 4: Guide to Sampling Lakes and Reservoirs  | FLEXIBLE<br>SCOPE |
| 5  | Water, potable         | БДС ISO 5667-5:2013       | Water quality. Taking samples. Part 5: Guidance on the sampling of drinking water from treatment plants and piped distribution systems | FLEXIBLE<br>SCOPE |
| 6  | Surface flowing waters | БДС EN ISO 5667-6:2016    | Water quality. Taking samples. Part 6: Guide to river and stream sampling  | FLEXIBLE<br>SCOPE |
| 7  | Waters, coastal marine | БДС ISO 5667-9:2002       | Water quality. Taking a sample. Part 9: Guidance on marine water sampling  | FLEXIBLE<br>SCOPE |
| 8  | Water, waste<br>water  | БДС ISO 5667-10:2020      | Water quality. Taking samples. Part 10: Guidance on waste water sampling   | FLEXIBLE<br>SCOPE |
| 9  | Water,<br>underground  | БДС ISO 5667-11:2011      | Water quality. Taking samples. Part 11: Guide to groundwater sampling  | FLEXIBLE<br>SCOPE |
| 10 | Sediment               | БДС EN ISO 5667-13 :2011  | Water quality. Taking a sample. Part 13: Guide to sediment sampling (ISO 5667-13:2011)   | FLEXIBLE<br>SCOPE |
| 11 | Treated organic waste  | БДС EN 12579: <b>2024</b> | Soil improvers and growing media. Taking samples   | FLEXIBLE          |
|    |                        | БДС EN ISO 5667-13 :2011  | Water quality. Taking a sample. Part 13: Guide to sediment sampling (ISO 5667-13:2011)   | SCOPE*            |

Legend:

FIXED SCOPE – fixed range

FLEXIBLE SCOPE - The introduction of a new version of the standards or standards that replace them in permitted. LAKOS maintains an up-to-date list of standards with their dated versions.

FLEXIBLE SCOPE\* - introduction of a new version of the standards or standards that replace them. After a check /verification/, provision of CRM/RM and calibrated TC, the characteristics from column 3 can be determined using the methods from column 4.

Version 1/Revision 1- 2022/08/01

MAKOC

### QL 5.0-4 Laboratory activities performed in LAKOS with fixed and flexible scope

Compiled by:

Eng. Rositsa Yankova-Ralcheva – Head of Laboratory

Date: 05.07.2024