# *ANNEX II + III:* TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

**Contract title: Procurement of the laboratory equipment with reagents and accessories for project: BEST WASTEWATER p 1 /…**

**Publication reference:** **TD02-HUSRB/23R/12/047-5.1**

**Columns 1-2 should be completed by the contracting authority**

**Columns 3-4 should be completed by the tenderer**

**Column 5 is reserved for the evaluation committee**

Annex III - the contractor's technical offer

The tenderers are requested to complete the template on the next pages:

* Column 2 is completed by the contracting authority shows the required specifications (not to be modified by the tenderer),
* Column 3 is to be filled in by the tenderer and must detail what is offered (for example the words ‘compliant’ or ‘yes’ are not sufficient)
* Column 4 allows the tenderer to make comments on its proposed supply and to make eventual references to the documentation

The eventual documentation supplied should clearly indicate (highlight, mark) the models offered and the options included, if any, so that the evaluators can see the exact configuration. Offers that do not permit to identify precisely the models and the specifications may be rejected by the evaluation committee.

The offer must be clear enough to allow the evaluators to make an easy comparison between the requested specifications and the offeredspecifications.

| **1.**  **Item number** | **2.**  **Specifications required** | **3.**  **Specifications offered** | **4.**  **Notes, remarks,  ref to documentation** | **5.**  **Evaluation committee’s notes** |
| --- | --- | --- | --- | --- |
| **1.1** | **Reagent case with PF-12Plus photometer with a package of test tubes and accessories, Quantity: 1 set**  The photometer PF-12Plus is a device tailored for mobile water analysis. Minimum 100 pre-programmed methods for all fields of water and wastewater analysis.  **Minimal Technical requirement:**  - Filter photometer with microprocessor control, self-test and auto calibration  - Automatic filter wheel with min. 7 interence filters, Insensitive to external light for fast measurements without cuvette slot cover  - Wavelengths: 345 nm / 436 nm / 470 nm / 540 nm / 585 nm / 620 nm / 690 nmplus 1 compartment for an additional filter,min. 860 mn LED for NTU-measurement  - Wavelength accuracy: ± 2 nm, bandwidth at half transmission 10 nm–12 nm  - Light source: Xenon-high pressure lamp  - Detector: Silicon photodiode  - Blank value: Automatic  Measuring mode: Min. 100 prepgrogrammed tests and special methods, absorbance, transmittance,  factor, standard, nephe-lometric turbidity measurement; 20 freely programmable methods  - Photometric range: ± 3 Abs  - Photometric accuracy: ± 1 %  - Stability: < 0.002 Abs/h  - Cuvette holder: Round tubes 16 mm AD  - Data memory: 1000 results, GLP-conform  - Display: Backlit graphic display, 128 x 64 Pixel. All important data at a glance: Result in respective unit,  date, time, sample number, dilution, measuring, control bar  - Auto-Off function: Inactive or automatic deactivation after 5 min, 10 min, 15 min, 20 min, 60 min  Quality control: With NANOCONTROL NANOCHECK 2.0  - Interface: USB 2.0  -Update: For free via internet / PC  - Operation range: 10 °C–40 °C, up to 80 % relative humidity (non-condensing), up to max. 3000 m  Power supply: Via USB cable, USB power supply, batteries / rechargeable batteries or battery pack  Housing: Shock-resistent; waterproof and dustproof, according to IP 68  **Test tubes and accessories included with instrument:** |  |  |  |
| **1.2** | Test tubes for determination of COD; range: 15–160 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |
| **1.3** | Test tubes for determination of COD; range: 20–1500 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |
| **1.4** | Test tubes for determination of BOD5; range: 0.5–3000 mg/L O2; (Analogous to DIN EN 1899-1 – H51 + DIN EN 25813 – G 21); Method - BOD5-winkler  Package: 20a, Quantity:1 |  |
| **1.5** | Accessories set for BOD5-TT, consists of electric air pump, 2 aerating bricks, 1-litre PE container, 2 reaction vessels (40 mL)  Package: 20a, Quantity:1 |  |
| **1.6** | Test tubes for determination of Ammonium; range: 4–80 mg/L NH4-N; range 2: 5–100 mg/L NH4+; (In accordance to ISO 7150-1); method- Ammonium – Indophenol  Package: 20a, Quantity:1 |  |
| **1.7** | Test tubes for determination of Ammonium; range: 30–160 mg/L NH4-N, Ammonium - 40–200 mg/L NH4+; (In accordance to ISO 7150- 1); method- Ammonium – Indophenol  Package: 20a, Quantity:1 |  |
| **1.8** | Test tubes for determination of Nitrite; range: 0.003–0.460 mg/L NO2-N, Nitrite - 0.02–1.50 mg/L NO2−; (In accordance with ISO 6777); method- Nitrite - Sulfanilic acid/1 –naphthylamine  Package: 20a, Quantity:1 |  |
| **1.9** | Test tubes for determination of Nitrite; range: 0.1–4.0 mg/L NO2-N, range 2: 0.3–13.0 mg/L NO2−; (In accordance with ISO 6777); method- Nitrite - Sulfanilic acid/1 –naphthylamine  Package: 20a, Quantity:1 |  |
| **1.10** | Test tubes for determination of Nitrate; range: 4–60 mg/L NO3-N; range 2: 20–250 mg/L NO3−; (In accordance to ISO 7890-1); method- Nitrate - 2, 6 –Dimethylphenol  Package: 20a, Quantity:1 |  |
| **1.11** | Test tubes for determination of Nitrate; 0.3–22.0 mg/L NO3-N, Nitrate - 2–100 mg/L NO3− (In accordance to ISO 7890-1); method- Nitrate - 2, 6 –Dimethylphenol  Package: 20a, Quantity:1 |  |
| **1.12** | Test tubes for determination of Phenols; range: 0.2–5.0 mg/L Phenol; method- Phenols - 4 –Aminoantipyrine;  Package: 20a, Quantity:1 |  |
| **1.13** | Test tubes for determination of Organic acids; range: Organic acids - 0.5–50.0 mmol/L CH3COOH, Organic acids - 30–3000 mg/L CH3COOH; method: Organic acids - Ethylenglycole/Iron(III) –Ions;  Package: 20a, Quantity:1 |  |
| **1.14** | Test tubes for determination of Sulfide; range: 0.05–3.00 mg/L S2−; method- Sulfide - Methylene blue;  Package: 20a, Quantity:1 |  |
| **1.15** | Test tubes for determination of Sulfate; range: 200–1000 mg/L SO42−; method- Sulfate - Barium sulfate (Turbidity);  Package: 20a, Quantity:1 |  |
| **1.16** | Test tubes for determination of AOX; range: 0.1–3.0 mg/L AOX,  range 2: 0.01–0.30 mg/L AOX; method- AOX – Mercury (II) - thiocyanate/Iron (III)– nitrate;  Package: 20a, Quantity:1 |  |
| **1.17** | Starter set for AOX, consists of tweezers, funnel, cartridge adaptor, beaker, glass rods, 1-liter bottle and syringes.  Package: 1 set, Quantity:1 |  |
| **1.18** | Supplement kit for AOX 3 for the sensitive AOX range (0.01–0.30 mg/L AOX) as well as for higher COD values (required above 50 mg/L COD).  Package: 2\*4g, Quantity:1 |  |
| **1.19** | Pump set for AOX consists of centrifugal pump, connecting tubes, cartridge adaptor, graduated 1-liter reservoir with tap and stand with clamps and bosses. For AOX 3 tube test.  Package: 1 set, Quantity:1 |  |
| **1.20** | Test tubes for determination of TOC; range: 2.0–30.0 mg/L C; method- TOC – Indicator  Package: 20a, Quantity:3 |  |
| **1.21** | Device for removal of TIC with cuvette holder, manual, power cable, adaptors and certificate  Package: 1 piece, Quantity:1 |  |
| **1.22** | Test tubes for determination of Calcium, Magnesium, Total hardness; range: Calcium - 10–100 mg/L Ca2+, Magnesium - 5–50 mg/L Mg2+, Total hardness - 0.2–3.6 mmol/L , Total hardness - 1.25– 25.00 °e, Total hardness - 20–350 mg/L CaCO3; method: Calcium - Phtalein purple, Magnesium - Phtalein purple, Total hardness - Phthalein purple  Package: 20a, Quantity:1 |  |
| **1.23** | Test tubes for determination of Carbonate hardness; range: Acid capacity - 0.4–5.4 mmol/L H+, Carbonate hardness - 1.25–18.75 °e, Carbonate hardness - 20–270 mg/L CaCO3; method: Acid capacity - Bromophenol blue, Carbonate hardness - Bromophenol blue  Package: 20a, Quantity:1 |  |
| **1.24** | Test tubes for determination of Anionic surfactants; range: Detergents - 0.20–3.50 mg/L SDS , Detergents - 0.20–4.00 mg/L MBAS; method; Detergents - Methylene blue  Package: 20a, Quantity:1 |  |
| **1.25** | Test tubes for determination of Lead; range: 0.10–5.00 mg/L Pb2+; method- Lead - 4 -(2 -Pyridyl -(2) -azo) -esorcine (PAR);  Package: 20a, Quantity:1 |  |
| **1.26** | Test tubes for determination of Cyanide; range: Cyanide - 0.02–0.80 mg/L CN−; sensitive range  Package: 20a, Quantity:1 |  |
| **1.27** | Semi-micro cuvette, 50 mm optical path made from optical glass, for sensitive measuring range (0.02–2.00 mg/L) with tube tests;  Package: 1 cell, Quantity:1 |  |
| **1.28** | Test tubes for the determination of Copper; range: Copper - 0.10–7.00 mg/L Cu2+; method Copper – Cuprizone  Package: 20a, Quantity:1 |  |
| **1.29** | Test tubes for the determination of Zinc; range: 0.10–4.00 mg/L Zn2+; Test no. 0-96; method- Zinc – Zincon;  Package: 20a, Quantity:1 |  |
| **1.30** | Test tubes for the determination of Total-Chromium, Chromium / Chromate; range: 0.05–2.00 mg/L C; range sensitive: 0.005–0.500 mg/L C; method- Chromium – Carbazide;  Package: 20a, Quantity:1 |  |
| **1.31** | Test tubes for the determination of Cadmium; range: 0.05–2.00 mg/L Cd2+; method- Cadmium – Cadion;  Package: 20a, Quantity:1 |  |
| **1.32** | Test tubes for the determination of Molybdenum; range: 1–40.0 mg/L Mo(VI), range 2: 1.6–65.0 mg/L MoO42−; Method: Molybdenum - Thioglycolic acid;  Package: 20a, Quantity:1 |  |
| **1.33** | Test tubes for the determination of Iron; range: 0.10–3.00 mg/L Fe, sensitive range: 0.02–1.00 mg/L Fe; method: Iron – Diphenylpyridyltriazine;  Package: 20a, Quantity:1 |  |
| **1.34** | Test tubes for the determination of Manganese; range: 0.1–10.0 mg/L Mn; range sensitive: 0.02–2.00 mg/L Mn; method- Manganese – Formaldoxime  Package: 20a, Quantity:1 |  |
| **1.35** | Semi-micro cuvette, 50 mm optical path made from optical glass, for sensitive measuring range (0.02–2.00 mg/L) with tube tests;  Package: 1 cell, Quantity:1 |  |
| **1.36** | Software for data processing for the needs of data systematization on the computer |  |
| **1.37** | Manufacturing methods for sample preparation and performing the procedure according to each required parameter and putting the method into operation |  |
| **2.1** | **Reagent case with PF-3 Water with regents (Cl2 liquid), Quantity: 1 set**  **Minimal Technical requirement:**  - Type: LED photometer with min. 3 interference filters  - Wavelengths: 450 nm, 530 nm, 590 nm  - Wavelength accuracy: ± 2 nm, bandwidth at half transmission 10–12 nm  - Measuring modes: Pre-programmed MN-tests  - Cuvette holder: Tubes 16 mm OD  - Memory: 50 results  - Display: Backlit graphic display, 64 x 128 pix, all important data at a glance: result with unit, data, time  - Operation: Self-explanatory menu guidance, foil keypad, test selection via parameter lists  - Power supply: 3 AA batteries, rechargeable batteries, USB interface; optional internal accu-pack  - Housing: Water proof, IP 68 certified  **Colorimetric test kit included with instrument:** |  |  |  |
| **2.2** | Colorimetric test kits for determination of Chlorine (free), Chlorine (total); range Chlorine (free) - 0.05–2.00 mg/L Cl2 , Chlorine (total) - 0.05–2.00 mg/L Cl2  Package: 150a, Quantity:1 |  |  |  |
| **2.3** | Colorimetric test kits for determination of Chlorine (free), Chlorine (total); range Chlorine (free) - 0.05–2.00 mg/L Cl2 , Chlorine (total) - 0.05–2.00 mg/L Cl2  Package: 150a, Quantity:1 |  |
| **2.4** | Colorimetric test kits for determination of Chlorine dioxide; range: Chlorine dioxide - 0.20–3.80 mg/L  Package: 150a, Quantity:1 |  |
| **2.5** | Colorimetric test kits for determination of Iron; range: Iron - 0.04–2.00 mg/L Fe  Package: 150a, Quantity:1 |  |
| **2.6** | Colorimetric test kits for determination of Fluoride; range: 0.1–2.0 mg/L  Package: 150a, Quantity:1 |  |
| **2.7** | Colorimetric test kits for determination of pH value; range: pH- 6.1–8.4 Test tubes for determination of COD; range: 20–1500mg/L O2; (In accordance with ISO 15705); method- Potassiumdichromate  Package: 150a, Quantity:1 |  |
| **3.1** | **Reagent case with PF-3 compact photometer for COD, Quantity: 1 set**  **Minimal Technical requirement:**  - Type: LED photometer with microprocessor control, self-test and auto calibration  - Optics: LED + interference filters; Insensitive to external light for quick measurements without cuvette slot cover  - Wavelengths: COD: 365 nm / 450 nm / 595 nm  - Wavelength accuracy: ± 2 nm, bandwidth at half transmission 10 nm–12 nm  - Light source: LED; Detector: Silicon photodiode  - Cuvette slot: Tubes 16 mm OD  - Memory: 50 results  - Display: Backlit graphic display, 128 x 64 pix, all important data at a glance: result with  unit, date, time  - Operation: Self-explanatory menu guidance, plastic foil keypad, test selection via parameter lists  - Interface: Mini-USB  - Update Free of charge via internet / PC  - Operating range: 10 °C–40 °C, up to 80 % relative humidity (non-condensing)  - Power supply 3 AA batteries, rechargeable batteries, USB interface; optional internal accu-pack  - Housing: Shock-resistant, waterproof and dustproof, according to IP68  **Test tubes and accessories included with instrument:** |  |  |  |
| **3.2** | Test tubes for determination of COD; range: 2–40 mg/L O2 (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |  |  |
| **3.3** | Test tubes for determination of COD; range 5–60 mg/L O2 (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |  |  |
| **3.4** | Test tubes for determination of COD; range: 15–160 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |  |  |
| **3.5** | Test tubes for determination of COD; range: 20–1500 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |  |  |
| **4.1** | **Spectrophotometer in case, with regents, Quantity: 1 set**  **Minimal Technical requirement:**  - Type: Spectrophotometer with Reference Detector Technology (RDT)  - Light source: Halogen lamp  - Optical system: Single beam photometer with grating monochromator  - Wavelength range: 340 nm–800 nm  - Wavelength accuracy: ± 2 nm  - Wavelength resolution: 1 nm  - Wavelength calibration: Automatically  - Wavelength selection: Automatically, Barcode, manually  - Scan speed: 1 complete Scan < 3 min  - Wavelength reproducibility: +/- 0.1 nm  - Spectral bandwidth: < 4 nm  - Photometric range: +/- 3.0 A in the range 340–800 nm  - Photometric accuracy: 0.003 A at 0.0–0.5 A; 1 % at 0.5–2.0 A  - Photometric linearity: < 0.5% at 0.5–2.0 A; ≤ 1% at > 2 A with neutral glass filters at 546 nm  - Scattered light: < 0.5 %  - Measurement modes: Over 200 pre-programmed tests and special methods; 99 fully programmable methods; absorbance; transmission; factor; kinetics;  scan; nephelometric turbidity measurement  - Turbidity measurement: Nephelometric turbidity measurement (16 mm and 24 mm)  1–1000 NTU  - Cuvette slot: Tube test 16 mm and 24 mm OD;  - Standard test 10 mm, 20 mm, 40 mm and 50 mm  - Data memory: 1000 Measured values, 1000 IQC results, 100 spectra;  - GLP-conform  - Display: Backlit colored 5′′ display with touch screen  - Operation: Barcode technology; icon-based display menu navigation; capacitive touch screen  - External light: Insensitive; open cuvette slot  - Interfaces: LAN (CAT 6; only use shielded cables with a maximum length of 20 m)  - 2 × USB (Host), 1× USB (Function)  - Protection class: IP67  - Update: Via USB stick  **Test tubes and accessories included with instrument:** |  |  |  |
| **4.2** | Test tubes for determination of COD; range: 15–160 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |  |  |
| **4.3** | Test tubes for determination of COD; range: 20–1500 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate  Package: 20a, Quantity:1 |  |  |  |
| **4.4** | Test tubes for determination of BOD5; range: 0.5–3000 mg/L O2; (Analogous to DIN EN 1899-1 – H51 + DIN EN 25813 – G 21); Method -BOD5-winkler  Package: 22a, Quantity:1 |  |  |  |
| **4.5** | Accessories set for BOD5-TT, consists of electric air pump, 2 aerating bricks, 1-litre PE container, 2 reaction vessels (40 mL)  Package: 1 set, Quantity:1 |  |  |  |
| **4.6** | Test tubes for determination of Ammonium; range: 4–80 mg/L NH4-N; range 2: 5–100 mg/L NH4+; (In accordance to ISO 7150-1); method- Ammonium – Indophenol  Package: 20a, Quantity:1 |  |  |  |
| **4.7** | Test tubes for determination of Ammonium; range: 30–160 mg/L NH4-N, Ammonium - 40–200 mg/L NH4+; (In accordance to ISO 7150- 1); method- Ammonium – Indophenol  Package: 20a, Quantity:1 |  |  |  |
| **4.8** | Test tubes for determination of Nitrite; range: 0.003–0.460 mg/L NO2-N, Nitrite - 0.02–1.50 mg/L NO2−; (In accordance with ISO 6777); method- Nitrite - Sulfanilic acid/1 –naphthylamine  Package: 20a, Quantity:1 |  |  |  |
| **4.9** | Test tubes for determination of Nitrite; range: 0.1–4.0 mg/L NO2-N, range 2: 0.3–13.0 mg/L NO2−; (In accordance with ISO 6777); method Nitrite - Sulfanilic acid/1 –naphthylamine  Package: 20a, Quantity:1 |  |  |  |
| **4.10** | Test tubes for determination of Nitrate; range: 4–60 mg/L NO3-N; range 2: 20–250 mg/L NO3−; (In accordance to ISO 7890-1); method 20aNitrate - 2, 6 –Dimethylphenol  Package: 20a, Quantity:1 |  |  |  |
| **4.11** | Test tubes for determination of Nitrate; 0.3–22.0 mg/L NO3-N, Nitrate - 2–100 mg/L NO3− (In accordance to ISO 7890-1); method- Nitrate - 2, 6 –Dimethylphenol  Package: 20a, Quantity:1 |  |  |  |
| **4.12** | Test tubes for determination of Phenols; range: 0.2–5.0 mg/L Phenol; method- Phenols - 4 –Aminoantipyrine;  Package: 20a, Quantity:1 |  |  |  |
| **4.13** | Test tubes for determination of Organic acids; range: Organic acids- 0.5–50.0 mmol/L CH3COOH, Organic acids - 30–3000 mg/L CH3COOH; method: Organic acids - Ethylenglycole/Iron(III) –Ions;  Package: 20a, Quantity:1 |  |  |  |
| **4.14** | Test tubes for determination of Sulfide; range: 0.05–3.00 mg/L S2−; method- Sulfide - Methylene blue;  Package: 20a, Quantity:1 |  |  |  |
| **4.15** | Test tubes for determination of Sulfate; range: 200–1000 mg/L SO42−; method- Sulfate - Barium sulfate (Turbidity);  Package: 20a, Quantity:1 |  |  |  |
| **4.16** | Test tubes for determination of AOX; range: 0.1–3.0 mg/L AOX, range 2: 0.01–0.30 mg/L AOX; method- AOX – Mercury (II) - thiocyanate/Iron (III)– nitrate;  Package: 20a, Quantity:1 |  |  |  |
| **4.17** | Starter set for AOX, consists of tweezers, funnel, cartridge adaptor, beaker, glass rods, 1-liter bottle and syringes.  Package: 1 set, Quantity:1 |  |  |  |
| **4.18** | Supplement kit for AOX 3 for the sensitive AOX range (0.01–0.30 mg/L AOX) as well as for higher COD values (required above 50 mg/LCOD).  Package: 2\*4g, Quantity:1 |  |  |  |
| **4.19** | Pump set for AOX consists of centrifugal pump, connecting tubes, cartridge adaptor, graduated 1-liter reservoir with tap and stand with clamps and bosses. For AOX 3 tube test.  Package: 1 set, Quantity:1 |  |  |  |
| **4.20** | Test tubes for determination of TOC; range: 2.0–30.0 mg/L C; method- TOC – Indicator  Package: 20a, Quantity:1 |  |  |  |
| **4.21** | Device for removal of TIC with cuvette holder, manual, power cable, adaptors and certificate  Package: 1 piece, Quantity:1 |  |  |  |
| **4.22** | Test tubes for determination of Calcium, Magnesium, Total hardness; range: Calcium - 10–100 mg/L Ca2+, Magnesium - 5–50 mg/L Mg2+, Total hardness - 0.2–3.6 mmol/L , Total hardness - 1.25– 25.00 °e, Total hardness - 20–350 mg/L CaCO3; method: Calcium - Phtalein purple, Magnesium - Phtalein purple, Total hardness - Phthalein purple  Package: 20a, Quantity:1 |  |  |  |
| **4.23** | Test tubes for determination of Carbonate hardness; range: Acid capacity - 0.4–5.4 mmol/L H+, Carbonate hardness - 1.25–18.75 °e, Carbonate hardness - 20–270 mg/L CaCO3; method: Acid capacity -Bromophenol blue, Carbonate hardness - Bromophenol blue  Package: 20a, Quantity:1 |  |  |  |
| **4.24** | Test tubes for determination of Anionic surfactants; range: Detergents - 0.20–3.50 mg/L SDS , Detergents - 0.20–4.00 mg/L MBAS; method; Detergents - Methylene blue  Package: 20a, Quantity:1 |  |  |  |
| **4.25** | Test tubes for determination of Lead; range: 0.10–5.00 mg/L Pb2+; method- Lead - 4 -(2 -Pyridyl -(2) -azo) -esorcine (PAR);  Package: 20a, Quantity:1 |  |  |  |
| **4.26** | Test tubes for determination of Cyanide; range: Cyanide - 0.02–0.80 mg/L CN−; sensitive range  Package: 20a, Quantity:1 |  |  |  |
| **4.27** | Semi-micro cuvette, 50 mm optical path made from optical glass, for sensitive measuring range (0.02–2.00 mg/L) with tube tests;  Package: 1 cell, Quantity:1 |  |  |  |
| **4.28** | Test tubes for the determination of Copper; range: Copper - 0.10–7.00 mg/L Cu2+; method Copper – Cuprizone  Package: 20a, Quantity:1 |  |  |  |
| **4.29** | Test tubes for the determination of Zinc; range: 0.10–4.00 mg/L Zn2+; Test no. 0-96; method- Zinc – Zincon;  Package: 20a, Quantity:1 |  |  |  |
| **4.30** | Test tubes for the determination of Total-Chromium, Chromium/ Chromate; range: 0.05–2.00 mg/L C; range sensitive: 0.005–0.500 mg/L C; method- Chromium – Carbazide;  Package: 20a, Quantity:1 |  |  |  |
| **4.31** | Test tubes for the determination of Cadmium; range: 0.05–2.00 mg/L Cd2+; method- Cadmium – Cadion;  Package: 20a, Quantity:1 |  |  |  |
| **4.32** | Test tubes for the determination of Molybdenum; range: 1–40.0 mg/L Mo(VI), range 2: 1.6–65.0 mg/L MoO42−; Method: Molybdenum-Thioglycolic acid;  Package: 20a, Quantity:1 |  |  |  |
| **4.33** | Test tubes for the determination of Iron; range: 0.10–3.00 mg/L Fe,sensitive range: 0.02–1.00 mg/L Fe; method: Iron Diphenylpyridyltriazine;  Package: 20a, Quantity:1 |  |  |  |
| **4.34** | Test tubes for the determination of Manganese; range: 0.1–10.0 mg/L Mn; range sensitive: 0.02–2.00 mg/L Mn; method- Manganese – Formaldoxime  Package: 20a, Quantity:1 |  |  |  |
| **4.35** | Semi-micro cuvette, 50 mm optical path made from optical glass, for sensitive measuring range (0.02–2.00 mg/L) with tube tests;  Package: 1 cell, Quantity:1 |  |  |  |
| **4.36** | Software for data processing for the needs of data systematization on the computer |  |  |  |
| **4.37** | Manufacturing methods for sample preparation and performing the procedure according to each required parameter and putting the method into operation |  |  |  |
| **4.38** | Test tubes for determination of COD; range: 15–160 mg/L O2; (In accordance with ISO 15705); method- Potassium dichromate |  |  |  |

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| **All items** | **Installation** performed by contractor or authorised service provider. All the equipment must include all necessary parts and standards for its installation. |  |  |  |
| **All items** | **Testing** of all basic functions of the instrument on a set of producers standard samples commonly used for the corresponding instrument. |  |  |  |
| **All items** | Technical documentation for equipment (Operating manuals/ Users Guide/ Equipment operating instructions/ Cleaning procedures/ Maintenance procedures/ Calibration procedures) upon delivery. |  |  |  |
| **All items** | Training on equipment handling (familiarization during installation - working with the equipment in all basic functions of the equipment), equipment maintenance.  Details of proposed training methodology, shall be presented in the tender proposal and shall refer to the related equipment |  |  |  |
| **All items** | **Warranty**  Tenderers must provide local reliable warranty service agent providing maintenance and the rapid supply of equipment spare parts and consumables for the Warranty duration of one year.  Offer must include warranty service description including:   * Service organisation contact data including name, postal address, telephone number, fax number and e-mail address; * Help Desk (phone) support, which must be available during working hours, 8AM – 4PM; * Guaranteed maximum response time to submitted maintenance support request (fax or e-mail) of 1 (one) working day; * Guaranteed that any requests for services will be attended to within 24 hours; * Guarantee that all items can be repaired or alternatively replaced within a maximum of 30 days; * Guarantee that genuine spare parts and consumables will be available for a period of minimum 1 years from the date of final acceptance of the equipment. |  |  |  |