ANNEX II + III: TECHNICAL SPECIFICATIONS + TECHNICAL OFFER

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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 offered specifications.

Unless otherwise specified, the requirements in these Technical Specifications are presented as a minimum standard which the offered goods must meet.

LOT 1 – Reference Microbiology Laboratory

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
1	**BECNCHTOP NEXT GENERATION SEGUENCING SYSTEM** **Quantity: 1**			
	- Method of sequencing: "sequencing by synthesis" - SBS (sequencing by synthesis). -"Benchtop" instrument (table, not larger than 70x70x70cm and not heavier than 60kg). - Integrated instrument - clonal amplification, sequencing and analysis of data (base calling, alignment, variant calling, reporting) are performed in one instrument. No amplification auxiliary system or additional computer infrastructure is required. -The system should perform paired-read sequencing (bi-directional sequencing) and allow multiple analysis simultaneously of up to 96 samples without the use of PCR reactions. - The throughput of the device (throughput) should be up to 15 GB per one operating cycle. - The instrument should enable the following applications: - complete genome resequencing - targeted sequencing	***Manufacturer's name:*** ***Product type, model:*** ***Specifications:***		

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	- de new sequencing - "Mate-pair" sequencing for libraries with inserts of 2-5kb - "Tag-based" gene expression - small RNA sequencing - ribosome profiling - mapping of DNAse 1 hypersensitive sites - nucleosome positioning and chromatin structure studies - "ChIP-Seq" examination of sequences involved in protein-RNA interactions - "CNV-Seq" determination of variations in the number of copies by sequencing - "GRO-Seq" determination of the RNA polymerase initiation site - sequencing of ancient DNA samples - "paired-end mRNA" sequencing - Analysis of DNA imprinting and allele specific expression. - Illumination: Light-emitting diodes at 530 nm, 660 nm. -The "Reagent chiller" section should have capacity for the entire reagent cartridge containing cluster-generating reagents, paired-end chemistry, and up to 600 sequencing cycles. Reagents should arrive pre-prepared in an integrated RFID-labelled			

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	cartridge. -The system should be a single flow cell system. Each "flow cell" is a substrate with one channel that can be read from the top, bottom or both surfaces, depending on the method of preparation. "Flow cells" should be self-positioned, clamped, and coded so that they can be placed in only one correct orientation. -The instrument control computer should be integrated with the sequencer and have a Quad core CPU with 16GB of RAM for instrument control, signal processing, sequence matching, and variant characterization. -The instrument must be delivered with the installed software for primary and secondary data analysis. -Installation, qualification (IQ, OQ and PQ) and training to work on the instrument must be included in the price. -Supply with the instrument a set of reagents for sequencing whole virus genomes and provide training of staff to perform the protocol for at least 5 working days			
2	**PRECISE INCUBATION SYSTEM** **Quantity: 1**			
	- High-precision heating system for PCR plates and tubes with heating lid for sample preparation for all NGS platforms; - For NGS sample preparation (NGS prep) and			

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	Bead Chip applications; - Sample temperature regulation: ± 0.1 ° C; - Temperature range: ambient + 5.0 ° C to 99.0 ° C; - Ability to select a block of 0.2 ml for PCR plates of 96 wells, 0.6 ml and 1.5 ml tubes, as well as MIDI plates; - Heating lid that minimizes condensation; - Simple temperature calibration; - Dimensions not larger than 21 x 15 x 30 cm; - Weight up to 3 kg			
3	**HIGH SPEED SHAKER** **Quantity: 1**			
	-Fast high-performance thermal shaker for handling a wide range of applications adapted for scientific research, with application in the pharmaceutical and biotechnological field. Suitable for shaking micro titer plates, plates with deep wells, tubes and rolls. - Purpose of shaking: micro titer plates, tubes and teats; - Shaking speed - adjustable: 200 - 3,000 rpm; - Constant orbital shaking diameter: 2 mm; - Shake program setting display; - Built-in timer; - Fire-resistant aluminum housing; - Dimensions not larger than cm 80 x 142 x 170 (H x D x W); - Weight up to 2.7 kg; - The instrument should be able to add the following adapters: for micro titer plates, for			

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	plates with deep wells and for PCR plates			
4	**HIGH PERFORMANCE MAGNETICS RACK** **Quantity: 1**			
	- Magnetic stand designed for product purification during NGS library preparation; - Compatible with 96-well plates and MIDI plates; - Made of ring magnet with integrated Spring Cushion technology, suitable for purifying demanding samples			
5	**GRADIENT THERMAL CYCLER** **Quantity: 1**			
	- 7-inch TFT color touch screen, easy to operate; - Fast heating and cooling, precise temperature control, for reliable results; - Instrument can perform conventional PCR, gradient PCR, long-range PCR, isothermal amplification and various experiments - 12 temperature gradients; - Protection against power outages, for your safety and work efficiency; - Flexible options: Tube Mode and Block Mode - Reaction volume: 0-100µl - Module temperature range: 4 ° C-99.9 ° C - Gradient: up to 12 gradients in one reaction - Gradient temperature range: 35 ° C-100 ° C - Temperature range of the heating cover: 40 ° C-110 ° C - Temperature uniformity: ± 0.2 ° C - Temperature accuracy: ± 0.1 ° C			

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	- Heating and cooling rates: 5.5 ° C / s - Number of cycles: 99 - Number of steps: unlimited - Temperature increase time: 1s-10min - Storage capacity ≥ 1000 programs - Dimensions: 260mm x 400mm x 260mm, 11kg - Noise at work: <55dB			
6	**REAL TIME PCR INSTRUMENT** **Quantity: 1**			
	-96 wells, 6 channels -Reaction volume: 0-100µL -Temperature range: 0-100 ° C -Heating / cooling method: Peltier -Maximum heating rate: 6.1 ° C / sec -Maximum cooling rate: 5.0 ° C / sec -Temperature accuracy: ± 0.1 ° C -Temperature uniformity: ± 0.1 ° C -Gradient block: 12 row, gradient range: 1-40 ° C, -Detection time: 7 sec for 96 wells for all channels -Possibility of detecting 1 copy -The real-time PCR device should have the following excitation range: - 465/510 (FAM, SYBR Green, EVA Green, LC Green); 527/568 (HEX, VIC, TET, JOE); 580/616 (ROX, Texas Red); 632/664 (Cy5); 680/730 (Alexa Fluor680); 465/616 (FRET) -Probe: TaqMan, Molecular beacons, Scorpion, FRET - Real-time PCR should be an open system for consumables - Real-time PCR device suitable for the following			

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	analyzes: quantitative analysis, absolute quantification, relative quantification, genotyping analysis, SNP analysis, dissociation curve analysis, endpoint analysis, HRM - Dimensions of Real-time PCR devices: 355mm x 480mm x 485mm, 30kg -Real-time PCR operating environment: temperature: 10 ° C-30 ° C, humidity: 20% -80%			
7	**MICROCENTRIFUGE** **Quantity: 2**			
	-Maximum rotor speed 14800 rpm -Maximum g-force: 16163 xg -Maximum capacity 12 x 1.5/2 ml tube -Timer setting: 20 sec to 99 min 59 sec in 1 sec increments -Acceleration / deceleration time from max speed: 17 sec / 18 sec -Pulse mode for short, fast centrifugation -Dimensions not larger than (H x L x W): 180mm x 280mm x 230mm -Device weight maximum 6.4 kg -Noise level at 1m distance <60 dB -Rotor imbalance detection -Rotor exchange without tool -Rotor with protective cover			
8	**UNIVERSAL CENTRIFUGE WITH ROTORS** **Quantity: 2**			
	-Rotor speed 16000 rpm -Maximum g-force: 23511 xg			

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	-Maximum capacity 4 x 400 ml tubes -Speed adjustment: up to 16000 rpm / 23511 xg, in divisions of 100 rpm or 100 xg -Timer setting: 9 min 59 sec in 1 sec increments -Unlimited continuous centrifugation mode -Pulse mode for short centrifuges at maximum speed -10 levels of acceleration and 10 levels of deceleration -Pulse mode for short, fast centrifugation -Audible signal to complete spinning and report a fault, with the possibility of switching off if necessary -Possibility to change set parameters (speed, RCF, time, acceleration / deceleration) during centrifuge operation -Dimensions not larger than (H x L x W): 355mm x 460mm x 550mm -Device weight maximum 48 kg -Noise level at 1m distance <68 dB -Automatic door lock after start -Aluminum rotor with airtight cover, capacity 24 seats for 2 ml tubes, fixed rotor angle 45 °, k factor 185 -Aluminum rotor with a capacity of 10 places for 10 ml tubes, fixed rotor angle 35 °, k factor 500 - Aluminum fixed angle rotor for15 ml conical and round-bottom tubes k factor 500 -Swingout rotor 0-90 ° for 2 x micro titer plates, maximum RPM 4700, maximum force 2721 RPM"			
9	**UNIVERSAL CENTRIFUGE WITH ROTOR**			

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	FOR TUBES **Quantity: 1**			
	-Benchtop , small centrifuge -Max. speed: 6800 - 8000 rpm -Max. RCF: 6153 xg -Max. capacity: 8 x 15 ml tube -Voltage 220V -Angle rotor 8 -place -Benchtop model, small size -Microprocessor with large LCD display -Electrical lid lock -Air Cooling System -Control panel with Touch-Operation			
10	**MINISPIN CENTRIFUGE** **Quantity: 4**			
	-Capacity 8x 2.0ml -Centrifugal force 2000 xg -Fix speed 6000 rpm -Power-ON time 99 min -Timer display 7 segment LED -Quick stop -Cover opening automatic -Rotor exchange without tool -Protective cover -Noise level 48 dB -Dimensions (W x H x D) 155 x 105 x 175 mm -Weight 1.4 kg -Protection class according to DIN EN 60529 IP 30			

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11	**ANTIVIBRATION TABLE** **Quantity: 1**			
	-Anti-vibration table without wheels -The bench must withstand the weight of the instrument - more than 100 kg -Table dimensions: up to 122cm x 92cm x 76cm			
12	**LIQUID HANDLING SYSTEM FOR PREPARATION OF NGS LIBRARIES** **Quantity: 1**			
	-Min 25 positions on the deck - the possibility of logical positioning according to the requirements of the protocol - Infrared curtain for security -Rotating gripper with unique offset finger design - Internal LED light - Bright, multiple color- and pattern-coded status light bar - Spacious, open-platform with access from all sides - Onboard cameras for live broadcast and on-error video capturing - Linear motion control - Optional Fly-by barcode reader - Orbital shaker, tip washer and magnetic plate included - The pipetting liquid displacement mechanism prevents any type of cross-contamination - Pipette tips can be automatically changed between each aspiration if required - The software will generate a warning sign if the			

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	aspirated volume is greater than the volume of the pipette tip filled on the mandrel - Pipettes can move independently in X,Y, Z and D axes - percentage error depending on volume ± 1-5% - 8 independent pipetting channels - Pipetting volume 0.5 - 5000 µl - Dimensions: Width: not more than 112 cm Depth: not more than 81 cm Height: not more than 104 cm - Weight: not more than 146 kg			
13	**WATER BATH** **Quantity: 1**			
	- TFT display - Useful volume 20.3 L - Thermal insulation cover made of stainless steel, with double walls with internal curvature			
14	**ANALITICAL BALANCE** **Quantity: 1**			
	- Range: 0-220 g - Readability: 0.1 mg - Repeatability: 0.2 mg - Linearity ± 0.3 mg - Weighing surface 120 mm			
15	**PCR BOX WITH UV LAMP AND HEPA FILTER** **Quantity: 1**			

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	-External dimensions: 650 mm (w) x 560 mm (d) x 875 mm (h) -Internal dimensions: 640 mm (w) x 540 mm (d) -Weight: 60 kg -Alarm system: Low airflow - Warning light and audible alarm -Operator safety: Safety screen with constant monitoring of UV and fluorescent light status -Laminar air flow: vertical flow 0.4 m / sec -Filtration: HEPA filter for air of purity ISO Class 5 -UV light: 20 V UV germicidal lamp -UV control: 4 preset time intervals with LED status indication -UV tube lifetime alarm: Light warnings and audible alarm after 1000 hours -Interior lighting: Full width LED lighting -Electrical requirements: 230V / 50Hz -Noise level: <55db (A) -Construction: Epoxy-coated steel cabinet to prevent corrosion. Polycarbonate side and front protection panels. -Stainless steel work surface			
16	**FRAGMENT ANALYZER** **Quantity: 1**			
	-Detection method: Fluorescence -Light source: LED -Connection: USB -Minimum power: 30W -Weight: 15 kg -Dimensions: 38x30x40 cm			

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	-Automated sampling: 1-96 samples -Consumable gel cartridge: 100-300 samples, single channel cartridge, DNA: S1, S2, S3, F3, N1, N3, RNA: R1, NR1, Protein: P2 -Quick analysis: 1-7 minutes per sample (below 1 kb) -Resolution: 1-4 bp (below 500 bp) -Sensitivity: 5 pg / µl, 1 pg / µl (if diluted with distilled water) -Minimum sample volume: 1 µl (Micro vials. C104250), 10 µl (0.1 ml tube), 20 µl (0.2 ml tube) -Sample consumption: ≤1pL -Software - Relative qualitative and quantitative analysis, Electrophoresis, Analysis of images, Forming reports in accordance with the needs of users			
17	**BIOLOGICAL SAFETY CABINET CLASS II** **Quantity: 2**			
	-Class II microbiological safety cabinet -Device in accordance with European standard for microbiological safety cabinets EN 12469: 2000 -Electronic closing and opening of the front panel using an electric motor -Infrared sensor for control and protection when closing the front movable panel -Control unit with a touch screen of at least 4.3 ”image quality 130,000 pixels or more -Measurement and display of the current flow rate on the screen in m / s -Automatic airflow compensation to maintain set point			

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	-Audible and visual alarm -Display of fan operating time, cabinet operation and service interval on the screen -PIN code-protected device specifications -Possibility of on-screen display: date of last and next service, date of filter installation and filter label -Air purity: ISO Class 4 (Class 10) in accordance with EN ISO 14644-1 (1999) -Main filter: H14 HEPA filter - 99.97% efficiency for particles> 0.3µm -Primary discharge filter: H14 HEPA filter - 99.97% efficiency for particles> 0.3µm -Additional outlet filter: H14 HEPA filter - 99.97% efficiency for particles> 0.3µm -Work surface made of stainless steel SS 316 -External dimensions of the cabinet without stand, ± 5% (W x D x H): 1200mm x 750mm x 1330mm -Workspace dimensions, ± 5% (W x D x H): 1107mm x 510mm x 741mm -Supplied with additional stand -At least two AC power outlets in the cabinet workspace that are activated and deactivated by pressing the display key -LED interior lighting with adjustable light intensity -Cabinet to be equipped with UV germicidal lamp -Possibility to adjust the duration of sterilization with a UV lamp and delayed start of sterilization			
18	**AUTOMATED SYSTEM FOR EXTRACTION OF NUCLEIC ACIDS**			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	Quantity: 2			
	- Extraction according to the principle of magnetic beads - 1-96 samples per cycle - 6 modules for plates, each plate for 16 samples - Plates: 2 x 8 samples - The possibility of using pre-filled whales for extraction - Duration of extraction for 96 samples: 24 minutes - Reaction volume: 30-1000μL - Sample volume: 200μL - Rotation speed: ≤2000rpm - Range of temperature control: Pyrolysis heating: room temperature-120 ° C, Elution heating: room temperature-120 ° C - Areas of application: clinical diagnostics, forensics, research, food quality control, control of the epidemiological status of the area . This instrument can process serum, plasma, whole blood, swabs, amniotic fluid, feces, tissues, paraffin sections, bacteria, fungi and other types of samples - Built-in 7-inch LCD display, touch screen - Flexible creation, deletion and modification of extraction programs - Possibility of storing 10,000 protocols, USB port - Extraction efficiency: high reaction efficiency for nucleic acids ≥95% - Contamination control: HEPA exhaust filter module with negative pressure and built-in UV lamp			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	- Pre-installed program for UV disinfection - Difference between wells CV≤1% - Temperature range: between 10 ° C and 30 ° C - Humidity ≤85% - Operating noise <60 dB - Dimensions: 490 * 520 * 480mm			
19	**FLUOROMETER** **Quantity: 1**			
	- More sensitive than quantification based on UV absorption, making it ideal for valuable samples - Accurately quantifies DNA, RNA and protein in < 3 seconds per sample - The new integrated reagent calculator reports the amount of color and buffer required - Use only 1 µl of sample - Flexible options for exporting results: Wi-Fi, USB drive or direct connection with USB cable - Dimensions: 13.6 cm x 25 cm x 5.5 cm, 743g - Excitation filters: Blue 430–495 nm, Red 600–645 nm - Emission filters: Green 510–580 nm, Red 665–720 nm - Processing time: ≤5s / sample - Warm-up time: <35s			
20	**NGS ANALYSIS SOFTWARE (PC included)** **Quantity: 1**			
	-Microbial Genomics For Outbreak-, Resistom-, Virulome-Investigation, and Real-time Surveillance			

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	-Allows automatic processing and analyzing of NGS (e.g., Illumina, Ion Torrent, or PacBio) and Sanger capillaryelectrophoresis sequence data -User friendly-No scripting or bioinformatics skills needed to process your data and run your analyses. -Possibility to download pre-defined typing schemes or quickly create a new scheme based on a reference genome or allele libraries. -Possibilty to setup an assembling and processing pipeline to analyze hundreds of samples without any further user intervention -Assemble raw reads (FASTQ) with integrated SKESA, Velvet, SPAdes, and BWA algorithms -Read and analyze assembly files (ACE, BAM, FASTA) -Contamination check with Mash Screen -Integrated database with an ability to store, search, retrieve, export, and create reports from experiment, epidemiologic, and DNA sequence data -Data fields are compliant with the meta-data requirements of the EBI European Nucleotide Archive (ENA) -Manage and backup all data (sequence and epi-data) -Possibility to download from NCBI			

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	complete/draft genomes or SRA reads -Possibility to compare new sequence entries against stored data -Automatically cluster alerts of possible outbreaks -Possibility for rapid and easy share typing schemes with others -Possibility to request a non-public epidemiologic data server for a closed group of users -Encryption (SSL) of all data in transmission - 1 PC: Computer Specification Microsoft Windows 64-bit or Linux 64-bit, quad-core processor, 16-32 GB RAM, 50 GB hard disk (HD), and Internet connection (via ports 80 & 443)			
21	**LABORATORY WATER DEMINERALIZATION SYSTEM** **Quantity:1**			
	-Resistivity: 18.2 MΩ.cm at 25°C >1MΩ.cm @ 25°C -Flow rate: Up to 1.2 l/min -Type 1, Type 2, Type 3 -Recommended volume: Up to 10l/day1 Type 1, Up to 10l/day1 Type 2, Up to 30l/day Type3 -TOC value: < 5 ppb2 Type 1 <50 ppb Type 2 <200 ppb3, Type 3 -Bacteria TVC: <0.1cfu/ml4 Type 1 <100			

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	cfu/ml Type 2 <1000 cfu/ml3 Type 3 -Endotoxin: <0.001EU/ml5 -RNases: <1pg/ml6 -DNases: <5pg/ml6 -Particulates: 0.2µm filtration -Application includes molecular biology e.g. DNA sequencing and PCR			
22	**ULTRA LOW FREEZER (minus 40 to minus 90°C) upright, volume 700-800 L** **Quantity:2**			
	-Device temperature range from -40 ° C to -90 ° C -Net device volume from 700L to 800L -Max external dimensions of the device (Width x Depth x Height): 1030 x 1040 x 1993 mm -Microprocessor control of the device Pt-1000 temperature sensor -Color touchscreen LCD for parameter control -Hydrocarbon-based coolant for environmental protection -Insulation of polyurethane foam and vacuum panels with a maximum thickness of 82 mm -Exterior doors with insulation -Security lock with the possibility of locking with a key or NFC card -Stainles steel of aluminum Interior door with handle, at least 2 pieces			

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	-Automatic valve for vacuum relese opening the door in case of emergency -Visual and audio alarm system for power failure, high temperature, low temperature, open door -Ability to protect device parameter settings with password -Possibility of graphical display of stored temperatures -Noise level <52 dBA -Electricity consumption 11.9 kWh / 24h -The device is equipped with software for recording, monitoring and visualization of temperature data and lists of events and alarms -Graphical display of temperature, upper and lower limits of temperature alarms depending on the time, on the screen of the device -Ability to transfer all recorded temperature data and lists of events and alarms up to 3 months back, to USB memory or SD card -24 pcs stainles steel racks with trays for 2" boxes, total capacyty of at least 576 boxes 2"			
23	**ULTRA LOW FREEZER (minus 86°C) upright, volume 50 L** **Quantity:1**			
	-External dimensions 825x595x645 mm -Dimension inner 630x435x428 mm -Weight 87 kg			

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	-Material inner cabinet Stainless steel Material outer cabinet Paintedsteel-Insulation type Polyurethane with cyclopentane -Insulation thickness 80 mm -Mobility Feet -Volume min 90 L -Fitures: Door Lock, LED light, Battery backup			
24	**MALDI (Matrix-Assisted Laser Desorption/Ionization) APPARATUS** **Quantity: 1**			
	-Benchtop / table mass spectrometer of linear configuration with MALDI-TOF technology for microbiological identification -Operation in the mass range up to at least 500,000 Da -Minimum laser life: 400 - 500 million shots -200Hz laser enables fast sample processing; min 300 - 400 samples / h -Data system, monitor, barcode reader -Ability to connect to the laboratory information system independently of the manufacturer -Ability to connect to an antibiotic susceptibility testing system independent of the system manufacturer -Possibility of connecting to the system remotely -Possible export of data in a form that allows			

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	data processing with other programs -Includes IVD reference library with profiles of microorganisms that allows identification of the following groups of microorganisms: enterobacteria, gram negative nonfermentative bacteria, gram positive cocci, gram positive bacilli, anaerobes, legionella, nocardia, campylobacteria, HACEK bacteria, yeasts and broad species environment; a total of a minimum of 3800 species. -Includes a reference library with profiles of microorganisms that allows the identification of molds, and a special protocol for the cultivation and preparation of samples, a minimum of 240 species -Includes an IVD reference library that allows the identification of third level biosecurity microorganisms. -IVD Module for optimized analysis of direct stars from positive blood cultures -IVD Module for the module for automatic subtyping of certain species (KPC-producing Klebsiella pneumoniae and Escherichia coli; Bacteroides fragilis cfiA subtyping) -IVD Module for detecting the presence of beta-lactamases, carbapenemases -The matrix can be applied within 30 minutes from the preparation of the sample smear on the tiles -Possibility of interruption of measurements,			

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	and change of sample plates in case of emergency samples -Reusable tiles (washable) -Possibility of using disposable plates with the possibility of using all positions regardless of the number of inserts of the plate in the instrument -Start-up reagent set included at least 2000 samples and 200 positive blood culture samples -Built-in diaphragm pump system allows easy maintenance with minimum service interval (3 years) -Ionization source self-cleaning protocol without vacuum exclusion -Appropriate CE-IVD certificate for equipment			
25	**MICROSCOPE w LED FLUORESCENCE AND CAMERA** **Quantity:1**			
	-Robust metal stand -Binocular ergophoto tube 100%:0%and 0%:100% with inclination max 20º, adjustable height of viewing for min. 44mm -Objective nosepiece, 6 position, encoded, with functions: - light manager (automated adjusting - - light intensity in conjunction with objectives)			

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	- automated measuring ratio - Mechanical table with drive which can be adjust for 15mm -Two integrated ergonomically positioned snap image buttons on left and right side of microscope (The snap image buttons allows to acquire images and videos directly on USB, without PC) -Achromatic aplanatic condenser 0,9 for magnification 1- 100x with 5 positions for phase contrast and dry darkfield -Illumination LED min 10W encoded, full Koeller, adjusting intensity on stand and ECO mode (automatically goes to stand by after being idle for 15 min.) -Active light manager with an adjustable light intensity, suitable for all kinds of objectives -Light intensity is memorized per objective and provides uniform brightness at all magnifications, eliminating manual lamp intensity adjustments when changing objectives -Objective: 10x/0.3, 20x/0.5, 40x/0.75, 63x/0.85, and 100x/1.3Oil -Eyepiece10x with field of view 23 mm -Additional magnification 1,25x and 1.6x -LED fluoroscence with 4 wavelenghts (385nm, 470nm, 565nm and 625nm) with power supply and control directly from microscope			

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	-Filter set for florochrome (DAPI, Alexa Fluor 405, FITC, eGFP, TRITC, Cy3, AlexaFluor 633, Cy5) -Digital microscope monochromatic camera with HD resolution, live image min 30fps via HDMI, USB 3.0) -Image sensor size min. 13mm, pixel size min 5.86µm, exposition time 2s or more, same producer as microscope -Appropriate adapter and software for multichannel fluoroscence, extended focus, measurement)			
26	**MICROSCOPE w BRIGHTFIELD,PHASE CONTRAST, DIGITAL CAMERA AND SOFTWARE** **Quantity:1**			
	-Robust metal stand -Binocular photo tube 50%:50% with inclination 30º, adjustable height of viewing for min 35mm -Objective nosepiece, 5 position, encoded, with functions: • light manager (automated adjusting light intensity in conjunction with objectives) • automated measuring ratio -Mechanical table with drive which can be adjust for 15mm -Two integrated ergonomically positioned snap image buttons on left and right side of			

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	microscope (The snap image buttons allows to acquire images and videos directly on USB, without PC) -Achromatic aplanatic condenser 0,9 for magnification 1- 100x with 5 positions for phase contrast and dry darkfield -Illumination LED min 10W encoded and halogen min 12V 35W, full Koeller, adjusting intensity on stand and ECO mode (automatically goes to stand by after being idle for 15 min.) -Active light manager with an adjustable light intensity, suitable for all kinds of objectives -Light intensity is memorized per objective and provides uniform brightness at all magnifications, eliminating manual lamp intensity adjustments when changing objectives -Objective: 10x/0.25Ph1, 20x/0.45Ph2, 40x/0.65Ph2, 63x/0.85Ph3 and 100x/1.25Ph3Oil -Eyepiece10x with field of view 23 mm -Digital microscope colour camera with Ultra HD/4K resolution, live image min 30fps via HDMI, USB 3.0) -Image sensor size min. 8mm, pixel size min 1.8µm, exposition time min. 1s, same producer as microscope -Appropriate adapter and software			

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27	**MICROSCOPE w ULTRA DARK FIELD AND DIGITAL MICROSCOPE COLOR CAMERA** **Quantity:1**			
	-Robust metal stand -Binocular photo tube 50%:50% with inclination 30º, adjustable height of viewing for min 35mm -Objective nosepiece, 6 position, encoded, with minimum following functions: • light manager (automated adjusting light intensity in conjunction with objectives) • automated measuring ratio -Mechanical stage with travel range min. 105x85 mm for microtiter plates -Two integrated ergonomically positioned snap image buttons on left and right side of microscope (The snap image buttons allows to acquire images and videos directly on USB, without PC) -Ultra darkfield condensor 1.2/1.4 (0.75-1.0) -Illumination LED min 10W encoded , full Koeller, adjusting intensity on stand and ECO mode (automatically goes to stand by after being idle for 15 min.) -Active light manager with an adjustable light intensity, suitable for all kinds of objectives -Light intensity is memorized per objective and provides uniform brightness at all			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	magnifications, by eliminating manual lamp intensity adjustments when changing objectives -Objective: 10x/0.2 with FWD min.11mm, 20x/0.40 with FWD min 7.2mm -Eyepiece10x with field of view 23 mm -Digital microscope colour camera with Ultra HD/4K resolution, live image min 30fps via HDMI, USB 3.0) -Image sensor size min. 8mm, pixel size min 1.8µm, exposition time min. 1s -Same producer as microscope -Appropriate adapter and software			
28	**MICROSCOPE w BRIGHT FIELD** **Quantity:4**			
	-Robust metal stand -Binocular photo tube 50%:50% with inclination 30º, adjustable height of viewing for min 35mm -Objective nosepiece, 5 position, encoded, with functions: • light manager (automated adjusting light intensity in conjunction with objectives) • automated measuring ratio -Mechanical table with drive which can be adjust for 15mm -Two integrated ergonomically positioned snap image buttons on left and right side of microscope (The snap image buttons allows			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	to acquire images and videos directly on USB, without PC) -Achromatic aplanatic condenser 0,9 for magnification 1- 100x -Illumination LED min 10W encoded and halogen min 12V 35W, full Koeller, adjusting intensity on stand and ECO mode (automatically goes to stand by after being idle for 15 min.) -Active light manager with an adjustable light intensity, suitable for all kinds of objectives -Light intensity is memorized per objective and provides uniform brightness at all magnifications, eliminating manual lamp intensity adjustments when changing objectives -Objective: 10x/0.25, 20x/0.45, 40x/0.65, 63x/0.85 and100x/1.25Oil -Eyepiece10x with field of view 23 mm			
29	**MICROSCOPE with BRIGHT FIELD and DIGITAL CAMERA** **Quantity: 5**			
	-Robust metal stand -Binocular photo tube 50%:50% with inclination 30º, adjustable height of viewing for min 35mm -Objective nosepiece, 6 position, encoded, with functions: • light manager (automated adjusting			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	light intensity in conjunction with objectives) • automated measuring ratio -Mechanical table with drive which can be adjust for 15mm -Two integrated ergonomically positioned snap image buttons on left and right side of microscope (The snap image buttons allows to acquire images and videos directly on USB, without PC) -Achromatic aplanatic condenser 0,9 for magnification 1- 100x -Illumination LED min 10W encoded, full Koeller, adjusting intensity on stand and ECO mode (automatically goes to stand by after being idle for 15 min.) -Active light manager with an adjustable light intensity, suitable for all kinds of objectives -Light intensity is memorized per objective and provides uniform brightness at all magnifications, eliminating manual lamp intensity adjustments when changing objectives -Objective: 10x/0.25, 20x/0.45, 40x/0.65, 63x/0.85, 100x/0.8 and 100x/1.25Oil -Eyepiece10x with field of view 23 mm -Additional magnification 1,25x and 1.6x -Digital microscope colour camera with Ultra HD/4K resolution, live image min 30fps via HDMI, USB 3.0) -Image sensor size min. 8mm, pixel size min			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	1.8µm, exposition time min. 1s, same producer as microscope. -Appropriate adapter and software			
30	**STEREO MICROSCOPE** **Quantity: 1**			
	-Apochromatic optics -Min. 11° or more Greenough optical system -Zoom ratio 8:1 -Magnification 6,3x…50x with objective 1x, -Free working distance min 92mm -Compact stand with LED transmitted illumionation: brightfield, darkfield and oblique illumination -Reflected LED segmented ring illumination with power supply from stand -Integrated binocular photo tube with inclanation not more than 35° -Eyepiece 10x with field of view min 23			
31	**AUTOMATED ELISA READER** **Quantity: 1**			
	-Fully automated ELISA processing for low to medium sample volume with minimal manual input -Open system -High reliability and traceability due to automatic identification of barcodes of patient samples and ready-to-use reagents -Fast processing of up to 50 tests per hour			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Capacity for up to 3 plates and 144 samples per run -Convenient operation of the software including scanning of QC certificates using a 2D-hand barcode scanner -Sample types Plasma, serum, CSF and stool -Parameter capacity per run up to 36 -Shakeable incubators 2 -Sample tubes Outer diameter 10 – 16 mm, height up to 100 mm -User interface Microsoft ® Windows ® 7 or similar -Online connection ASTM interface, bi-directional -Dimensions (WxDxH): up to 1600 mm x 750 mm x 1150 mm (incl. attached All-in-one PC) -Weight: up to 100 kg			
32	**ELISA READER** **Quantity: 2**			
	-Detection modes - UV/vis absorbance spectra (Wavelength range 220-1000 nm) -Measurement modes -Endpoint and kinetic; Spectral scanning (absorbance); Well scanning -Microplate formats - Possibility to upgrade the option for reading plates from 6-1536 wells -Light sources - High energy xenon flash lamp			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Detectors - CCD spectrometer -Read times - less than 1 sec/well -Sensitivity - Full spectrum captured in < 1 s/well -Selectable spectral resolution: 1, 2, 5, and 10 nm -OD range: 0 to 4 OD -Accuracy: < 1% at 2 OD -Precision: < 0.5% at 1 OD and < 0.8% at 2 OD -Shaking - Linear, orbital, and double-orbital with user-defi nable time and speed -Incubation - +3°C above ambient up to 45 °C (the upper heating plate is always 0.5 °C warmer than the lower one in order to avoid condensation) In accordance with FDA 21 CFR Part 11 -Software included in the price -Computer included in the price -Optional - small volume plate with 16 wells (2 µL)			
33	**ELISA WASHER** **Quantity: 2**			
	-3.5-inch LCD display. -100 wash programs. -Aspirating in 2 positions, residual volume <0.7 µl. -Multi-plate can be selected by default settings or manual operation.			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Special rinse procedure makes easy to maintain the device and reduces contamination between plates. -Automatical rinse procedure by distilled water when turn on or turn off can avoid crystallizing in the pipes. -Suitable for plate models: flat-, round -, U-, V- plate (96-well and 48-well) -Manifold types: 8- and 12- way -Wash times: 1 to 99 times adjustable -Wash lines: 1-12 lines selectable -Wash mode: plates or strips -Dispensing volume: 50-950 µl, interval 50 µl adjustable (May extend to 0-6000 µl, interval 25 µl adjustable) -Number of dispensing channels: 3 channels -Soaking and shaking time: 0-999 (seconds/minutes/hours) adjustable -Aspiration time: 0.1-9.9 seconds adjustable, interval 0.1second -Pipeline wash time: 0-240 seconds adjustable -Distilled water automatically wash interval: 0-20 plates - To be supplied with 8 (eight) bottles for washer/waste			
34	**ULTRASONIC BATH** **Quantity: 2**			
	-Ultrasonic frequency 40 KHz -Tank material Stainless steel Cr-Ni 18/10			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Timer 1 - 30 minutes with automatic shutdown -Tank capacity 12 L -Valve for draining liquid from the tank, with hose connection -Total power 1320W -Power of ultrasonic generator 720W -Heater power 600W -Heating control Adjustable up to 90ºC with automatic shut-off -Optimal liquid temperature 40 ºC -Internal dimensions 300mm × 240mm × 200mm (L × W × H)			
35	**INCUBATION SYSTEM (minimal volume 100 L)** **Quantity: 8**			
	-Minimum 100 L -Upper temperature range: Up to 80 C or better -Lod per rack/shelve: minimum 15 kg -Audio/Visual alarm -Inner glass door -Temperature fluctuation: maximum ±0,2 C (at 37 C) Temperature range: +5 °C above ambient temperature to +100 °C -High temperature accuracy thanks to APT.line™ technology or similar -Natural convection			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Controller with LCD display -Electromechanical control of the exhaust air flap -Inner door made of tempered safety glass 2 chrome-plated racks -Stackable -Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm -Ergonomic handle design -USB port for recording data			
36	**INCUBATION SYSTEM (minimal volume 200 L)** **Quantity: 5**			
	-Minimum volume 200 L -Temperature range: +5 °C above ambient temperature to +100 °C -High temperature accuracy, APT line technology or similar -Forced convection -Controller with LCD display -Electromechanical control of the exhaust air flap -Inner door made of tempered safety glass -2 chrome-plated racks -Class 3.1 integrated independent temperature safety device (DIN 12880) with visual alarm -Ergonomic handle design -USB port for recording data			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
37	**INCUBATION SYSTEM WITH CO2 OPTION (minimal volume 50 L)** **Quantity: 3**			
	-Minimum volume 50 L -Temperature Control Range & Fluctuation: °C at +5 ~ +50, ±0.1 -Temperature Uniformity: ±0.25 °C -CO2 Control Range & Fluctuation: % 0 ~ 20, ±0.15 -Humidity Level & Fluctuation: %RH 95, ±5 -Sterilisation Method: H2O2 -Decontamination (optional) -Temperature Sensor: Thermistor -CO2 Sensor: Dual IR -Display: LCD Touch Screen -Exterior Material: Painted Steel (rear cover not painted) -Interior Material: Stainless Steel Copper Enriched Alloy -Insulation Material: Extruded polystyrene -Heating Method: Direct Heat & Air Jacket System			
38	**INCUBATION SYSTEM WITH COOLING OPTION** **Quantity: 4**			
	-Temperature range: 10 -60 C or better -Interior volume minimum: 53L			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Lod per rack/shelve: minimum 15 kg -Optional stacking -Inner glass door -Audio/visual alarm -Temperature variation/uniformity: maximum ±0,5 C (at 37 C) - Display: LCD Touch Screen			
39	**MULTIGAS INCUBATION SYSTEM** **Quantity: 1**			
	- External Dimensions (W x D x H): up to 480 x 550 x 585 mm (±5%) - Volume 50 liters or more - Temperature Control Range & Fluctuation: at +5°C ~ +50, ±0.1 - Temperature Uniformity: ±0.25°C - CO2 Control Range & Fluctuation: 0% ~ 20%, ±0.15% - O2 Control Range & Fluctuation: 1% -18% and 22% - 80%, ±0.2 - Humidity Level & Fluctuation: 95% RH, ±5 - CO2 Sensor: Dual IR - O2 Sensor: Stabilized Zirconia Sensor -Display: LCD Touch Screen -Exterior Material: Painted Steel (rear cover not painted) -Interior Material: Stainless Steel Copper Enriched Alloy -Insulation Material: Extruded polystyrene - Heating Method: Direct Heat & Air Jacket			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	System			
40	**LABORATORY STEAM STERILIZER** **Quantity: 3**			
	Laboratory, vertical, compact, floor-standing: - Electrically heated, microprocessor-controlled, programmable, automatic - temperature range: Max: 105°C - 138°C - Capacity: 150 L - Chamber and lid built in AISI 316L stainless steel. - External structure in AISI 304 stainless steel. - Manual top lid, hermetically closed by knobs and silicon gasket. - The entire control is made through the PLC (Programmable Logic Controller). - 3.5" color touch screen providing an easy and intuitive interface - The heating is performed by electrical heaters. - Drying is performed through a vacuum caused by thermal shock over the entire height of the chamber, thus achieving a quick and effective drying. - As an option, drying can be performed by a vacuum pump. - A thermostatic steam trap is used to achieve automatic elimination of the steam condensates inside the chamber			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
41	**CENTRIFUGE WITH COOLING** **Quantity: 3**			
	-Max. speed: 18,000 rpm -Max. RCF: 23,542xg -Max. volume: 4 x 200ml -Speed range: 200 – 18,000 rpm -Temperature range: -20°C - 40°C -Running time: 59min 50s / 10s increments 99h 59min / 1min increments -Dimensions 40cm x 36cm x 70cm (WxHxD), -Weight 60 kg, -Power input: 660 W -Angle rotor 30x15ml Glass or 20x15ml conical, Angle: 35°, -Angle rotor 12x15ml, Angle: 32°, -Swing out rotor 2x3 Microtitreplates -Angle: 0-90°			
42	**MEDIA DOSING SYSTEM** **Quantity: 1**			
	-Dosing range per dish 1 – 99.9 ml -Standard filling rate (up to 15 ml) circa 900 dishes/hour -Maximal dosing rate 500 ml/min -Dosing reproducibility circa 1% (at 15 ml)			
43	**FAST POC qPCR SYSTEM** **Quantity: 1**			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-On-site molecular diagnostics -Portable, light -Two heating blocks, rechargeable lithium battery -LCD display with touch screen -No DNA/RNA extraction, isothermal amplification with real-time detection -Two- minutes cooking prepares the sample, test system for diagnostics of EHEC, EAggEC, EIEC/Shigella from bacterial culture and selective media			
44	**WATER DESTILATION UNIT** **Quantity: 2**			
	-Conductivity stage 1 /25 °C 2.3 µS/cm -Production output 12 L/h -Tank volume 24 L -Heater power max. 9 kW -Power consumption max. 9 kW -Cooling water flow rate 3.3 L/min -Maximal pressure cooling water 7 bar			
45	**LABORATORY REFRIGERATOR** **Quantity: 3**			
	-Temperature set range: + 4 ° C to + 15 ° C -Alarm set range: + 1 ° C to + 20 ° C -Gross volume: 1430 L -Interior dimensions: 1544 x 1291 x 707 mm (H x W x D)			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-External dimensions: 2050 x 1441 x 910 mm (H x W x D) -Safety door lock with 2 keys -Digital temperature indicator (Display: 0.1 Digits) -Controlled fan cooling system for constant temperature and even temperature across the entire refrigeration chamber. -Safety thermostat avoids the dropping of the stored product's temperature below + 2 ° C -Self contained alarm system with integrated battery (12V - 7 Ah) takes over the alarm function and temperature value measurements in case of power failure for at least 48 hours -Automatic fan switch off when the front door opens -Material interior body: Stainless steel -Material outer casing: Stainless steel with glass door -Glass door heating (anti-mist) -12 Wire Shelf and 6 ST-Drawer -Noise level: 50 dB (A) -Energy consumption: 1.90 kWh / 24h -Heat ejection: 48 kcal / h -Hold Over time (from + 5 ° C to + 10 ° C): 1.42 h -Power: 280 W			
46	**AUTOMATED IMMUNOASSAY SYSTEM**			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	Quantity: 2			
	-Compact, multiparametric automated immunoanalyzer -Technology ELFA (Enzyme Linked Fluorescent Assay) -Enables 10 different analytes to be used simultaneously and up to 30 results can be produced per hour -Used with assay kits covering: − hepatitis, − AIDS, − serology testing, − bacterial and viral antigen detection, − fertility/pregnancy monitoring, − thyroid hormones, − tumor markers, − endocrinology, − anemia, − sepsis − immuno-hemostasis, − industrial microbiology -Mandatory tests in the range of clinical parameters: HIV DUO Ultra, Ultra HBs Ag, anti-HCV, Lyme IgM, IgG Lyme, EBV VCAIgM, EBV VCA / EA IgG EBV EBNA IgG, C. difficile Toxin A and B, C. difficile GDH -Mandatory tests for control of food pathogen detection: Salmonella, Listeria spp, Listeria monocytogenes, E.coli O157:H7,			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	Campylobacter spp, Staphyloccocal enterotoxins -Complete analysis on the reagents for a single test -Always ready for run, without startup and shutdown process -Ability to work individual analysis and series -Ability to work a number of different analyzes at the same time -Complete control of sample and reagent bar code -The possibility of networking			
47	**BACTERIAL COUNTING SYSTEM** **Quantity: 1**			
	-Detects down to one organism per 100 mL -No dilutions (for counts up to 200 with Quanti-Tray; 2,419 with Quanti-Tray/2000; and up to 2,272 with Quanti-Tray/Legiolert). -51-Well Trays -97-Well Trays			
48	**DILUTOR** **Quantity: 1**			
	-Fast and accurate dispensing: 12 sec. for 225ml / (9 sec in turbo mode) -Dilution accuracy: >99% -Turbo mode -Integrated bubble level -Motorized dispensing nozzle			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Editable programs: 20 -Weighing range : 0.1 to 4000g -Stainless steel bag holder - extended lifetime -Watertight base - easy to clean -2 USB ports - 1 for upgrades / 1 for eTRACE connections -Plug and play removable pumps: 4 -Interactive display (color codes) -Dimensions (W x H x D): 275 x 250 x 400 mm -Weight: 8 kg -Electricity Supply: 100-240 V / 50-60 Hz / 120W			
49	**LABORATORY TECHNICAL BALANCE** **Quantity: 2**			
	- Range: 0-3000 g - Readability: 0.01 g - Repeatability: 0.02 g - Linearity ± 0.05 g - Cup diameter 120 mm			
50	**DRY STERILIZER** **Quantity: 2**			
	- Minimal volume 120 L - Temperature range: +10 °C above ambient temperature to +300 °C -Up to 30% lower energy consumption compared to conventional units on the market			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-High temperature accuracy, APT line technology -Adjustable fan speed -Controller with LCD display and enhanced time functions -Electromechanical control of the exhaust air flap -2 chrome-plated racks -Class 2 integrated independent adjustable temperature safety device (DIN 12880 or equivalent) with visual alarm -Ergonomic handle design -Ethernet interface -USB port for recording data			
51	**LABORATORY PH METER** **Quantity: 3**			
	-Parameter pH/mV/Temp -Measuring range pH -2.000 ... 19.999 -Measuring range Temperature -5.0 ... 105.0 oC -Measuring range mV -1200.0 ...+1200 / -2000...+2000mV -Accuracy pH +/- 0.005/ +/-0.01/0.1 -Accuracy mV +/- 0.3 mV/ +/- 1 mV -Accuracy Temperature +/-0.1 K -Supplied with pH electrode			
52	**THERMOSTAT DRY BLOCK SYSTEM WITH HEATING AND COOLING**			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	Quantity: 1			
	-Maximun load [kg] 0.3 -Permissible ON time [%] 100 -Timer yes -Timer display TFT -Time setting min. [s] 1 -Time setting max. [min] 6000 -Operating mode timer, continuous and program operation -Working with microtiter plates yes -Working temperature min. [°C] room temp. - 30 ±2 -Temperature setting range min. [°C] -10 -Heating temperature max. [°C] 110 -Set temperature resolution [°C] ±1 -Temperature control accuracy [°C] ±0.5 -Temperature stability [°C] 0.5 -Temperature homogenity [°C] ±0.5 -Heating rate [°C/min] 5.5 -Temperature display yes -Cooling Rate [°C/min] 2 -Cooling Power [W] 72 embedded cooling unit yes -Number of exchangable attachments 10 -Fixed safety circuit [°C] 145 -Permissible ambient temperature [°C] 5 - 40 -Permissible relative humidity [%] 80 -Protection class according to DIN EN 60529 IP 21 -For controlled dry heating and cooling of test			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	tubes and microtubes in interchangeable blocks. - thermoblock for 2 ml tubes - thermoblock for microtubes 1.5 ml - thermoblock for microtubes 0.5 ml - thermoblock for 96- well PCR plates - thermoblock for microtiter and deep-well plates - cover for thermoblock - Power cable set, 220/240 V.			
53	**THERMOSTAT DRY BLOCK SYSTEM WITH HEATING OPTION** **Quantity: 1**			
	-Number of blocks: 4 -Heat output [W] 412 -Heating temperature range [°C] room temp. +5° - 120 -Temperature display -Adjustment and display resolution [K] 1 -Connection for external temperature sensor CT (DIN12878) PT 1000 variation; DIN EN 60751 Kl. A [K] ≤ ± (0.15 +0.002xITI) -Temperature stability within the blocks at 37°C [°C] ±0.2 -Temperature stability within the blocks at 60°C [°C] ±0.4 -Temperature Homogenity @ 37°C [K] 0.2 -Temperature Homogenity @ 60°C [K] 0.4 Heatingrate / Heat up time with external			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	sensor [K/min] 5 -Set-up plate material Aluminium alloy -Set-up plate dimensions [mm] 96 x 304 -Fixed safety circuit [°C] 150 -Timer -Time setting range [min] 1 – 5999 -4 interchangeable blocks -Included: - block removal tool - 2 aluminium thermoblock for 2 ml tubes - 2 aluminium thermoblock for microtubes 1.5 ml			
54	**AUTOMATED SYSTEM FOR STAINING OF MICROORGANISMS** **Quantity: 1**			
	-Standardization – slides are all stained the same way -Up to 30 slides ready in 5 minutes -Eco-friendly system -Staining adjustable to lab practices/habits -Standardized staining – innovative spray nozzles always dispense the same reagent volume -No cross contamination – each slide separated & fresh staining reagent used each time -Improved microorganism differentiation compared to manual and bath staining results			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Full traceability of reagents, users and maintenance – troubleshoot problems & ensure compliance -User management to ensure standardization of the process -Clean and safe staining -Simply Load & Go (just 2 handling steps!) -Easy intuitive touch screen -Customize & program protocols -Rapid results (3-5 minutes) -Fully automated process from fixation to slide drying -Improved lab workflow with single or batch slides possible -Can be integrated with Full Microbiology -- Lab Automation -Optional cytocentrifuge function			
55	**MICROBIAL DETECTION SYSTEM** **Quantity: 1**			
	-Built-in control module and incubation chamber with optical detection system, where each position has its own optical detection system -Capacity of 120 bottles, with the possibility of subsequent upgrade capacity up to 840 (Modular system to increase easily the analytical capacity) -Colorimetric method of CO2 detection due to			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	growth of microorganisms -Continuous monitoring of changes every 10 minutes, gives immediate notification of results with instant visual and audible alerts, including a remote alarm capability. -Possibility of adapting the capacity of the instrument for simultaneous detection of mycobacteria in one compartment of the incubator and other microorganisms in the other compartment (indipendent drawers for blood and SBFs samples and mycobcteria other than blood samples in the same instrument) -Availability 24/7 -Software support for device handling, with the possibility of connecting to a LIS -Algorithms adapted to the detection of microorganisms from blood and other primarily sterile body fluids, sputum - validated by the manufacturer and approved by the FDA (CE-IVD marked and FDA clearance for blood and SBFs) -Algorithms adapted to the detection of microorganisms from bottles that stood at room temperature for 24 hours before investment without the risk of false negative results (Patented alghoritms for delayed bottles) -Customizable protocol incubation and protocol period by bottle			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-From the same bottle used, in addition to the detection of bacteria, the detection of fungi is also possible -Full solution of plastic bottles (unbreakble) to ensure maximum of safety - no glass bottles. -Storage up to 2000 results and growth curves -The possibility of archiving data to a USB drive -The ability to display and print different data and growth curves -Bar code reader - built-in and external reader -Printer -UPS -Keyboard -Embedded touch scree			
56	**DENSITOMETER** **Quantity: 10**			
	-Measurement range 0.00–15.00 McF -Display resolution 0.01 McF -Light source LED -Measurement wavelength (λ) λ = 565 ±15 nm -Accuracy (0.3–5.0 McF)±3% -Measurement time: 1 s -Sample volume: not less than 2 ml -Tube external diameter: 12 mm, 16 mm (using A-12, A-16 adapter) or 18 mm (without adapter)			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Possibility to restore factory calibration settings -Display: LCD -Dimensions (W×D×H): 165×115×75 mm -Weight: up to 0.7 kg -Input current/power consumption: 12 V, 7 mA / 0.1 W -External power supply: Input AC 100–240 V, 50/60 Hz; Output DC 12 V -Standard set: External power supply, A-16			
57	**VORTEX MIXER** **Quantity: 12**			
	-Type of movement orbital -Shaking stroke [mm] 4 -Permissible shaking weight (incl. attachment) [kg] 0.4 -Motor rating input [W] 39 -Motor rating output [W] 9 -Speed min (adjustable) [rpm] 500 -Speed max. [rpm] 2500 -Speed display scale -Speed control scale 0 - 6 -Operating mode continuous operation -Touch function yes -Dimensions (W x H x D) [mm] 120 x 140 x 138 -Weight [kg] 3.9 -Permissible ambient temperature [°C] 5 - 40 -Permissible relative humidity [%] 80			

1. Item Number	2. Specifications Required	3. Specifications Offered	4. Notes, remarks, ref to documentation	5. Evaluation Committee's notes
	-Protection class according to DIN EN 60529 IP 21			
58	**FLAMELESS STRILIZER** **Quantity: 6**			
	-No combustion on the housing (Cool-Touch) -Sterilization temperature 750 ° C - 1000 ° C -Comfortable operation on touch or foot pedal (stainless steel foot pedal, cable length 3.0 m, included) -Energy efficient use through Thermocontol technology -Optical display of sterilization flow -IC sterilization source -Hallogen lamp -Sterilization of annealing tube before use -Quartz sterilization tube -Special quartz glass annealing tube -Very easy cleaning of devices and annealing tubes -Tube size external - minimum Ø 19 mm, internal - minimum Ø 16 mm, length maximum 112 mm -Fixed timer (10 seconds) automatically controls the heating of your instruments -Tested and certified for photobiological safety of lamps and lamp systems according to EN 62471 by BG ETEM - No risk to skin and eyes -Dimensions of the device maximum WxHxD 11 x 17 x 18 cm			

Installation and after sales services for Lot No1

Specifications Required		Specifications Offered	Notes, remarks, ref to documentation	Evaluation Committee's notes YES/NO
Installation	Installation performed by contractor or authorised service provider; All the equipment must include all necessary parts and standards for its installation			
Testing	Testing of all basic function on a set of producer's standard samples commonly used for the corresponding instrument.			
Education	Theoretical education about basic functions of instrument, software and maintenance in Serbian or interpretation should be provided for 2 doctors and 3 technicians during 5 days performed by a manufacturer's licensed instructor no sooner than 1 month before installation.			
Start-up Training	Practical start-up training for 5 end users after installation and testing in all basic functions of the instrument on set of standard samples, commonly used for the corresponding instrument . Duration of training 1 day.			
Manuals	Instruction manual in English and Serbian			
Certificates and documentation	CE mark; Certificates conform to standards as specified in EU Directive 2002/98/EC; GMP (Good Manufacturing Practice)documentation; all in English language.			
Warranty	One year after provisional acceptance in accordance with the conditions laid down in Article 32 of the General Conditions.			

Annex II + III: Technical Specifications + Technical Offer - part II – Place of delivery/Acceptance

Item	ARTICLE	Name of person responsible for provisional and final acceptance	Place of acceptance
Lot 1 - **REFERENCE MICROBIOLOGY LABORATORY**			
Item 1-58	**All items**	Dr Verica Jovanović	Institute of Public Health of Serbia “Dr Milan Jovanovic Batut” Ministry of Health, Republic of Serbia Dr Subotica 5 11000 Belgrade

Authorised Contact Person	Delivery address
Name: Dr Verica Jovanović **Phone:** +381 11 2442741 **Fax:** N/A **E-mail:** verica_jovanovic@batut.org.rs **Working hours:** 7:30-15:30 (Monday to Friday)	**Lot 1** Institute of Public Health of Serbia “Dr Milan Jovanovic Batut” Ministry of Health, Republic of Serbia Dr Subotica 5 11000 Belgrade