

№	DESCRIPTION
1	Technical Specifications for Stereo microscope
2	Technical Specification for Invert Microscope with Camera Attachment with computer link interphase

3	Technical Specifications for refrigerators
4	Technical Specifications for freezer -20 oC
5	Technical Specification for Laboratory Centrifuge

6	Technical Specifications for Ultra purity water generator
7	Technical Specification for Refrigerated Centrifuge
8	Technical Specifications for Immunofluorescence microscope

9	Technical Specifications for freezer -20 oC
10	Technical Specifications for ultra low freezer -86 oC

11	Technical Specification for HPLC (High-performance liquid chromatography) for Aflatoxin Analysis
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12	Technical Specifications for Inductively Coupled Plasma Mass Spectrometer for element analysis
13	Biological Safety Cabinet Class II Type A2

14	Real-Time PCR Detection System
15	Technical Specifications for COMMERCIAL GLASS DOOR REFRIGERATOR

16	Mobile Incinerator
17	Laboratory Autoclave
18	Laboratory Microwave Digestion System
19	Technical Specifications for refrigerators



## SPECIFICATION

- 1) Stereo microscope with magnification X125 or higher
  - 2) Resolution 600 LP/mm or higher
  - 3) Aperture 0.2 or higher
  - 4) Field of view more 60 mm
  - 5) Zoom ratio of 10:1 or higher
  - 6) Zoom range approximately 0.6
  - 7) Objectives
    - a) X 0.5
    - b) X 0.75
    - c) X 1.0
    - d) X 1.25
  - 8) Coaxial fluorescence illuminator
  - 9) LED base for transmitted light
  - 10) Camera (colour) compatible with the microscopic system with facilities to record the pictures and direct display of images in a PC monitor
  - 11) Power supply: 220-240 V, 50/60 Hz, 2-pin grounded plug type F
  - 12) Operation and maintenance instruction manuals
  - 13) Brand new product.
  - 14) Software program
- Additional parts: Microscope cover 1 NOS

- a) A complete trinocular research microscope with compatible digital camera and attachments meeting the following specifications
  - b) Optical system of the type UIS2 or CFI or IC2S type Plan Achromat or equivalent
  - c) Objectives :
    - 4X with NA 0.1 or higher
    - 10X with NA 0.25 or higher
    - 40X with NA 0.65 or higher
    - 100X with NA 1.25 or higher (oil immersion)
  - d) Quadruple nosepiece tilted .
  - e) Trinocular observation tube with inclination of 30 degree .
  - f) Interpupillary distance adjustment range of 50-70 mm
  - g) Light of minimum 30 W halogen lamp with adjustable intensity.
  - h) Microscope digital camera type is C-mount CCD camera head with control unit and handset
  - i) Imaging sensor : Size is no less than 1/1.8 inch color CCD  
: Effective pixels is no less than 5 megapixels  
Progressive scanning facility
  - j) Video recording pixels of AVI 400 x 300 or better
  - k) Image display resolution for UXGA of 1600x1200 or better
  - l) Storage media is USB memory, network PC
  - m) Exposure time: AUTO: 2 to 1/20,000 sec.  
: MANUAL: 8 to 1/20,000 sec.
  - n) Scale display : View scale/Hide scale  
Available microscope total magnification: 0.01x to 9000x
  - o) Facility to measure functions of Distance of 2 Points, 3 Points Circle, Distance between 2 Circle Centers, 3 Points Angle, 4 Points Angle, Perpendiculars, Polygon Area, Boundary Length, Distance of Parallel Lines, XY Distance, Count, Poly Line, and Cross Line
  - p) Computer 2 Duo Core processor, 3.2GHz or lasted version with lasted Window software
  - q) A minimum of 4.0GB RAM or better
  - r) A minimum of 320GB Hard disk or better
  - s) Micro thin LED or LCD monitor at least 23 inches
  - t) Color printer and UPS
  - u) Power supply: 220-240 V, AC, 50/60 Hz
  - v) Brand new product.
  - w) Installation, user and maintenance instructions
  - x) Software program
- Additional parts:
- a) CD memory stick of 8 or more 2 Nos

- 1) Refrigerator, operating at ambient temperatures up to 32 oC
  - 2) Digital temperature display
  - 3) Operational temperature range +2 to +8 oC
  - 4) Resistant to chemical vapours
  - 5) Capacity 300- 400 Litre
  - 6) 4 or more shelves of corrosion resistant material
  - 7) Facility to use a thermometer to read internal temperatures.
  - 8) Frost free
  - 9) Cooling system of environmentally acceptable refrigerant (indicate the refrigerant)
  - 10) Power supply: 220-240 V, 50-60 Hz, 2-pin grounded plug type F
  - 11) Brand new product.
  - 12) Operator and maintenance instruction manuals
  - 13) Factory certification on operational quality of equipment
- Additional Parts; none

Volume: 700 litres  
 Rated at 43°C ambient  
 Fridge temperature range: -2°C to +8°C  
 Freezer temperature range: -10°C to -35°C  
 Electronic HACCP controller  
 Fan forced refrigeration with auto defrost  
 Full stainless steel construction  
 Internal radius corners  
 Internal LED light  
 Reversible & Self closing door  
 Removable magnetic door gasket  
 Door lock with key  
 Removable racking for ease of cleaning  
 4x Adjustable shelves 530x650mm  
 Supplied on castors (2x with brakes)  
 Upright model  
 Compressor of no less than 0.5 HP  
 Operation system with no frost formation  
 Power supply: 220-240 V, AC, 50/60 Hz 2-pin grounded plug type F  
 Brand new product.  
 Operator and maintenance instructions  
 Factory certification on operational quality of equipment  
 EC or similar declaration of conformity  
 Additional parts: none

- 1) Bench top centrifuge operational up to 14000 rpm, and digitally controlled timer
  - 2) Rotor to hold 0.2 to 2.2 microtubes (Adapter for PCR tube 0.2 ml, max 6 mm, for all 1,5/ 2 ml rotors)
  - 3) Microprocessor control with operational speed digitally displayed
  - 4) Power: 220-240 V, 50-60 Hz, 2-pin grounded plug type F
  - 5) Brand new product.
  - 6) Operator and maintenance manuals
  - 7) Factory calibration certificate
- Additional Parts: Rotor to hold 0.2 to 2.2 microtubes  
 Microtubes 2 ml capacity x 25

The complete unit should be capable of producing water at Resistivity: 18.2 M•cm @ 25 °C and meeting the quality requirements given below

- a) TOC (with 185/254 nm UV lamp): <5 ppb
- b) Particulates (size > 0.22 µm): <1 particulate/ml
- c) Bacteria: <0.1 cfu/ml
- d) Endotoxin (pyrogens): <0.001 EU/ml
- e) Rnases: <0.01 ng/ml
- f) Dnases: <4 pg/ul

The system should include:

- a) Cartridge system for initial chemical purification of water usable for more than 6 months
- b) UV system for decontaminating water
- c) Ultra filter system to remove bacteria and spores
- d) System should be capable of producing 80 L ultra pure water per day from tap water

Power supply: 220-240 V, 50-60 Hz

Brand new product.

Operator and maintenance instruction manuals

Additional Parts

water chemical purification packs - 2

water microbiological purification packs - 2

UV bulb / tube – 1

1) Bench top centrifuge operational up to 13700 rpm, with digitally controlled timer

2) Microprocessor control with operational speed digitally displayed

3) Operates with refrigeration off too

4) Operates at temperatures of 4 oC to 50 oC

5) Time settings 1 to 90 min

Rotor to hold: 6x50 ml tubes Max speed up to 13500 rpm

Rotor to hold: 40x50 ml tubes and 96x15 ml tubes Max speed up to 4250 rpm. Adapter for 50 ml conical tubes and for 15 ml tubes

6) Centrifuge tubes capacity 15 ml 50 ml Teflon 40 units of each type

7) Power: 220-240 V, 50-60 Hz, 2-pin grounded plug type F

8) Brand new product.

9) Operator and maintenance instruction manuals

10) Factory calibration certificate

1) Upright microscope

2) DIA at least 100 W halogen lighting

3) Micro-macro-block window with refocusing mechanism

4) Ergonomic height – adjustable trinotubus

5) Adapter for upgrading the camera

6) Eyepieces 22 mm (F.O.V.)

7) Lenses for fluorescence: 10x- N.A at least 00:29,

8) 20x N.A. at least 0:49, 40x N.A. at least 00:89, 60x N.A. at least 0.94

9) Revolver for at least 6 lenses

10) Mechanical table right management.settingg torsion displacement

11) Holder preparation 2 preparation

12) The option of installing fluorescent filters. Built 3 filters green, blue and DAPI

13) Camera (colour) compatible with the microscopic system with facilities to record the pictures and direct display of images in a PC monitor

14) EPI Light Source 130 W Hg least 2000 ur lifetime

15) Modern computer with graphical card and all 2T disk

16) Power supply: 220-240 V, 50/60 Hz, 2-pin grounded plug type F

17) Operation and maintenance instruction manuals

18) Brand new product.

19) Software program

Additional parts: Microscope cover 1 NOS

- 1) Volume: 151 litres
  - 2) Door lock with key
  - 3) External dimensions 595x 610 x 845 mm
  - 4) Rated at 43°C ambient
  - 5) Freezer temperature range: -10°C to -35°C
  - 6) Electronic HACCP controller
  - 7) Fan forced refrigeration with auto defrost
  - 8) Full stainless steel construction
  - 9) Removable magnetic door gasket
  - 10) Reversible & Self closing door
  - 11) High and low temperature alarms
  - 12) Internal LED light
  - 13) Internal radius corners
  - 14) Removable racking for ease of cleaning
  - 15) 3 shelves
  - 16) Supplied on castors (2x with brakes)
  - 17) Upright model
  - 18) Compressor of no less than 0.5 HP
  - 19) Operation system with no frost formation
  - 20) Power supply: 220-240 V, AC, 50/60 Hz 2-pin grounded plug type F
  - 21) Brand new product.
  - 22) Operator and maintenance instructions
  - 23) Factory certification on operational quality of equipment
  - 24) EC or similar declaration of conformity
- Additional parts: none

- 1) Volume: 500-600 litres
- 2) Door lock with key
- 3) Polyurethane insulation
- 4) Rated at 43°C ambient
- 5) Freezer temperature: maintain ultra low temperature up to -86°C
- 6) Electronic HACCP controller
- 7) Auto defrost
- 8) Full stainless steel construction
- 9) Removable magnetic door gasket
- 10) Reversible & Self closing door
- 11) High and low temperature alarms
- 12) Internal LED light
- 13) Internal radius corners
- 14) Removable racking for ease of cleaning
- 15) tall box, boxes per rack  
tall box, boxes per rack  
tall box, boxes per rack
- 16) Supplied on castors (2x with brakes)
- 17) Upright model
- 18) Dual compressor
- 19) Operation system with no frost formation
- 20) Power supply: 220-240 V, AC, 50/60 Hz 2-pin grounded plug type F
- 21) Brand new product.
- 22) Operator and maintenance instructions
- 23) Factory certification on operational quality of equipment
- 24) EC or similar declaration of conformity
- 25) LN2 back up system

Components in the main unit

a) Quaternary gradient HPLC system with facility to perform standard HPLC & fast HPLC. Both standard and fast mode to be operated with four or more solvent gradients.

b) Factory plumbed integrated system (pumps, solvent delivery modules, auto injectors, UV visible photodiode array detectors)

Pump system:

a) Low pressure gradient pump with reciprocating dual piston design.

b) In-built degasser with 4 channel or better.

Maximum pressure : 5700psi or better

Flow Rate: 0.001 ml/min to 9.999 ml/min

Composition range: 1 to 100%

Composition Accuracy: + 1% or better

Composition precision: <0.2RSD or better

Column oven compartment:

a) Temperature range: ambient +10 oC to 65 oC

b) Temperature accuracy:  $\pm 1$ oC or better

c) Temperature reproducibility:  $\pm 0.15$  oC or better

d) Warm up time: less than 15 min

UV-Vis Detector:

a) Wavelength range; 190 nm – 900 nm

b) Wavelength accuracy; +0 - 1nm

c) Light source: Deuterium and halogen

d) Noise Level +or-  $1 \times 10^{-6}$  AU

e) Drift less than 1 mAUh

Fluorescence Detector:

a) Wavelength Range(Excitation): 200 – 800 nm approx.

b) Wavelength Range(Emission): 250 –900 nm approx

c) Accuracy: Maximum + 3 nm or better

d) Sensitivity: >600 for H<sub>2</sub>O Raman line

e) Flow Cell Volume: Approx. 10  $\mu$ l

Auto sampler:

In built auto sampler,

a) To handle 200 x 2ml HPLC vials or better

b) Auto sampler syringe volume 100  $\mu$ l or better

- a) Complete ICP-MS unit capable of using in the standard, Collision and Reaction modes consisting of the plasma ion source, sample spray chamber and cyclone chamber (electronically controlled cooling) for testing environmental and food samples
- b) Detection limits of less than 1 ng/L
- c) RSD, 4% under all conditions
- d) RF generator of starting from 25 MHz or better
- e) Auto alignment facilities for the torch
- f) Facilities for efficient removal of interfering substances from unknown samples
- g) High frequency quadrupole system
- h) Preferably sensitivity more than 400 Mcps/mg/L or Kg (ppm)
- i) Self- diagnostic tools
- j) Autosampler to handle 70 or more samples
- k) Mechanisms to prevent drifts due to environment temperature variations in the spray chamber
- l) Indicate the systems used for the three modes.
- m) Indicate the detection limits of the instrument for standard substances
- n) Indicate the software used and duration for free upgrade of software
- o) After sale technical support (indicate duration)
- p) Power supply: 220-240 V, 50-60 Hz Plug type F
- q) Brand new product.
- r) Operator and maintenance instruction manuals
- s) It is required to submit brochures giving detailed technical information and specifications for the offered model of the equipment along with the bidding documents

Additional Parts:

- a) Software Package, LabSolutions ICPMS (English) recent version (Indicate software update terms)
- b) Detection limit standards – 100 ml (For at least 5 elements)
- c) Calibration standards (100 ml each) for 20 elements
- d) Quality control standards – 100 ml For 10 elements
- e) Helium gas cylinder of purity 99.999% - 2 Nos

The system should circulate minimum of 65% air at work space and all air entering the system and exiting should be only through HEPA filters.

Internal Size: Width 1.5 meters or more; Depth 600 cm or more; height 650 cm or more

Usable Work Area: More than 0.70 m<sup>2</sup>

Average Airflow Velocity: Inflow- 0.53 m/s (105 fpm), Downflow- 0.35 m/s (70 fpm)

ULPA Filter Typical Efficiency: >99.999% for particle size between 0.1 to 0.3 microns per IEST-RP-CC001.3

- Door: Laminated glass more than 6 mm
- Control panel: LCD digital display panel
- Required sash level: 200 or more
- External material: SPCC / AL with epoxy powder coated
- Chamber: Stainless steel 304
- Certification: EN 12469, CE
- Noise level: ≤ 65 dBA
- Exhaust volume: 720 CMH

General Specifications:

A thermal cycler and data station for Polymerase Chain Reaction to be used mainly for animal health diagnostic analysis with ability to amplification of PCR, cloning, cycle sequencing, gene expression studies and mutagenicity meeting following technical specifications.

Technical specifications:

- a) Possess analysis modules for melting curve genotyping, absolute quantification and relative quantification Melt curve analysis, Gene expression analysis by relative quantity ( $\Delta Cq$ ) or normalized expression ( $\Delta\Delta Cq$ ) with multiple reference genes and individual reaction efficiencies, Data analysis options include bar chart, clustergram, scatter plot, volcano plot, and heat map, Multiple file gene expression analysis for comparison of an unlimited number of Cq values, Allelic discrimination, End-point analysis
- b) Block cycler unit to take up 384 or more wells (0.2 ml)
- c) Heating rate is at least 5 °C/ second and cooling rate at least 4 seconds/°C
- d) Preferably peltier-based heating and cooling system or equivalent
- e) Thermal base system to provide well-to-well temperature homogeneity of + 0.5 °C within 15 sec of arrival at 90 °C
- f) Lamp with 430-690 nm for excitation carrying minimum of 5 filters and emission filters in the range 500 – 700 nm (minimum of 5 filters)
- g) Resolution: Detect as little as 1.5 fold changes in the target quantities in single phase reaction.

Preinstalled software configuration for

- a) Amplification of PCR
- b) Cloning
- c) Cycle sequencing
- d) quantification analysis
- e) Endpoint genotyping
- f) Mutagenicity
- g) Indicate any other facilities offered

Other requirements

- a) PC Computer if data screen is not a part of the machine . Indicate the make and version offered (It should be Windows 10 program Pentium XP pack 3 or hire)
- b) Possibility of operating the machine with an external PC
- c) Operator and maintenance manuals English / Russian versions
- d) Self-diagnostic system consisting of Installation kits, spectral calibration kit, TaqMan RNA P-96 well Instrument verification plates ( or equivalent systems)

Licensed for real-time PCR

To be used for Experiment Types:

~~Quantitative PCR with dual~~

- 1) Refrigerator, operating at ambient temperatures up to 32 °C
- 2) Digital temperature display
- 3) Operational temperature range +1 to +10 °C
- 4) Capacity 1200- 1300 Litre
- 5) 12 shelves of corrosion resistant material
- 6) Facility to use a thermometer to read internal temperatures.
- 7) Frost free
- 8) Cooling system of environmentally acceptable refrigerant (Isobutane, propane or hydrocarbon blend R-441A)
- 9) Power supply: 220-240 V, 50-60 Hz, 2-pin grounded plug type F
- 10) Brand new product.
- 11) Operator and maintenance instruction manuals
- 12) Factory certification on operational quality of equipment
- 13) Operating mode: Ventilated
- 14) Number and type of doors: 3 Glass
- 15) Climatic class: 4 or better
- 16) Type of external material: Stainless Steel
- 17) Type of internal material: Stainless Steel

Additional Parts; none

<p>The unit should be mobile and consists of:</p> <ul style="list-style-type: none"> <li>a) Loading chamber of capacity more than 0.7 m<sup>3</sup> or more</li> <li>b) Afterburning chamber of combustion products;</li> <li>c) Loading hatch;</li> <li>d) grate;</li> <li>e) Burners (one or two);</li> <li>f) Exhaust pipe.</li> </ul> <p>Load capacity up to 400 kg  The volume of afterburner gas (m<sup>3</sup>):2.15 or better  Burning rate (kg/h) up to 100</p> <p>Loading window area of 1 sq meter or more</p> <p>Volume of the afterburner (m<sup>3</sup>) not less than 2.0  Temperature range: 850 to 1500 oC  850 oC should be reached within 3 minutes.  Type of fuel: diesel</p> <p>Additional Parts; none other than that of transport system</p>
<p>Chamber Volume : 100-120 L (Horizontal model)  Sterilization Temperature: 50°C - 135°C under steam pressure  Internal Material: Stainless steel 304 or equivalent  Standard Accessories:3 sterilization baskets (indicate their capacity)  Minimum of 5 autoclaving programs covering temperatures of 105 oC, 110 oC and 121 oC.  LCD display and fully automatic microprocessor control  Automatically shut off with beep reminding after sterilization  Computer controlled auto recycle sterilization  Self-expandable sealing ring and dual scale numerical indication pressure gauge</p> <p>Additional components: A gasket for the door, 5 Sterilization indicator tape roles.</p>
<p>Applications: Routine samples: Biological and environmental samples, EPA procedures, food, cosmetic and pharmaceutical samples  For microwave-assisted digestion using mixtures of hydrochloric, nitic acids and hydrogen peroxide at temperatures up to 300 oC under pressure of up to 1000 psi.  Navigator and interface with more than 200 pre-installed programs  Pressure resistant sealable 24 digestion vessels, of volume capacity up to 80 ml (including a control vessel to monitor operational temperature and pressure  Voltage stabilizer capability to operate at power variations between 190 V to 250 V with over voltage cut out  Additional Parts; none</p>
<p>Refrigerator, operating at ambient temperatures up to 32 oC  Digital temperature display  Operational temperature range +2 to +8 oC  Resistant to chemical vapours  Capacity 300- 400 Litre, resistant to chemical vapours  4 or more shelves of corrosion resistant material  Facility to use a thermometer to read internal temperatures.  Frost free  Cooling system of environmentally acceptable refrigerant (indicate the refrigerant)  Power supply: 220-240 V, 50-60 Hz, 2-pin grounded plug type F  Brand new product.  Operator and maintenance instruction manuals  Factory certification on operational quality of equipment</p>



UNIT
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1

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<https://www.anton-paar.com/tr-tr/ueruenler/detaylar/multicube-48/>

2