



امارت اسلامی افغانستان
وزارت صحت عامه
معینیت غذا و ادویه

د افغانستان اسلامي امارت
د عامې روغتیا وزارت
د خوړو او درملو معینیت



Islamic Emirate of Afghanistan

کمیته موظف خریداری

درخواست نرخ گیری
(Request for Quotation)

برای

تهیه و تدارک 344 قلم ماشین آلات لابراتوار برای ولایات هرات، کندهار، ننگرهار و بلخ

شماره درخواست نرخگیری :

تاریخ صدور درخواست نرخ گیری : 1403

شماره: ف س 9 (پیشنهاد)

مربوط: لابراتوار های ولایت هرات، کندهار، ننگرهار و بلخ

اسم شرکت:

آدرس:

1403

تاریخ:

- (1) معینیت غذا و ادویه وزارت صحت عامه تخصیص بودجه لازم برای تدارک اجناس/ خدمات غیر مشورتی مندرج این درخواست را دارد.
- (2) آفر سر بسته شام تاریخ 1403 / / ساعت 02:00 بعد از ظهر یا قبل از آن به شعبه هیات خاص خریداری ماشین آلات لابراتوار 4 زون کشور، معینیت غذا و ادویه وزارت صحت عامه واقع ده افغانان تسلیم داده شود.
- (3) آفر ها نیکه بعد از میعاد تسلیمی ارائه گردید. بدون اینکه باز شود مسترد می گردد. پاکت حاوی آفر باید به صورت واضح عبارت نرخ قیه و تدارک 344 قلم ماشین آلات لابراتوار 4 زون مورد ضرورت لابراتوار های ولایت هرات، قندهار، ننگرهار و بلخ در بنایی نشانی شده باشد.
- (4) آفر ارائه شده درآفرها باید الی مدت (30) روز تقویتی سر از تاریخ ختم میعاد تسلیمی آفرها اعتبار داشته باشد.
- (5) در صورت تغییر در مقدار نیازمندی، اداره می تواند مقدار نیازمندی تقاضا شده را الی (15) فیصد زیاد و یا کم نماید، مشروط به اینکه قیمت مجموعی آن از حدود صلاحیت پولی برای درخواست نرخ گیری تجاوز ننماید.
- (6) ترجیح داخلی مطابق حکم چهارم طرز العمل تدارکات قابل اجرا است. (25٪) (بیست و پنج فیصد) توفیقات داخلی ارجحیت دارد.
- (7) آفر گشائی در محضر عام حتمی نبوده و فرمایش دهنده مکلف به قبولانترین نرخ نمی باشد. در صورت رد هریک یا تمام آفرها فرمایش دهنده کدام مسئولیت در قبال داوطلب قیه/ ارائه کننده ندارد.
- (8) آفر دهنده اسناد ذیل را با آفر خویش ضمیمه می نماید:
1- جواز تجارنی/ فعالیت/ کار قابل اعتبار؛
2- غیر تشخیصیه مالیه؛ (اختیاری)
- (9) سند نرخ گیری تکمیل و توسط شخص با صلاحیت یا نماینده قیه/ ارائه کننده در هر صفحه مهر امضاء شده باشد.
- (10) تحویل دهی جنس در مرکز ولایات های ولایت هرات، قندهار، ننگرهار و بلخ می باشد.

نام کارمند صادر کننده درخواست نرخ گیری:

وظیفه کارمند:

شماره تماس:

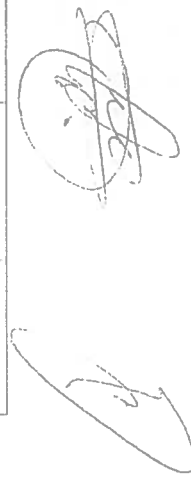
امضای هیئت خریداری:

Food and Water Division

Physicochemical Department

شماره	نوع دستگاه	مشخصات فنی	واحد	مقدار	وزن، نصب و ترمیم	قیمت فی واحد	قیمت مجموعی
1	HPLC	Detector: PAV or DAD. Wavelength range (190nm - 800nm). The DAD detector must have a flow cell that can be easily cleaned if necessary. Pump: a quaternary pump system with the capability of handling 4 solvents as mobile phase. These solvents may be used together or individually or in any combination. Flow rate: 0.001 - 10ml/min. flow rate accuracy: $\pm 1\%$ (operating pressure: more than 60 Vpa). Pump Mode: gradient system or isocratic mode. Column Oven: Thermostat system (20 - 90 C). The system must have an in-built degasser. Clear and easy access and methods for purging must be available. The tools required for the purging must be provided along with the system. The fittings must be easy to operate with the tools provided. Appropriate tools for maintenance must be provided. It is preferable to have some leak detection system. Some spare consumables (such as tubing fittings) must be provided in total. Autosampler: can inject samples into the LC system with sample volumes ranging from 0.1 microliters to 100 microliters. The autosampler must be capable of holding at least 100 vials at a time and must allow for programmable automated injection of these these samples into the LC system without interruption of the operation. The autosampler must be able to hold vials (approximately 1.5 ml. with screw cap and septa) that are interchangeable with standard HPLC vials provided by other vendors. Columns: Standard and suitable column with guard column according to the HPLC system. A software system controlling all the aspects of the HPLC system mentioned above must be provided (original disk or Drive or CD). The software should have the capability of different display parameters during the run of a sample. The post run data analysis should be available in the same software where the chromatogram of a run sample must available for analysis. Data analysis must include	Each	1	Warranty: 1 year Installation Successful Installation at the laboratory Training on-site comprehensive training for a minimum of two scientific personnel operating the system		

				standard chromatogram operations such as area, height, width and percentage estimation. The software system must also allow the easy integration of calibration data into data analysis methods. The software must be able to perform spectral analysis for UV-visible, fluorescence and IR detectors. The software data analysis system must also allow for the integration of UV spectral library information for automatic matching of the peaks with reference spectra, even if this might not be standard features. If this UV spectral matching feature is available. A suitable computer system must be provided for this system that can handle all the operations. UPS system more than 30 min backup. A generic C-18 column must be provided that can separate a mixture of polycyclic aromatic hydrocarbons. A tubing kit and maintenance tool kit must be provided along with the system. ISO 13485, CE, FDA certificates or equivalent.			
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Beam Splitter : Multilayer Ge coated KBr, Detector: Room temperature DLaTGS module (standard) IR source: High intensity Long lifetime, air-cooled IR source, Wavenumber range: 7800 /cm - 350/cm, Resolution : 0.85/cm, Wavenumber Accuracy: ± 0.01 /cm. Necessary accessories. A suitable computer system must be provided for this system that can handle all the operations. Power supply: 220 V - 230 V, ISO 13485, CE, FDA certificates or equivalent.	FTIR Spectrophotometer	2



		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Automatic Kjeldahl nitrogen analyzer. Measuring range: 0.1mg ~240mg N. Reproducibility: Average value relative error $\pm 0.5\%$. Burette volume: 1.0ml/step optional: 0.2ml/step and 0.4ml/step. Water consumption in the distillation process: 0.5L/min. Power supply: 220V/AC$\pm 10\%$, 50Hz. power: 2Kw. Capacity: 24 samples per batch. Tank capacity 4x15L. Power Supply:100-230 volt , 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent.	Fully Automatic Kjeldahl Nitrogen Analyzer	3
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L. temperature range: 80-380 °C. Maximum load: 15 to 20 Kgf. Body Material : Polypropylene. Corrosion resistant surface and panel. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity. RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 160-240 V , 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Heating with Magnetic stirrer	1
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity: 16 Lit. Operating temperature: 0 to 40°C. Accuracy: $\pm 0.1^{\circ}\text{C}$. Resolution $\pm 0.1^{\circ}\text{C}$. The proposed units should be work in electricly voltage and frequency of 220v - 230v, 50/60Hz.	Ice Bath	3

		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Ph range: 0 to 14, mv; ± 1999 , Accuracy: ± 0.02 , operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100-230 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Bench top PH meter	6
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.0001g-220g. Readability: 0.1mg. Tare Range: Full. Linearity: 0.2mg. Response Time: 3 sec. Operating Temperature Range: 10° to 40°C. Calibration tools: Standards weights. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Analytical Balance	7
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Fully Automatic Bomb Calorimeter for rapid determination of Gross Calorific Value of food items. Temperature resolution: 0.00010C or Better, Reproducibility Repeatability: <0.1% RSD or better. Unit of measurement: kJ and KJ. Pelletizer: Suitable for pelletizing food samples. Calorific Energy Measurement Range: 25 - 10000 Calories or more. Oxygen filling: Automatic. Accessories: Ignition wire. Additional 10 Nos Cotton thread 1000 Pcs Combustion crucible. 25 Pcs Bomb - Additional 3 nos NIST certified Benzoic for calibration Any other accessories required for analysis of food samples. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Bomb Calorimeter	8




		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Hand / Motor lift: hand lift. Height adjustment speed: manual. Height adjustment: 155 mm. Rotation speed: 10 – 280 rpm Rotation speed setting: 3.5" LCD display. Drive: brushless DC motor with electronic speed control. Heating capacity: 1500 w Temp. range heating bath: 20 – 210 °C. Temperature accuracy bath: ± 1 . Overheat protection bath cut-off at 5 °C over set temperature via separate Pt 1000. Bath temperature setting: 3.5" LCD display. Heating bath temperature control: electronic digital. Material heating bath: stainless steel. Diameter heating bath: 255 mm. Volume heating bath: 4.5 L. Flask volume: 1 L. Timer: yes. Rate of evaporation: 1 mmol/h. Water: 1.2 L/h. Condensing surface: 1.200 cm ² . Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Rotary vacuum evaporator (it included vacuum pump and water chiller)	9
		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measurement Range: 0.0980g/w Temp range: 0 - 50 °C Measurement accuracy: water activity: ± 0.015 and ± 0.25 (%). Measurement accuracy: relative humidity: 0 - 95 RH Power Supply: 100-230 volt - 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Water activity meter	10
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	It should be a small foot print, battery powered with a single PC piece with digital display Measurement of liquid and viscous samples, regardless of their turbidity, viscosity, transparency and absorption Measurement prism: (Optical glass, light source: LED) Approximating to wavelength of D-Line). Wavelength: 589 nm. Scale: Refractive Index & Brix. Measurement Range: Refractive index (nD): 1.3000 to 1.7000 Brix: 0.00 to 95.00% (5 to 75 °C ATC). Measurement Accuracy: Refractive Index (nD): 0.0004 Brix: 0.03%. Temperature control range: 5.0 to 75.0 °C. Calibration standards: Calibration block: 1 No and contact solution (1-Bromonaphthalene) and any other standard solutions. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Abbs digital Refractometer	11

		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	The system must be capable of quantitative separation of total fats from food, feed etc. Sample Positions: ≥ 6. Measuring Range: 0.1 – 100 % fat. Sample Volume (Size): 0.5 to 15 gm or more. Accuracy: $\pm 1\%$. Solvent Recovery: $\geq 75\%$. Temperature: 100°C – 280°C or better. Material: All material in contact with solvents should be PTFE or suitable high-grade material. Accessories to be supplied: The system should be supplied with at least 12 glass/aluminum extraction cups (preferably > 150 ml.), 24 dozen of suitable cellulose thimbles (preferably 33 (3) x 80 mm) or Filter Bags, at least 6 viton seals, 1 sample tray, 1 boiling stones, 1 cup stand and 1 recovery flask. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Automated Fat analyzer	12
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring Mode: Optical Rotation. Specific Rotation. Specific Rotation Plus Concentration. Sugar Scale. Z(ISS). Display: On screen LCD / LED (touchscreen). Accuracy: 0.001 deg Arc or better. Measuring Range: ± 89.9 deg Arc Optical Rotation. $\pm 999.99^\circ$ Arc Specific Rotation. 0-99.9% Concentration. Optical Wavelength: 589 nm Na and Tungsten-halogen or Hg- Lamp (for 633 nm/ 578 nm / 546 nm / 405 nm / 405 nm, Light Source: Sodium/ Tungsten-halogen LED with life time 100,000 h of operation. Prism: Glan Thompson Calcite prism with life time Guarantee. Detector: PVE. Calibration Automatic. Calibration built via touchscreen. Calibration Standards: Certified values of Certified Reference Material (CRM) provided by an accredited Reference Material Producer with stated metrological traceability to the SI for sugar solutions. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Automated digital polarimeter	13




Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system			Each	The system must be closed and microprocessor controlled, capable of performing all operations: extraction, rinsing & filtration of samples for analysis of crude fiber, acid detergent fiber, neutral detergent fiber, etc. Should have agitator/heater Switch & temperature/time/clock controller for process parameter input and results readout. System should be based on either crucibles or filter bag technology. Should have possibility of analyzing 6 (12) 1 samples at a time. Sample size: ≤ 1 gm Measuring range: ≤ 0.1 to 100%. Reproducibility: $\pm 1\%$, relative at 5 % - 30 % fiber level. Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Automated fiber analyzer	1-4
Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system		1	Each	Measuring principle: visual. Modes: Transmittance, reflectance Range: 0.1 - 79.9 Red, Yellow, 0.1 - 49.9 Blue, 0.1 - 3.9 Neutral. Resolution: 0.1 Lovibond® unit. Optical system: 11 glass-filled nylon racks containing a graduated range of Lovibond® color glasses. Viewing system: Fully adjustable, prismatic wide-angle blue filter for light standardization. Light source: 2 x 15 W, 60 Hz Violet tungsten halogen lamp. Illuminant approximates to daylight, cath length: (up to 153 mm (6"). Power supply: AC 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Lovibond unitometer	15



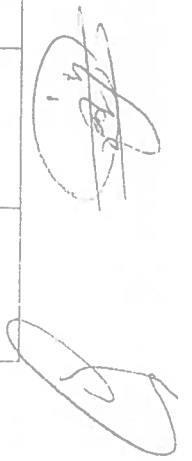

		Warranty: 1 year. Installation: Successful Installation at the laboratory training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	External dimension (mm): 524x1067x574. Inner dimension (mm): 483x853x560. Dehumidification system: H2O electrolysis discharge by solid polymer electrolytic dehumidification element. Dehumidified ability (When 30% rh is set): Within 8 hours. • Humidity Range: 10 to 60% RH, 0 to 60 °C / 10 measurement range (60 %RH). Temperature and humidity sensors: • Temperature/thermistor elements, humidity/resistance are low humidity measurement sensors. Area of dehumidifying element: about 49 cm2. Temperature and humidity display accuracy: ±1 °C. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent.	Digital Dry Desiccator	16
		Warranty: 1 year. Installation: Successful Installation at the laboratory training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	TLC Plate Cutter size: 200x260 mm. Drying Rack: 10 TLC plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. Simultan Separating Chamber: The vertical grooves in the transverse walls should hold up to five 200 x 200 mm TLC plates. Desiccator Opener: This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro Capillaries: Their accuracy should be better than 1%. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent.	Thin Layer Chromatography Plates	17




				Measuring method: Infrared heat drying mass measurement Sample pan size: $\phi 150$ mm Minimum display in weighing: 0.001 g Measurement range of moisture content: 0.01% to 100.00% Moisture content minimum display: 0.01% Maximum sample capacity: 120g Measurement mode: Automatic or Timed baking modes, Rapid, Slow and Step drying modes, Predictive Measuring mode Drying heater: Mid-wave infrared quartz heater Setting temperature range: 30°C to 180°C (by 1°C increments) Dimensions & weight: W 220x D 415x H 190 (mm), 4.5 kg Operational temperature and humidity range: range 5°C to 40°C, 85% RH maximum Standard accessories: Sample pan 2 pcs, sample pan stop, windbreak case, sample pan, handler 2 pcs, alarm unit sheet 29 pcs, spoon, spatula, Power supply: AC 100-240 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Electronic moisture balance	18	
		Warranty: 1 year Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: 1°C–24°C, Capacity Range: 2.1 cubic feet, Door Swing: Left Hinge, Double-Swing, Power Supply: 100-240 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Freezer (-20)	19




		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	It should be a small foot print battery powered with a single Eyepiece with digital display Measurement of liquid, and viscous samples, regardless of their turbidity, viscosity, transparency and absorption. Measurement prism: Optical glass. Light source: LED (. Approximating to wavelength of D-Line). Wavelength: 589 nm. Scale: Refractive Index & Brix. Measurement Range: Refractive index (nD): 1.3000 to 1.7000 Brix: 0.00 to 95.00% (5 to 75 °C ATC). Measurement Accuracy: Refractive Index (nD): 0.0004 Brix: 0.03%. Temperature control range: 5.0 to 75.0 °C. Calibration standards: Calibration block: 1 No and contact solution (1-Bromonaphthalene) and any other standard solutions. Power Supply: 100-230 V, 50/60 Hz. ISO 13485 (Ch. FDA certificates or equivalent	Digital Refractometer	20
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Dedicated this Parameters: Fat, Protein, Lactose, Total Solids, Solids non-fat, Freezing Point (milk only) Feature and Specification: Consumption: 12V, 5A, ~ 60 W Ambient Temperature: 5 - 35 ° Ambient Humidity: < 80 RH Noise Level < 70 dB. Measuring range: 0-48 % Fat, 0-6 % Protein, 0-52 % Total Solids, 0-12 % SNF, 0-6 % Lactose Accuracy Accuracy < 1.2 % CV* on major raw cow Milk components (Fat, Protein, Lactose, Lactose, Total Solids, solids nonfat). Repeatability < 1.2 % CV* on major raw cow Milk components (Fat, Protein, Lactose, Total Solids, solids nonfat), < 0.5 % CV* on major raw cow Milk components (Fat, Protein, Lactose, Total Solids, solids nonfat). Analysis time: 1 min. for milk, Sample volume: 6 ml, Sample temperature: 5 - 40 °C. Average testing sample: 70 samples/hr. Power supply: (100 to 240V) V - 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Milk Analyser	21



		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Tank capacity: 8 L. Tank size (mm): 300x240x150. Ultrasonic Power: 200 W. Heating power: 300 W. Heating Temp: 0-80 °C. Time setting: 1-99 min. Display: Digital RED LED. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Ultra Sonic Bath	22
		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Speed range: 30-400rpm. Heavy duty maximum load 6kg. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Orbital Laboratory Shaker	23
		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Max Irradiance: 250 mW/cm². Wavelengths: 365 nm, 385 nm, 395 nm, 405 nm. Electrical Power Input: 100W. Main Supply: 100-240V AC. Interior Dimensions: 300mm x 300mm x 500mm. Power Supply: 100-230 V, 50/60 Hz.	UV Chamber	24

		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Max. flow rate: 20 l/min. Capacity: 300 ml. Filter diameter: 47 mm. 50 mm. Effective filtration area: 15 l/cm. Filter funnel: PES. Waste bottle: Borosilicate 1000ml glass (with drain). Funnel lid: PP. System, complete set includes: V.P. 17. Vacuum Pump. MF 31. Filtration Set. Silicone Tube (1m). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Vacuum Filtration System	25
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Viscosity range: 0.5 mPa - 70000 mPa, Accuracy: 0.1%, Balls 1 and 2: Boron Silicate Glass, Balls 3 and 4: Nickel iron. Balls 5 and 6: Steel. Full time of measurement: 30-300 seconds. Operating temperature: -5 - 150 °C. Sample tube volume: 4ml. Viscometer, dimension: 180x220x330 mm. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Palling ball Viscometer	26
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Application: liquid and semi solid mixer homogenizer. PLC automated touch screen control, jacketed process vessel for temperature controlled processing Capacity: 1 L. (Model: H10M13 Ltr). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Homogenizer	27




		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Sieve diameter: 200 mm. Quantity of sieve: 1 x 5. Noise Vibration frequency 1400rpm. Fixing force: 3 kN. Time: 999 min. Motor: Vertical vibration motor. Accessories: Supporting clamps & Rods (model: STXVSS8). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Sieve Shaker	38
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Special medium length FS 1048 thermometer with a range 14-35 °C. Accuracy: $\pm 0.2^\circ\text{C}$. Volume size: 50 ml. Power Supply: 100- 230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Thermometer	39
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Automated (operating system with LCD/LCD screen directly without manual alignment can connect PC) with RS232 interface. Measurement Range: Concentration 0-95%, Refractive Index 1.2800—1.7000. Automatic Temperature Control: Through Peltier. Concentration: 0-30%, Resolution: Butyro 0.1%, RI 0.0001. Measurement Accuracy: Butyro $\pm 0.5\%$ (at 10°C), RI ± 0.0003 (at 40°C). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital Butyro Refractometer	30
			30	Total Number of Device			

Microbiology Department

شماره	نام دستگاه	مشخصات فنی	واحد	مقدار	وراثی، نصب و ترمینال	قیمت فی واحد	قیمت مجموعی
1	Vertical Laminar Flow Bench	Standard version, working space: 1135x570x570mm. Includes radial fan, illumination, differential pressure indicator, pre-filter HEPA filter. For bench mounting. ISO 13485, CE, FDA certificates or equivalent.	Each	1	Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		
2	Analytical Balance	Measuring range: 0.0001g-220g, Repeatability: 0.1mg, Tare Range Full, Linearity: 0.2mg, Response Time: 3 sec, Automatic Internal Calibration, PC Interface, USB, Calibration Certificate with calibration weight set, Operating Temperature Range: 16° to 40 °C, Power supply: AC 100-240 V 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Each	1	Warranty: 1 year Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		



		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Capacity : 150 L. Temp Range : 0-60, Temp accuracy : ± 1 °C, Temp Fluctuation: ± 1 °C. Maximum inner range: 24 Hours, Display: LCD, Humidity Range: 50-90 % rh, Power Supply: 100-230 volt , 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	biohazard	
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Cabinet (Material of construction) Cabinet should be made from Galvanized Iron 18 SWG sheet metal with polyurethane painted coated finish and bottom will be supplied with AISI 316 stainless steel leveling legs or motorized. External surfaces to be coated with antimicrobial coating to protect against surface contamination and inhibit bacterial growth. Interior work area to be from a single piece of stainless-steel with large radius corners to simplify cleaning. The cabinet work area must have a no welded joints, which collect contaminants or dust. Front door frame of clear 5 mm thick Toughened glass, vertical sliding, with 1 inch motorized operation, while opening the door UV lamp will be cut "OFF". And while closing the door UV lamp will be "ON". Automatically. Side Panels, front, the sidewalls are made from double layered outer GI & inner stainless steel with return-air plenum in between. Edges should be perforated to avoid entry of room air into the work zone and exit of contaminated air in to	Biosafety cabinet class 2 type B2		

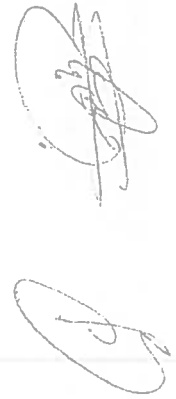
			The room and such contaminated air is sucked through this full height perforation at the edges of the sidewalls. A recessed central area with drain pan to contain spills and prevent liquids from entering the lower filtration unit. The BSC shall be ergonomically designed for maximum user comfort and adjustability. Fail-safe system to ensure that in case of exhaust failure, the cabinet's main fan automatically shuts down to ensure safety to the user. Air Balancing : 100% Exhaust & 0 % Recirculation. Direction of flow: Vertical. HEPA Filters: Type: Separator less type. Mini-Pleats HEPA Media. Media: Ultra clean glass fiber paper. Retention: 0.3 Micron Efficiency: 99.997%, Initial Pressure: 12 mm W.G. Grade: H14 rating. Real-time display panel for remaining Filter. ISO 13485, CE, FDA certificates or equivalent.		
Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Chamber: Vertical leading type chamber with service basket. Chamber size: 80 x 120 L. Gauges: Should have a water level gauges. Display: Fully Automatic PID control 0.1 °C. LED display for temperature and remaining time. Operation temperature: 10 °C. Temp accuracy: ± 0.5 at 21 °C. Operating pressure: 15-20 °C. Timer: Automatic start and stop timer. Must have safety warning alarm. Must have necessary accessories. Must be with calibration certification. ISO 13485, CE, FDA certificates or equivalent.	Vertical Autochange	
Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L. temperature range: 80-380 °C. Maximum load: 15 to 20 KG. Body Material : Polypropylene. Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity, RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485, CE. FDA certificates or equivalent.	Hot Plate with Magnetic Stirrer	

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity: 12 L. Material of construction: Transparent, unbreakable polycarbonate jar. Unit: Jar should be provided with pressure -cum -vacuum gauge attached to the lid. Jar should be ideal for all strict anaerobic test conditions. Lid should consist of O- ring gasket. It should be provided with petri dish (100 mm diameter) carrier/SS rack, Schrader valve and screws to connect to vacuum pump. Vacuum pump: Suitable oil free vacuum pump for the system. Accessories: Catalyst/gas pouch startup kit. Anaerobe indicator tablets. Lid, complete with clamp and screw O-rings. Power supply: 100-230 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Anaerobic system with Anaerobic jar	8
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity: 5 L with easy cleaning facility. Material of construction: Body should be compact, durable, leak proof and made of stainless steel/heavy duty plastic. Unit: It should be compatible with all disinfectant solutions used concentration. It should be compatible with maximum pH range (both acid and alkali). The equipment should be of good quality and conform to national international standards. Power supply: AC 100-240 V, 50-60 Hz. ISO 13485, CE, FDA certificates or equivalent	Indicator	9
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -50-300 °C. Chamber volume: 100 L, walls stainless. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Drying Oven	10



Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	PH range: 0 to 14, mV $\pm$ 1999, Accuracy: $\pm$ 0.2, operating temperature: 5-40 °C, Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis, Temp measuring range: 0 to 100 °C, Power Supply: 100-230 volt, 50/60 Hz. With two extra electrodes, ISO 13185, CE, FDA certificates or equivalent.	1	1
Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Material of construction: Full Stainless-steel fabricated body with duly heat cured epoxy coating. Display and counting: It should consist of 1 digit display up to 4 digits with confirmation by audible tone. It should consist of Magnifying lens (greater than 2X magnification with digital marking pen), Accepts petri dish up to size 149 mm diameter with a centering adaptor for standard 90 mm petri dish, glare free viewing low energy bright LEDs, A switchable black background viewing transillum and difficult to see colonies, / zero reset button, Power supply: AC 100-230 V, 50/60 Hz, ISO 13185, CE, FDA certificates or equivalent.	1	1
Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12 - 24°C, Capacity Range: 2-24 cubic feet, Door Swing: Left Hinge, Double-Swing, Power Supply: 100-230 V, 50/60 Hz, ISO 13185, CE, FDA certificates or equivalent.	1	1

		Warranty: 1 year Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 68 in. Depth With Door Open 90 Degree: 57.0 in. Depth 31 in Capacity: 17. Cabinet Width: 28.9 in. Refrigerator Volume: 13.66 cu. ft. Door Style: Contour. Handle Material: Plastic. Location of Controls: Interior Up Front. Deli Drawer: 1 Flexi- Slide Bin. Door Bins: 2 Fixed Full-Width. Lighting: LED Features: LED Lighting, EZ Connect IceMaker Kit Compatible, Flexi-Slide Bin, Humidity-Controlled Crispers. ISO 13485, CE, FDA certificates or equivalent	14	Refrigerator
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 200 to 3000 rpm. Material: Rubber. Plastic Platform. Dimensions (L x W x H): 8.1 x 5.9 x 5.2 in. (20.3 x 15.1 x 13.1 cm). Timer Range: 1 to 99 min. Continuous Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	15	Digital vortex mixer
		Warranty: 1 year Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	RPM range: 50-5000 RPM. Increment range: 5 RPM. Timer flexibility: 1 min to 15 min or beyond. Rotor capacity: 12 or more 15 ml. Rotor type: fixed angled rotor. Power Supply: 100-230 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent Complete Programmable each parameters	16	Digital Control Centrifuge



		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Counting Chamber: Constructed entirely of glass. Centre of glass should contain a 15x20mm rectangle that is flanked by 0.1 mm shoulders on each side to support cover glass. Rectangular and Cover glass should have optically plane surfaces. Facilities for calibration of microscope. Eyepiece micrometer. Ruited into squares (grid), each of which is equal to 1/6 of the diameter of the eyepiece diaphragm opening. Cover slips: 1 mm 28mm x 33mm x 0.5mm 2 Nos. Thick 28mm x 33mm x 1.0mm 2 Nos. Power Supply: AC 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Howel Model Counter	17
		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Volumen: 20 Lt. Temperature range: 15 to 30 °C. Temperature Resolution Ratio: 0.1 °C. Power: 2 kW. 11 proposed units should be work in electricity voltage and frequency of 230V, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.	Water Bath	18




Water Physicochemical Department

شماره	نام دستگاه	مشخصات فنی	واحد	مقدار	وراثی، نصب و تربیت	قیمت فی واحد	قیمت مجموعی
1	UV-Vis Spectrophotometer	Photometric system: Double beam. Wavelength range: 190 - 1100 nm. Wavelength accuracy: ± 0.02 nm. Light Source: Halogen Lamp. Deuterium Lamp. Spectral Bandwidth: 1 nm. Scanning Speed 10 - 8000 min. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Each	1	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		
2	Flame photometer	Elements: Potassium (K), Sodium (Na), Lithium (Li), Calcium (Ca), Barium (Ba), measuring range: measuring range 0-199.9). Power supply: AC 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Each	1	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		




		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Range: Conductivity: 0 μS/cm - 2000mS/cm; TDS: 0 - 2000 μL or ppt; Temperature: 0 - 100 $^{\circ}$C; Resolution: Conductivity: 0.01 μS/cm - 200.0 mS/cm; TDS: 0.01 mg/L or ppm to 0.1 μg/L or ppt; Temperature: 0.1 $^{\circ}$C; Accuracy: Conductivity: $\pm$1% full-scale; TDS: $\pm$1% full-scale; Temperature: $\pm$ 0.5 $^{\circ}$C; Calibration: Calibration by certified reference material traceable to SI units or ISO 17034; Auto-Range; Across 5 Conductivity and TDS ranges; 1 p to 5-point push button Calibration; Accessories: Electrode holder & One spare electrode; Power supply: AC 100-240 V, 50/60 Hz; ISO 13485, CE, FDA certificates or equivalent	Benchtop Conductivity meter + TDS meter	3
		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each pH range: 0 to 14, mV; $\pm$1999; Accuracy: $\pm$0.02; operating temperature: 5-40 $^{\circ}$C; Calibration: 1-3 points automatic calibration with calibration instruction and self-analysis Temp. measuring range: 0 to 100 $^{\circ}$C; Power Supply: 100-230 volt, 50/60 Hz; ISO 13485, CE, FDA certificates or equivalent	Benchtop pH meter	4
		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each Measuring range: 0.0001g-200g; Readability: 0.1mg; Linearity Range: Full; Linearity: 0.2mg; Response Time: 3 sec; Automatic Internal Calibration; PC Interface: USB; Calibration Certificate with calibration weight set; Operating Temperature Range: 10° to 40 $^{\circ}$C; Power supply: AC 100-240 V, 50/60 Hz; ISO 13485, CE, FDA certificates or equivalent	Analytical Balance	5

	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Range: 0-1000 NTU. Principle of Operation: Nephelometric Automatic Range Selection: 0.01 to 19.99 NTU, 20.0 to 99.9 NTU, 100 to 1000 NTU. Accuracy: $\pm 2\%$ of reading ± 1 digit for 0 - 500 NTU. Calibration: 4 points. Calibration Kit set 3 sample vials. Display: Digital LED. Detector: Photo Diode. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Bench top Turbidity meter	6
	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Wavelength range: 420-660 nm. Filter: 420 nm, 470 nm, 500 nm, 620 nm & 660 nm. Detector: silicon photo-cell. Photodetector range: T%:0-100%, Abs log F 0-2. Light source: tungsten lamp. Indicator: LED. ISO 13485, CE, FDA certificates or equivalent.	Benchtop colorimeter	7
	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Temperature range: 50-300 °C. Chamber volume: 100 l. Walls: stainless. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Dry Oven	8
	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L. Temperature range: 80-380 °C. Maximum load: 15 to 20 kg. Body Material: Polypropylene. Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity: RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Hot Plate with Magnetic Stirrers	9

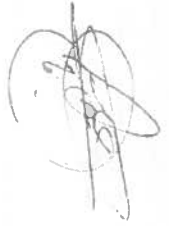
		Warranty: 1 year Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Measurement Range: 0-5 mg/L free or total chlorine. Accuracy: ± 0.03 mg/L. Limit of Detection: 0.03 mg/L. Resolution: 0.01 mg/L. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Chlorin Analyzer	1
		Warranty: 1 year Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	CaCO₃ range: 20-350 mg/L, Cl range: 5-100 mg/L. Mg range: 3-50 mg/L. Application: 1 or raw (untreated) water, drinking water, surface water. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Drinking Water hardness test	1
10		Total Number of Device				

2

[Signature]

Food and Water Toxicology Department

شماره	نام دستگاه	مشخصات فنی	واحد	مقدار	وزن	قیمت فنی	قیمت مجموعی
5070	GC	Detector: Flame ionization detector (FID). Oven: single airless oven. Oven temperature range: RT to 350°C Accuracy: $\pm 0.02^\circ\text{C}$ Sample: vapor or liquid Calibration: Comparison with external standard manual or automatic Injection system: gas injection valve and liquid injection valve Software: Full traceability through the archiving of results and quality control Programming and control of alarm thresholds Data transfer via communication protocols Columns type: capillary. Full range control of pressure and flow Measuring response: Sensitivity: $\pm 0.5\%$ of span Linearity: $\pm 0.5\%$ of span Repeatability: $\pm 1\%$ Sampling and valves: Diaphragm valves, diaphragm piston valves, sliding vane rotary valves, slider valves, or bonded injection valve Auto sampler for liquid injection Hept syringe adapter Rinse with two different solvents Rack of samples: at least 60 positions for capacity 1-2 ml. vials Column: Standard and suitable column with guard column according to the HPLC system gas supplier Nitrogen compressed gas cylinder, purity 99.998% Helium compressed gas cylinder, purity 99.998%	1	Each	Warranty: 1 year Installation: Service call Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		




				Hydrogen compressed gas cylinder, purity 99.999% Inlet Pressure: 2-125 psig (825 kPa) Airflow, regulators and connectors All proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.		
	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	TLC Plate (cut size: 200x260 mm, Drying Rack: 10 TLC plates with the formats 200 x 200, 290 x 100 and 200 x 50 mm. Simultaneous Separating Chamber: The vertical grooves in the transverse walls should hold up to five 100 x 200 mm TLC plates. Desiccator Opener: This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro Capillaries: Their accuracy should be better than 1%. (TLC 3000 Series). ISO 13485, CE, FDA certificates or equivalent.	Thin Layer Chromatography (TLC)	1
	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Fully PC based Atomic Absorption Spectrophotometer bath flame and tune system automatic operation. Detector: SiOscns. Light Source: Hollow Cathode Lamps (HCL). Background Correction: Deuterium. Wavelength (nm): 185-900 nm. Optical Design: Czerny Turner Spectrometer. Wavelength Precision: 0.005nm. A suitable computer system must be provided for this system that can handle all the operations. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Atomic Absorption Spectrophotometer	1
	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.0001g-220g. Readability: 0.1mg. Tare Range: Full. Linearity: 0.2mg. Response Time: 3 sec. Automatic Internal Calibration. PC Interface, USB. Calibration Certificate with calibration weight set. Operating Temperature Range: 10° to 40 °C. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Analytical Balance	1

	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Maximum number of samples per test: 6. Temperature precision °C: ± 0.5 . Solvent recovery %: Up to 80. External dimensions L x D x H mm: 680 x 330 x 580. Accessories: Extraction thimbles set. Extraction vessel test. Main fields of application (food, pharmaceutical, chemical and cosmetics) Power supply: (100 to 240V) V - 50/60 Power. ISO 13485, CE, FDA certificates or equivalent.	5	Soxhlet Extractor
	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system.	1	Each	Hand / Motor lift, hand lift. Height adjustment speed: manual. Height adjustment: 155 mm. Rotation speed: 10 - 280 rpm. Rotation speed setting: 3.5" LCD display. Drive: brushless DC motor with electronic speed control. Heating capacity: 1300 w. Temp. range heating bath: 20 - 210 °C. Temperature accuracy bath: ± 1 . Overheat protection bath, cut-off at 5 °C over set temperature via separate Pt 1000. Bath temperature setting: 3.5" LCD display. Heating bath temperature control: electronic digital. Material heating bath: stainless steel (Diameter heating bath: 255 mm. Volume heating bath: 4.5 L. Inner yes. Rate of evaporation: Ethanol: 3.5 l/h. Water: 1.2 l/h. Condensing surface: 1200 cm2. ISO 13485, CE, FDA certificates or equivalent.	6	Vacuum Rotary Evaporator (it included vacuum pump and water chiller)
	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm. Stirring capacity: 4l temperature range: 80-380 °C. Maximum load: 15 to 20 KG. Body Material: Polypropylene. Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity, RS232. Refert stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	7	Hot Plate with Magnetic Stirrers
	Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Volume : 20 L. Temperature range: 15-100 °C. Temperature Resolution Ratio: 0.1 °C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz.	8	Water Bath

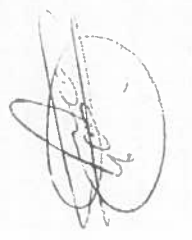

OCL Lab - Team

	Warranty: 1 years. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each External dimension (mm): 524x1067x574. Inner dimension (mm): 483x853x560. Dehumidification system: H2O electrolysis discharge by solid polymer electrolytic dehumidification element. Dehumidified ability: 1 When 30% rh is set). Within 8 hours. • Humidity Range: 10 to 60% RH. 0 to 60 °C/10 measurement range 60 %RH. Temperature and humidity sensors: Temperature thermistor elements; humidity/resistance ape low humidity measurement sensors. Area of dehumidifying element: about 49 cm2. Temperature and humidity display accuracy: $\pm 1^{\circ}\text{C}$. Power Supply: 100- 230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital Dry Desiccator	23
	Warranty: 1 years. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each TLC Plate Cutter size: 200x200 mm. Drying Rack: 10 TLC plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. Simultaneous Separating Chamber: The vertical grooves in the transverse walls should hold up to five 200 x 200 mm TLC plates. Desiccator Opener: This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro Capillaries: Their accuracy should be better than 1%. Power Supply: 100- 230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Thin Layer Chromatography (TLC)	24




		Warranty: 1 year Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	RPM range: 50-5000 RPM Increment range: 5 RPM Timer facility 1 min to 15 min or beyond. Rotor capacity: 12 or more (5- 15 ml) Rotor type: fixed angle rotor. Power Supply: 100-230 volt, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	9
		Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12 - 24 °C. Capacity Range: 2.1 cubic feet Door Swing: Left Hinge Double-Swing. Power supply: 100-230 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	10
		Warranty: 1 year Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 63 in. Depth With Door Open 90 Degree: 57.9 in. Depth: 31 in. Capacity: 17. Cabinet Width: 28.0 in. Refrigerator Volume: 13.6 cu. ft. Door Style: Swing. Handle Material: Plastic. Location of Controls: Interior Top Front. Deli Drawer: 1 Flexi- Slide Bin. Door Bins: 2 Fixed Full-Width. Lighting: LED. Features: LED Lighting, EZ Connect IceMaker Kit (compatible, Flexi-Slide Bin, Humidity-Controlled Crispers. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	11
		Warranty: 1 year Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	PH range: 0 to 14, mv. ±1999, Accuracy: ±0.02, operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100-230 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	12

Warranty: 1 year. Installation: Successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range : 50-300 °C, Chamber volume: 100 L, walls: stainless, Power supply: AC 100-240 V, 50-60 Hz, ISO 13485, CE, FDA certificates or equivalent.	IDP (A/C)	13
Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Light Source: Quartz-halogen lamp 6V/10W, Wavelength: Absorbance 230-750 nm, Accuracy: ±1nm Fluorescence Ex 230 - 850 nm, Em 280 - 850 nm Accuracy: ± 2nm, Filters: 8- position filter wheel, the instrument is delivered with the following standard filters installed: 105nm, 450nm, 620nm and 650nm, Resolution: 0.001 Abs, Display: High contrast color display (480 X 272 dots), Temperature control : Ambient - 5 °C to 45°C, Calibration plate: 96-well calibration plate must be calibrated for the wavelength (e.g., 630 nm, 650 nm, 420 nm, 450 nm) Calibration Certificate from ISO 17025, NABL accredited laboratory, ELISA Microplate Washer should be Fully automatic plate washer With (V) specifications, Capability: Washing of 96 well microplates and strips, with flat, round, or "V" bottom well, Isotile; With non-pressurized bottle to maintain biosafety, Wash, rinse and waste (volume 1-6 L), Residual volume: < 2 µL, Dispensing volume: 50-400 µL for 96 well plate, Data Transfer: USB Port Number of wash protocols up to 99, Power Supply: 100-240 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	ELISA Reader with Plate Wash.	14

		Warranty: 1 year. Installation: successful Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Air velocity: 0.3-0.8 m/s. System exhaust volume: 1140m³/h. Max opening: 750 mm. Exterior material: 1 mm cold-rolled steel with bacteria powder coating. Interior material: compact material board with good acid and alkaliresistance function. Lamp: LED (40Wx1), work surface height: 900mm Noise level: 68 dB. Exhaust duct: PVC, standard length: 4.5 meters. 300mm. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.	Fume hood	
			16	Total Number of Device			




Food and Water Accessorie and Kits

قیمت مجموعی	قیمت فی واحد	واحد	دبیارتمنت	مقدار	مشخصات فنی	نام دستگاه	ردیف
		Each	All Dep	1	Capacity: 250 ml. Holder: Ceramic Wich. Cap: Plastic Snuff.	Alcohol Burner	1
		Each	All Dep	1	Height: 8.5in (216mm). Inlet: 5/16in (7.9mm) OD serrated gas. high-temperature unit for use with an extremely hot flame and forms uniform blue heat cones with no backlash. with one-piece unit has a nickel-plated venturi 1.5in (38mm) mixing tube with monel grid and mesh backing, a knurled adjustment valve, an octagonal base. or equivalent.	Gas Burner	2
		rolls	All Dep	2	Percentage Purity: 99%. Thickness: 0.3mm. Temper: Hard. Length: 7m. Width: 0.30m. Technical Name: or equivalent.	Aluminum foil	3
		pair	All Dep	2	made of polychloroprene, approx. 31 cm long, anatomical shape with good gropeability, sanitised, cotton lined, patterned for a non-slip grip, cotton floked, high abrasion resistance, resistant to many chemical substances such as acids, bases and organic oils and fats as well as bacteriological contamination, glove can be used universally for laboratory, trade and industry, excellent abrasion resistance and thereby very long service life, size 7.5, 8, 9 and 10. or equivalent.	Chemical Protective Gloves	4




					Lens Thickness: 3mm. Lens Size (Vertical): 60mm. Lens Size (Horizontal): 140mm. Overall Length (Lens edge): 182mm (Approx.). Strap Length: 240mm (Approx.). Height: 75mm. Width: 88mm. or equivalent.	Goggles	5
	pcs	All Dep	4		Material: Polypropylene. Color: red. Easy to clean. Resistant to acids and alkalis. Quick-Release for up to 25ml. Pipettes. or equivalent.	Manual Pipette Filler	6
	Each	All Dep	8				
	Each	All Dep	50		Size: Medium. Colour: blue. Dimension L x W x H (mm): 85x85x24. Volume (ml.): 85. or equivalent	Weighing Boat	7
	Each	All Dep	50		Size: Medium. Colour: White. Dimension L x W x H (mm): 108x183x26. Volume (ml.): 260. or equivalent	Weighing Boat	8
	Each	All Dep	8		Shape: Pointed end, blunt end. Length (Metric): 15 cm. Material: Stainless Steel or equivalent.	Scoopula (Metal Scoop)	9
	Each	All Dep	8		Dimensions: 3.35 x 3.5 (2.5) x 6 (1.0) mm. Material: stainless steel or equivalent	Funnel	10
	Each	All Dep	8		Capacity: 250 ml. Dimensions: 60x60x160 mm. or equivalent.	Wash Bottle	11
	Each	All Dep	4		Capacity: 500 ml. Dimensions: 90x90x190 mm. or equivalent.	Wash Bottle	12
	set/12	All Dep	4		Hard nylon bristles on twisted G.I. wire, head 140 x 63 mm, overall length 400 mm. or equivalent.	Brush for round bottom flask	13
	pcs	All Dep	4		Water dip, 45mm soft bristles. 65 x 420 x 65mm. Max 50°C or equivalent.	Wet brush (Vikan Hand Brush)	14
	box (100 pcs)	All Dep	4		Volume Range: 0.5-20 µl. Length: 46 mm. The tip should be graduated at 2 µl and 10 µl for quick volume check. Color: gray or equivalent.	Micropipette tips	15




			box (100 pcs)	All Dep	4	Volume Range: 50-1000 µl. Length: 70 mm. The tip should be graduated at 250 µl, 500 µl and 1000 µl for quick volume check. Color: blue or equivalent.	Micropipette tips	16
			set	All Dep	4	Included a box + 1 bar retriever (150 mm). Cylindrical bars, (3 x 12 mm, Ø 4.5 x 15 mm, Ø 6 x 20 mm, Ø 6 x 25 mm, Ø 6 x 30 mm, Ø 8 x 40 mm, Ø 8 x 50 mm, Ø 9 x 60 mm, Ø 9 x 70 mm, Ø 10 x 80 mm, cylindrical with ring: Ø 5 x 15 mm, Ø 6 x 25 mm, Ø 8 x 40 mm, triangular: Ø 8 x 25 mm, Ø 12 x 50 mm or equivalent.	Magnetic stirrer bar set	17
			pack 100 pcs	All Dep	2	No: 41. Material: Circles cotton filters. Parameter: 0.22 psi wet burst 54 sec 100 ml. speed. Diam: 125 mm, thickness: 220 µm. Pore size: 20-25 µm or equivalent.	Whatman Filter paper	18
			pack 100 pcs	All Dep	2	No: 42. Material: Circles cotton filters. Parameter: 0.22 psi wet burst 54 sec 100 ml. speed. Diam: 125 mm, thickness: 220 µm. Pore size: 2.5 µm or equivalent.	Whatman Filter paper	19
			Bottle (500ml)	All Dep	4	PH: 4.0 (25 °C in H ₂ O). Grade: Certified reference material. Quality Level: 33. Format: Mixture. storage temp: 15-25 °C or equivalent.	Buffer solution	20
			Bottle (500ml)	All Dep	4	PH: 7.0 (25 °C in H ₂ O). Grade: Certified reference material. Quality Level: 33. Format: Mixture. storage temp: 15-25 °C or equivalent.	Buffer solution	21
			Bottle (500ml)	All Dep	4	PH: 10.0 (25 °C in H ₂ O). Grade: Certified reference material. Quality Level: 33. Format: Mixture. storage temp: 15-25 °C or equivalent.	Buffer solution	22
			pcs	All Dep	2	Length (Metric): 200 mm. Material: Stainless Steel. Tip Style: Sharp/Round or equivalent.	Laboratory Scissors	23
					184	Total Number of Items		




Medicine Department Accessorie and Kits

شماره	نمبر دستگاه	ملاحظات فنی	مقدار	توضیحات	واحد	قیمت فی واحد	قیمت مجموعی
1	Alcohol Burner	Capacity: 250 ml, Holder: ceramic Web, (type Plastic Smelt, or equivalent)	3	Height: 8.5in (216mm), Inlet: 5/16in (7.9mm) OD serrated gas, 200-240V, negative unit for use with an external pressure and horns uniform blue heat (6.5 in. width) back flush with one-piece of 1/8 in. diameter venturi 1.5in (38mm) diameter tube with metal grid and mesh, venturi, a knurled adjustment valve, an octagonal base or equivalent.	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	
3	Gas Burner	Percentage Purity: 99.96, Inlet: 1/8 in. (3.18mm), 1 inper. Head, Length: 7 in. (178mm), 10 cm, Technical Name: Aluminum, 1-annular Al or equivalent.	7		rolls	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	
1	Parafilm tape	width: 5 cm, length: 75 m, thickness: 100 µm, liquid impermeable, gas permeable, Temperature range: -10 °C to +60 °C or equivalent.	7		rolls	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	
5	Parafilm tape	width: 10 cm, length: 75 m, thickness: 200 µm, liquid impermeable, gas permeable, Temperature range: -10 °C to +60 °C or equivalent.	7		rolls	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	

			pair	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	14	made of polychloroprene, approx. 31 cm long, anatomical shape with good gripability, sanitised, cotton lined, patterned for a non-slip grip, cotton flocked, high abrasion resistance, resistant to many chemical substances such as acids, bases and organic oils and fats as well as bacteriological contamination, gloves can be used universally for laboratory, trade and industry, excellent abrasion resistance and thereby very long service life, size 7, 5, 8, 9 and 10 or equivalent.	Chemical Protective Gloves	9
			pair	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	14	Version: Five-finger glove Length: 110 mm, Size 14 or equivalent.	Heat- and cold-resistant gloves	7
			box (100 pcs)	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	50	Colours: Milky White, Size: M Type: Powdered or equivalent	Latex gloves	8
			box (100 pcs)	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	50	Colours: Milky White, Size: L Type: Powdered or equivalent	Latex gloves	9
			bag (100 pcs)	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	250	Material: Non Woven, Elastic Double Cotton, White, Weight (g/m ²): 102 ± 2g Size: 12 inch or equivalent	Hair net	10



			pair	Physic-Chemistry; Microbiology; Water- Chemistry; Toxicology	50	Material: TPE; One injection molding High temperature sterilization; Machine washable; General anti-static Flat, Big head shoes design (ergonomic design). Two side double vent holes Size: 40-44 (size 16; 20 pair, size 41, 40 pairs, size 42; 10 pairs, size 43; 30 pairs, size 44; 20 pairs) or equivalent.	Laboratory safety shoes	11
			pcs	Physic-Chemistry; Microbiology; Water- Chemistry; Toxicology	24	Lens Thickness: 3mm Lens Size (Vertical): 60mm; Lens size (Horizontal): 140mm. Overall length (lens edge): 183mm (Approx.). Strap Length: 240mm (Approx.). Height: 75mm Width: 55mm or equivalent	Eye glasses	11
			pcs	All Day	-	Suitable for use with all sources and penetrant and magnetic particles and all UV-A, B & C sources (certified of ISO 5050 or equivalent	UV protection goggles	15
			pack (10 pcs)	Physic-Chemistry; Microbiology; Water- Chemistry; Toxicology	11	Feature: Eco-Friendly, Stoveed, 1" surge test tube, Style: Hand Color: White/Black; Length: 20 cm. Material: Nylon + stainless steel. Package Included: 10 Pcs or equivalent	Test tube holder Cleaning Brushes	14
			batch	Physic-Chemistry; Microbiology; Water- Chemistry; Toxicology	11	Capacity: 500 ml. Ideal for a wide variety of grinding application in the Lab. Diameter: 85 mm. Long about 95 mm or equivalent	Mortar and Pestle	15

		Each	Physic-Chemistry, Microbiology, Water Chemistry, Toxicology	14	Capacity: 150 ml. Ideal for a wide variety of grinding application in the Lab. Diameter: 85 mm. Long about 95 mm. or equivalent.	Mortar and Pestle	16
		Each	Physic-Chemistry, Microbiology, Water Chemistry, Toxicology	7	Materials: Polypropylene. Rotary rack with solid base for safe standing. Rotary base unit protects the pipettes' tips. 94 openings with different diameters for graduated pipettes and volumetric pipettes of all sizes or equivalent.	Pipette racks	17
		Each	Physic-Chemistry, Microbiology, Water Chemistry, Toxicology	7	Color: white. Material: Acrylic. Capacity: 6 to 8 pipettes or equivalent.	Acrylic Pipette Stand	18
		each	Physic-Chemistry, Microbiology, Water Chemistry, Toxicology	7	Volume: 2-25 ml. Color: red. Material: natural rubber or equivalent.	Pipette Bulb	19
		Each	Physic-Chemistry, Microbiology, Water Chemistry, Toxicology	7	Material: Polypropylene. Color: red. Easy to clean. Resistant to acids and alkalis. Quick Release for up to 25ml. Pipettes or equivalent.	Manual Pipette Filler	20
		Each	Physic-Chemistry, Microbiology, Water Chemistry, Toxicology	7	High-Grade Stainless Steel. Shelves, Adjustable shelves, providing flexibility in storing containers of varied sizes. Doors Lockable. Size (WxDxH): 34-Inch x 34-Inch x 65-Inch, or equivalent.	Reagent Cabinet	21

	Each	Physic-Chemistry & Toxicology	2	Door Type: Manual Self-Close: 15 gal Dimension: W=1092mm, H=157mm, D=1651mm, Shelves: 2 of equivalent	Flammable Liquid Storage Cabinet	1
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	21	Length: 170 mm, width: 20 mm, width of spoon: 13 mm, spoon capacity: 2.5 ml or equivalent	Spatula	1
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	14	Material: Stainless Steel, Diameter (Metric) (Outer): 6 mm, Width (Metric): 10 mm, Direction of Use: W= 100 x 10 mm or equivalent	Small Spoons (Metric)	14
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Color: Green, Dimension (WxDxH): 2.25 x 0.50 x 7.5 or equivalent	Lab Storage Box	25
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: 1 mm, pieces: 40 pieces, L x W x H: 210 x 170 x 10 mm or equivalent	First-Aid Kit	10
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Leg Material: Stainless Steel, Tripod Support (Base Material): Iron, Leg Length: 150 cm, Tripod Support: 1/8" diameter, 11 cm, Mesh Screen: 15.4 x 15.5 cm/6 Standing over an incubator or Bunsen burner or equivalent	Lab Bench (Tripod with Mesh Screen)	25
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: 304 Stainless Steel or equivalent	Forceful Tongs	10
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Made of zinc plated steel with a flat riveted joint and easy grip handles. The beaker tongs plastic coated for a sure grip. Maximum jaw opening: (180mm) and length (248mm) or equivalent.	Beaker Tongs	20

OCL-Lab Team

		pack (100 pcs)	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: Low density polyethylene. Size: 3 ml. or equivalent.	Dropper	30
		Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Sturdy metal rod. Chemically-resistant base. Perfect for distillation, titration, filtering, & more. or equivalent.	Ring Stand (retort stand)	31
		Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	hold burettes from 10 to 100 ml. square clamping mechanism. insert buret. release to hold securely. made of aluminum with white enamel finish. attaches to support rods up to 17mm diameter. or equivalent	Double Buret Clamp	32
		Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: Stainless Steel Item dimensions LxWxH: 8 x 5.25 x 24.5 inches. Color: Blue. Metallic Rod: 24 Inch. Use for Glass Funnel Stand or Test Tube Holder. or equivalent	Lab Support Ring	33
		Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Type: Laboratory Test Tube Clamp Material: Stainless steel/Nickel-plated Brass Length (Metric): 13 cm or equivalent	Test Tube Clamp	34
		Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: Polypropylene. Diameter: 90 mm. Capacity: 300 ml. Small perforations for better filtration efficiency: 90-100 or equivalent.	Buchner funnels	35
		Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	14	Material: Glazed porcelain. Temperature resistance: use - up to 1050° C. Dimensions: 38 mm high x 55 mm. Lid fits loosely or equivalent.	Crucible and Cover	36



	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	14	material: ceramic, can withstand extreme temperatures, or equivalent	Class I triangle	5
	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	14	Diameter: 100 mm. Product use: The slightly concave sphere can be used for some applications in evaporating liquids; Material: glass; Product color: transparent or equivalent.	Watch Glass	58
	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	14	Capacity: 100 ml. Diameter: approximately 60 mm, height: 40mm. Thermally-stable porcelain and glazed inside for easy cleaning or equivalent.	Evaporating Dish	59
	pair	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	-	Heat Resistant: 200°C. Non Slip, or equivalent.	Hot Mat	60
	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	7	Size: 6x6 inch. Shape: square. Thickness: 2-3 mm. Material: aluminum or equivalent.	Wine Canizer	61
	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	20	Size: 600mm L x 60mm W x 25mm H (mm). Volume (mL): 85 or equivalent.	Weighting Food	65
	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	50	Size: Medium. Color: White. Dimension L x W x H (mm): 108x183x16. Volume (mL): 260, or equivalent.	Weighting Food	66
	Each	Physic-Chemistry; Microbiology; Water-Chemistry; Toxicology	-	Shape: Pointed end, blunt end. Length (Metric): 15 cm. Material: stainless steel or equivalent.	Scoopula (Metal Scoop)	67

	pack (15 pcs)	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	2	Dimension LxWxH (mm): 127 x 71 x 85 ± 3 14 10 columns; rows 12-8 Bottom: round, or equivalent.	96 well plate	15
	pack (10 pcs)	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Length (Metric): 250 mm, Tip type, Rounded, autoclavable at 121°C or equivalent	Forceps	16
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Temperature Range: -10-100°C Division ≤2°C Type: Mercury-in-Glass, Length: 16 cm or equivalent	Thermometer	17
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Dimensions: 335 x 35 (25) x 6 (10) mm Material: stainless steel or equivalent	Ruler	18
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: Polystyrene, 125 x 125 x 10 mm or equivalent	Polymer (L) Beaker Stirring Rods	19
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Used for mixing chemicals and liquids, Materials, or equivalent, or equivalent	Stirring Rod	20
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Capacity: 250 ml Material: Polyethylene Mouth Diameter: 38mm Graduations Increments: 10ml, or equivalent	Squeeze Wash Bottle with screw up wide Mouth - Polyethylene	21
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Capacity: 250 ml, Dimensions: 60x60x160 mm, or equivalent	Wash Bottle	22
	Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Capacity: 500 ml, Dimensions: 90x90x190 mm, or equivalent	Wash Bottle	23



Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Size: 10 inch, Overall Length: 365mm (Overall Width: 16mm Material: High Carbon Steel or equivalent	Insulator line	54
Each	Medicine physiochemistry	14	Size: Universal, Large jaw For cap with O.D. 21mm-38mm, Small jaw For cap with O.D. 18mm-26mm, or equivalent	ALL LIP FUNCTIONAL VIAL OPENER	55
Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	14	Product Size: 52mm x 85mm, Multi-in Neodymium magnet holds cap once opened Premium Stainless Steel finish, or equivalent	Push And Pop Magnetic Bottle Opener	56
Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	14	Material: Stainless Steel Size: small (Male Material: Stainless Steel Product Dimensions: 2.04"W X 8.23"H or equivalent	Stainless Steel Whisker (Cap Sawyer	57
Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Metal Type: Stainless Steel, Can opening professional: Portable Drink Beer (open Beverage Drink Opener or equivalent	Can opener	58
Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	Material: High Density Polyethylene (Capacity: Netw: 20 L, Dimensions of X A X H: 367 X 165 X 385 mm or equivalent	Wide Neck Jar can with the closed connector	59
Each	Physic-Chemistry, Microbiology, Water-Chemistry, Toxicology	7	For filter paper dia (inner 125-150 mm) plastic or equivalent.	Universal filter inner 60	60
pes	All Dep	7	Heating protection band waveband Heating protection band waveband or equivalent	Heating protection band waveband	61

			PCS	All Dep	7	Fittings, filter valve, With FFP-2 and FFP-3 levels Application: For use in pharmaceutical and medical laboratories and clean rooms or equivalent	Respiratory protection mask	62
			set 12	All Dep	7	Hard nylon bristles on twisted G.I. wire, head 140 X 43 mm, eye all length 100 mm or equivalent	Brush for round bottom flask	63
			pcs	All Dep	7	Product Dimensions: 13 x 0.75in (330 X 19mm) LxW or equivalent	Laboratory Brush set	64
			pcs	All Dep	7	Wetted dip, 45mm soft brushes, 65 x 120 X 65mm, Axis 50 ° or equivalent	Nat brush (Nylon Hand Brush)	65
			roll	All Dep	7	Backing: impregnated white paper Adhesive: Dry natural rubber and resins Length: 50m Width: 19mm Total thickness 0.125mm Tensile strength: 85 N/25 mm Adhesion to steel: 7 N/25 mm Elongation: 50% Sterilization conditions: 15 min 121°C 10 min 131°C Indicator colors: Light green to medium dark green Expiration: 30 months or equivalent	Sizer indicator line	66
			Box (100 pcs)	All Dep	7	Volume Range: 0.5-20 µl Length: 46 mm The tip should be graduated at 2 µl and 10 µl for quick volume check (color gray or equivalent).	Micropipette tips	67



	box (100 pcs)	All Dep	7	Volume Range: 50-1000 µl. Length: 70 mm. The tip should be graduated at 50 µl, 500 µl and 1000 µl for quick volume check. Color: blue or equivalent.	Microscope tips	68
	pcs	All Dep	7	Top and middle plate hole diameters: 7.9mm. Bottom plate drain holes: 3.2mm diameter. Distance between top and bottom plates: 10.5cm. Stem autoclavable at 121°C or equivalent.	Thermometer rack	69
	pcs	Microbiology, Neurobiology	3	Volume Range: 0.5 to 200 µl. 1.5 ml. Adjustable. Channels: 8 or equivalent.	Microscope media channel	70
	set	All Dep	7	Includes a box + 1 bar thickness: 1.5 mm. (Cylindrical base: 6.3 x 12 mm, 0.7 x 1.5 mm, 0.6 x 2.0 mm, 0.6 x 3.5 mm, 0.6 x 8.0 mm, 0.8 x 4.0 mm, 0.8 x 5.0 mm, 0.9 x 6.0 mm, 0.9 x 7.0 mm, 0.10 x 8.0 mm, cylindrical with ring: 0.5 x 1.5 and 0.6 x 2.5 mm, 0.8 x 4.0 mm, triangular: 0.8 x 1.5 mm, 0.12 x 5.0 mm or equivalent.	Magnetic stirrer	71
	pack/100 pcs	All Dep	7	Note: 1. Material: Circles cotton fibers. Parameter: 0.22 psi wet burst 5.0 sec 100 ml speed. Diam: 1.25 mm thickness: 2.5 mm. Pore size: 11 µm or equivalent.	Whatman filter paper	72




			pack/100 pcs	All Dep	7	No. 11. Material: Circles cotton filters Parameter: 0.22 psi wet burst 5.1 sec 100 ml speed, Diam: 125 mm, thickness: 270 µm, Pore size: 20-25 µm or equivalent.	Whitman filter paper	73
			pack/100 pcs	All Dep	7	No. 12. Material: Circles cotton filters Parameter: 0.22 psi wet burst 5.1 sec 100 ml, speed, Diam: 125 mm, thickness: 270 µm, Pore size: 2.5 µm or equivalent.	Whitman filter paper	74
			pack/100 pcs	All Dep	7	Pore size: 0.45 µm, Material: Mixed cellulose esters, Diameter: 47 mm or equivalent.	Membrane filter paper	75
			pack/100 pcs	All Dep	7	Pore size: 0.45 µm, Material: Nylon Diameter: 20 mm or equivalent.	Syringe filter Nylon Syringe filter	76
			pcs	Toxicology and Physico- chemistry	7	Material: Stainless Steel Sieve, Mesh Size: 18 mesh test sieves, Diameter: 10 cm, Height: 6 cm or equivalent.	Plastic jar	77
			pcs	All Dep	7	Measurement ranges: 0 to 100% r.h., 30 to 100 °C Resolution: 0.01% r.h., 0.1 °C Accuracy: ±2.0% r.h. at 25 °C, ±0.5 °C at 35 °C Display: dual LCD or equivalent.	Digital Hygrometers	78




		roll	All Dep	7	Range: 1-14. Pack Size: 5m x 3m Roll or equivalent	Pf1 Indicator papers	85
		box set	All Dep	1	Pf1 length: mm: 10. Type: Macro with lid Material: glass. Absorbance in the Visible range at 410nm, 465nm, 516nm, 560nm and 635nm wavelengths. Wavelength in the UV and Visible range at 279.3nm, 300.9nm, 453.2nm, 536.2nm and 637.6nm or equivalent.	Spectrophotometer Calibration Standards	86
		box (4 pcs)	All Dep	1	Polished Window: 2. Capacity: 1.5gpf Inside Dim. (mm): 45 x 135 x 25. Padlock Length (mm): 10. Inside Width (mm): 10 or equivalent.	Standard UV quartz cuvette with lid	87
		pcs	All Dep	7	Plate size: 80x75 mm. Max. storage load capacity: 30 kg. Working height: 100 x 120 mm. Color: blue or equivalent.	locks (box)	88
		each	All Dep	7	Capacity: 46 L. or equivalent.	Roll pedestal bin	89
		each	All Dep	7	Maximum usable capacity: 10 L. Material: Pf1. With handle or equivalent.	Pure water storage tanks	90
		each	All Dep	7	Maximum usable capacity: 25 L. Material: Pf1. With handle or equivalent.	Pure water storage tanks	91

Q



					Print Method: Direct thermal thermal transfer, Display, LCD with buttons, Interface Connectivity: Ethernet, Serial RS-232, USB, USB Host, Wireless Connectivity: Bluetooth, Type: Desktop, Max Print Speed: Up to 5 ips (127 mm/s), Max Print Width: 54 mm, Max Print Length: 2,280 mm, RAM: 4 MB, STORAGE: Keyboard, Standalone keyboard or equivalent.	Label printer	02
	each	All Dep		1	Volume Range: 0.5ml-50ml, Accuracy: Pressure max: 500mmHg, Viscosity max: 1000mPa.s, Temperature max: 100°C, Density max: 2.0 g/ml or equivalent	Bottletop dispenser	03
	each	All Dep		1	Used in many organic and inorganic solutions. Materials in contact with reaction are resistant to most acids, solvents and bases. Disposable at 121°C/12 bar, according to DIN EN 853, PP* threaded adapter, telescopic suction tube, nitrogen bag, quality certificate and instructions for use. Nominal volume 1-10 ml, with adapters 0.4, 0.5, 1, 2, 3, 5, 10, 20, 30, 50, 100 ml and telescopic aspirating tube 125-150 mm, Not available for sale in Spain or equivalent.	Bottletop dispenser	04

		pack	All Dep	7	Size: 1000 x 1000mm, 3-ply material, Fire blanket to extinguish fires, Two layers of woven fibre glass and a fire retardant inner, Clearly labelled PVC wallet or equivalent	Container for fire blanket, fireglass	95
		each	All Dep	7	Capacity: 4.5 Kg, Fire rating: 4A:60B:E, Discharge Time: 19sec, Product Dimensions (H X Cyl O): 480mm X 145mm or equivalent.	Powder fire extinguisher	96
		each	All Dep	7	Capacity: 4.5 Kg, CO2 fire extinguisher: 10 sec, Height: 140 mm, Diameter: 140 mm, Empty weight: 12.4 kg, Operating temperature: -30- (+60), Test pressure: 250 bar or equivalent.	CO2 fire extinguisher	97
		each	All Dep	1	Washing Capacity (kg): 18, Drying Capacity (kg): 11, Door: Tim Door, Panel Display: AI Control, Spin Speed: 1100 rpm, Noise technology: VRT Plus™ technology, Bubble technology, Net weight: 97 kg or equivalent.	Clothes washing Machine	98

Total Number of Items

1218

Medicine Division

Physicochemical Department

قیمت مجموعی	قیمت فی واحد	وراثی، نصب و ترمیم	مقدار	واحد	مشخصات فنی	نام دستگاه	شماره
		Warranty: 1 years. Installation: Successful Installation at the Laboratory Training: On-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Detector: PAB or DAD, Wavelength range (190nm - 800nm). The DAD detector must have a flow cell that can be easily cleaned if necessary. Pump: a quaternary pump system with the capability of handling 4 solvents as mobile phase. These solvents may be used together or individually or in any combination. Flow rate: 0.001 - 10ml/min, flow rate accuracy $\pm 1\%$. Operating pressure: more than 60 Mpa. Pump Mode: gradient system or isocratic mode. Column (Oven: Thermostat system 12 C - 90 C. The system must have an in-built degasser. Clear and easy valves and methods for purging must be available. The tools required for the purging must be provided along with the system. The fittings must be easy to operate with the tools provided. Appropriate tools for maintenance must be provided. It is preferable to have some leak detection system. Some spare consumables (such as online filters) must be provided initially. Autosampler: can inject samples into the LC system with sample volumes ranging from 0.1 microliter to 100 microliters. The autosampler must be capable of holding at least 100 vials at a time and must allow for programmable automated injection of these these samples into the LC system with an interruption of the operation. The autosampler must be able to hold vials (approximately 1.5 ml. with screw cap and septa) that are interchangeable with standard HPLC vials provided by other vendors. Columns: Standard and suitable column with guard column according to the aspects of the HPLC system. A software system controlling all the aspects of the HPLC system mentioned above must be provided (original disk or Drive or	HPLC	1

				CD). The software should have the capability of different display parameters during the run of a sample. The post run data analysis should be available in the same software where the chromatogram of a run sample must available for analysis. Data analysis must include standard chromatogram operations such as area, height, width and percentage estimation. The software system must also allow the easy integration of calibration data into data analysis methods. The software must be able to perform spectral analysis for UV visible, fluorescence and RI detectors. The software data analysis system must also allow for the integration of UV spectral library information for automatic matching of the peaks with reference spectra, even if this might not be standard features. If this UV spectral matching feature is available. A suitable computer system must be provided for this system that can handle all the operations. UPS system more than 30 min backup A generic C-18 column must be provided that can separate a mixture of polyanomatic hydrocarbon. A tubing kit and maintenance tool kit must be provided along with the system. ISO 13485 CE, FDA certificates or equivalent.			
	Warranty: 1 years. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Beam Splitter : Multilayer (coated KBr, Detector Room Temperature DLaTGS mode (standard), IR source High intensity, Long lifetime, air-cooled IR source, Wavenumber range: 7800 /cm ~350 /cm, Resolution : 0.85/cm, Wavenumber Accuracy: ± 0.01 /cm, Necessary accessories, A suitable computer system must be provided for this system that can handle all the operations. Power supply: 220 V - 230 V, ISO 13485, CE, FDA certificates or equivalent.	IR Spectrophotometer	2	

QCL-Lab Team

Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	2	Each	Photometric system: Double beam . Wavelength range: 190 - 1100 nm. Wavelength accuracy : ± 0.02 nm. Light Source : Halogen Lamp, Deuterium Lamp, Spectral Bandwidth: 1 nm. Scanning Speed 10 - 8000 /min. Power supply: AC 100-240 V . 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent.	UV-Vis Spectrophotometer
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		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Basket: autobasket type A and type B. Temperature: 15-50 °C. Screen: touch screen. Lift drive: step motor. Speed: 30 +/-, Height of stroke (mm): 55 +/-2. Heating: Integrated flow through heating system. Temperature control: External PT 100 temperature sensor. Automatic determination of the disintegration time: Autobasket type A (6 test tubes) or AutoBasket Type B (3 test tubes plus discs). Power Supply: AC 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Automated disintegration tester	4
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Test-stations: 14 in two row. Vessel capacity: 1000 ml. Low-head and high-head operations. Evaporation: Less than 1 % (50 rpm / 1000 ml / 37° C / 24 h). Heating range: 30-50° C. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Dissolution Tester	5
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Instrument Operation: Touch foil keypad. Rotation speed: 20 - 100 +/- 1rpm. Test run timer: Infinitely adjustable up to 9 h, 59 min., 59 sec. +/-0.1. Revolution counter: Infinitely adjustable up to 9999. Displays: LC. Test drums: 2 (TAR 220). Automatic removal of tablets. Voltage: 100 - 240 V / 50 - 60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Friability tester	6



 QCT Lab Team

		Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Air velocity: 0.3-0.8 m/s. System exhaust volume: 1140m³/h. Max opening: 750 mm. Exterior material: 1 mm cold-rolled steel with bacteria powder coating. Interior material: compact material board with good acid and alkali resistance function. Lamp: LED (40Wx1). work surface height: 900mm. Noise level≤68 dB. Exhaust duct: PVC, standard length: 4.3 meters 300mm. The proposed units should be work in electricity voltage and frequency of 220V - 230V, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.	Fume hood	7
		Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	pH range: 0 to 14, mV: ±1.0mV, Accuracy: ±0.02, operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100- 230 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Benchtop pH meter	8
		Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.001g-200g Readability: 0.1mg, Line Range: Full, Linearity: 0.2mg, Response Time: 3 sec. Automatic Internal Calibration, PC Interface, USB. Calibration Certificate with calibration weight set. Operating Temperature Range: 10° to 40 °C. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Analytical Balance	9

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	Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range : 50-300 °C, Chamber volume: 100 L., walls: stainless. Power supply: AC 100-240 V , 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Drying Oven	10
	Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Tank capacity: 8 L. Tank size (mm): 300x240x150, Ultrasonic Power: 200 W, Heating power: 300 W, Heating Temp: 0-80 °C, Time setting: 1-99 min, Display: Digital RED LED, Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Ultra Sonic Bath	11
	Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	It should be a small foot print battery powered with a single Eyepiece with digital display Measurement of liquid, and viscous samples, regardless of their turbidity, viscosity, transparency and absorption, Measurement prism: Optical glass, Light source: LED (Approximating to wavelength of D-line), Wavelength: 589 nm, Scale: Refractive Index & Brix, Measurement Range: Refractive index (nD): 1.3000 to 1.7000 Brix: 0.00 to 95.00% (5 to 75 °C ATC), Measurement Accuracy: Refractive Index (nD): 0.0004 Brix: 0.03%, Temperature control range: 5.0 to 75.0 °C, Calibration standards: Calibration block: 1 No and contact solution (1-Bromonaphthalene) and any other standard solutions, Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Abbs digital Refractometer	12

		Warranty: 1 years. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	RPM range: 50-5000 RPM. Increment range: 5 RPM. Timer facility 1 min to 15 min or beyond. Rotor capacity: 12 or more (5 - 15 ml). Rotor type: fixed angle rotor. Power Supply: 100-250 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent. Complete Programmable each parameters	Digital Control Centrifuge	13
		Warranty: 1 years. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring method: Infrared heat drying mass measurement Sample pan size: ϕ130 mm Minimum display in weighing: 0.001g Measurement range of moisture content: 0.01% to 100.00% Moisture content minimum display: 0.01% Maximum sample capacity: 120g Measurement mode: Automatic or Tuned halting modes. Rapid, Slow and Stop drying modes. Predictive Measuring mode Drying heater: Mid-wave infrared quartz heater Setting temperature range: 30°C to 180 °C (by 1 °C increments) Dimensions & weight: W220x D415x H190 (mm), 4.5 kg Operational temperature and humidity range: range: 5 °C to 40°C, 85% RH maximum Standard accessories: Sample pan 2 pcs, sample pan stop, windbreak case, sample pan, handler 2 pcs, aluminum sheet 20 pcs, spoon, spatula. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Electronic moisture balance	14

		Warranty: 1 years. Installation: Successful Installation at the Laboratory Training, on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Range: Conductivity: 0 μS/cm - 2000 μS/cm; TDS: 0 - 2000 μg/L or ppt; Temperature: 0 - 100 $^{\circ}$C. Resolution: Conductivity: 0.01 μS/cm - 200.0 mS/cm; TDS: 0.01 mg/L or ppm to 0.1 μg/L or ppt; Temperature: 0.1 $^{\circ}$C. Accuracy: Conductivity: $\pm$1% full-scale; TDS: $\pm$1% full-scale; Temperature: $\pm$ 0.5 $^{\circ}$C. Calibration: Calibration by certified reference material traceable to SI units or ISO 17031. Auto-Ranging: Across 5 Conductivity and TDS ranges (up to 5-point push button Calibration). Accessories: Electrode holder & One spare electrode. Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Bench top Conductivity & TDS Meters	15
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		Warranty: 1 years. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	each	Design Ignition: Must designed in strict accordance with the test method ASTM D93. Method A and B. Automatic movement of head for closing and opening of the cup. Microprocessor controlled unit with digital easy to read display of the results. Ignition: Electric ignition and should also provide an automatic re-ignition facility. Electric Igniter should be encapsulated. Detection: Thermal detection (with metal sample temperature probe) of the flash to eliminate interference from water or silicone containing compound. Measuring Range: Flash point Ambient to 350 °C or more. Heating System: Heat rate: 0.5 °C to 12 °C/min. Heating should be microprocessor controlled at the specified rate. Temperature Measurement: Rugged metal and intelligent Pt 100 probe with built-in calibration, min 5 calibration points. Temperature calibration: Resistance check box for temperature calibration with calibration certificate from ISO 17025/NABL accredited laboratory. Sample Stirrer: Automatic stirrer test method or user-defined from 0 rpm to 250 rpm or more ISO 13485, CFE, FDA certificates or equivalent.	Melting Point apparatus	16
		Warranty: 1 years. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	each	Display type: Built-in Display. Measuring range for dynamic viscosity: 0.2 to 30000 mPas. Measuring range for kinematic viscosity: 0.2 to 30000 mm ² /s. Measuring range for density: 0.65 to 2.5 g/cm ³ . Accuracy: Viscosity: 0.5% of measured value or better Density: 0.01 g/cm ³ or better Repeatability: ± 0.010C or better. Standards: NIST traceable Viscosity and Density 4 no's each at various temperatures. Control system: Interfaces: 4 x USB, 1 Ethernet 1 x CA Bus, 1 x RS-232, 1 x VGA. Spindle /Speed combination: 18 or more ISO 13485, CFE, FDA certificates or equivalent.	Viscosimeter	17

		Warranty: 1 years. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	2	Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L. temperature range: 80-380 °C. Maximum load: 15 to 20 KG. Body Material : Polypropylene. Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity: RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Hot plate with Magnetic stirrer	18
		Warranty: 1 years. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring Mode: Optical Rotation. Specific Rotation. Specific Rotation Plus Concentration. Sugar Scale %Z(ISS). Display: On screen LCD / LED (touchscreen). Accuracy: 0.001 deg Arc or better. Measuring Range: ± 89.9 deg Arc Optical Rotation. ± 999.99° Arc Specific Rotation. 0-99.9% Concentration. Optical Wavelength: 589 nm Na and Tungsten-halogen or Hg- Lamp (-for 633 nm/ 578 nm / 546 nm / 436 nm / 405 nm, Light Source: Sodium/Tungsten-halogen/LED) with life time 100,000 h of operation, Prism: Glau Thompson Calcite prism with life time Guarantee. Detector: PMT. Calibration Automatic: Calibration In-built via touchscreen, Calibration Standards: Certified values of Certified Reference Materials (CRM) provided by an accredited Reference Material Producer with stated metrological traceability to the SI for sugar solutions. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Automated digital polarimeter	19



		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed range: 30-400rpm. Heavy duty maximum load 6kg. Power Supply: 100-230 V , 50/60 Hz. ISO 13485, CE. FDA certificates or equivalent.	Orbital Laboratory Shaker	20
		Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measurement Range: 0 to 100 % r.h. -30 to 100 °C. Resolution: 0.01 % r.h. 0.01 °C. Accuracy: +/- 2.0 % r.h. at 25 °C, +/- 0.5 °C at 25 °C. Response time % r.h. about 10 sec. (90 % @ 25 c air temp.) Power Supply: AC 100-230 V , 50/60 Hz. ISO 13485, CE. FDA certificates or equivalent.	Hygro meter	21
		Warranty: 1 years. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0-3g /cm³ Temperature range: 10-95 °C. Pressure range: 0 to 10 bar Density accuracy: ±0.0001 g/cm³. Resolution: 0.0001 g/cm³. Wetted parts: Borosilicate glass, PTFE. Minimum sample volume: 1.5 ml. Power Supply: 100-230 V , 50/60 Hz. ISO 13485, CE. FDA certificates or equivalent	Density meter	22

		Warranty: 1 years. Installation: Successful Installation at the laboratory: Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	External dimension (mm): 524x1067x574, Inner dimension (mm): 483x853x560. Dehumidification system: H₂O electrolysis discharge by solid polymer electrolytic dehumidification element. Dehumidified ability: When 30% rh is set). Within 8 hours. • Humidity Range: 10 to 60% RH, 0 to 60 °C/10 measurement range 60 %RH. Temperature and humidity sensors: Temperature/thermistor elements, humidity/resistance ape low humidity measurement sensors. Area of dehumidifying element: about 49 cm². Temperature and humidity display accuracy: ±1 °C. Power Supply: 100-230 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent	Digital Dry Desiccator	23
		Warranty: 1 years. Installation: Successful Installation at the laboratory: Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	PLC Plate Cutter size: 200x200 mm Drying Rack, 10 PLC plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. Simultaneous Separating Chamber: The vertical grooves in the transverse walls should hold up to five 200 x 200 mm PLC plates. Desiccator Opener: This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro Capillaries: Their accuracy should be better than 1%. Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Thin Layer Chromatography (TLC)	24




	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12 -24 °C. Capacity Range: 22 cubic feet. Door Swing: Left Hinge. Double-Swing. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Freezer (-20)	25
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 68 in. Depth With Door Open 90 Degree: 57.0 in. Depth: 31 in. Capacity: 17. Cabinet Width: 28.0 in. Refrigerator Volume: 13.66 cu ft. Door Style: Countertop Handle Material: Plastic. Location of Controls: Interior Top Front. Deli Drawer: 1 Flexi-Slide Bin. Door Pins: 2 Fixed Full-Width. Lighting: LED. Features: 1 LED Lighting, EZ Connect Iceemaker Kit (compatible), Flexi- Slide Bin, Humidity-Controlled Crispers, ISO 13485, CE, FDA certificates or equivalent.	Refrigerator	26
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 200 to 3000 rpm. Material: Rubber. Plastic Platform. Dimensions (L x W x H): 8.1 x 5.9 x 2.1 in. (20.5 x 15.1 x 5.3 cm). Timer Range: 1 to 99 min. Continuous. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital Vortex mixer	27

		Warranty: 1 year. Installation: Successful Installation at the laboratory training, on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity: 500 ml, Units: 6, Speed Range: 0-1200 rpm, Total watts: 1800 W, Dimension HxWxL (mm): 210x300x1200, Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Heating Mantle	28
		Warranty: 1 year. Installation: Successful Installation at the laboratory training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Max. flow rate: 20 l/min, Capacity: 300 ml / 1000 ml, Filter diameter: 17 mm / 50 mm, Effective filtration area: 13.1 cm ² , Filter funnel: PTFE, Waste bottle: Borosilicate 1000ML, glass (with drain) Funnel lid: PP System, complete set includes: VP-17, Vacuum Pump, MF-31, Filtration Set, Silicone Tube (1m), Power Supply: 100- 230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Vacuum Filtration System	29
		Warranty: 1 year. Installation: Successful Installation at the laboratory training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring Range: 0-150 millimeter or 0-6 inch, Resolution: 0.01 millimeter or 0.0005 inch, Repeatability: 0.01 millimeter or 0.0005 inch, Maximum measurement speed: 1m/s, ISO 13485, CE, FDA certificates or equivalent.	Digital Vernier Caliper	30

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system			It should be a small foot print battery powered with a single Eyepiece with digital display Measurement of liquid, and viscous samples, regardless of their turbidity, viscosity, transparency and absorption. Measurement prism: Optical glass, Light source: LED (Approximating to wavelength of D-I-line). Wavelength: 589 nm. Scale: Refractive Index & Brix. Measurement Range: Refractive index (nD): 1.3000 to 1.7000 Brix: 0.00 to 95.00% (2 to 75 oC ATC). Measurement Accuracy: Refractive Index (nD): 0.0004 Brix: 0.03%. Temperature control range: 5.0 to 75.0 °C. Calibration standards: (calibration block, 1 No and correct solution (1-Bromonaphthalene) and any other standard solutions. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital Refractometer	11
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature Range: 5 to 40°C. Humidity: 0 to 80% relative humidity. Viscosity: μmPa.s 50 cP. Sample Bottle Clearance: 153 mm. Volume Accuracy: > 95% Sample Flow Rate: 10 to 100 ml/min. PharmSpec 3 Software (Processor: 1.0 GHz or faster processor Operating System: Windows 10 Enterprise 64-bit. Memory: 2GB of RAM). Standard Sensors range: 2 μm to 600 μm (chemical compatibility). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Liquid Particle Counter	12

	Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Special medium length Ts 10/18 thermometer with a range 1-38 °C. Accuracy $\pm 0.2^{\circ}\text{C}$, volume size: 50 ml. Power Supply: 100-230 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Pycnometer	33
	Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Application: liquid and semi solid mixer homogenizer. PLC automated touch screen control, jacketed process vessel for temperature controlled processing Capacity: 1 L. (Model: UHOM-1/3 Ltr). Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Homogenizer	34
	Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Vacuum Range: 150-600 mm Hg. Hold time: upto 9999 secs. Accessories: Main Apparatus along with vacuum pump Polycarbonate desiccator along with connecting tube Instruction Manual. Power Supply: AC 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Leakage Test Apparatus	35




	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system.	1	Each	Maximum number of samples per test: 6. Temperature precision °C: ± 0.5. Solvent recovery %: 10 to 80. External dimensions L x D x H mm: 680 x 350 x 580. Accessories: Extraction thimbles set, Extraction vessel test, Main fields of application (food, pharmaceutical, chemical and cosmetics). Power supply: (100 to 240V) V - 50/60 Hz.	Soxhlet Extractor Apparatus	36
	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system.	1	Each	Volume: 20 Lit. Temperature range: 15-100 °C. Temperature Resolution Rate: 0.1 °C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz, ISO 13485, CE, FDA certificates or equivalent.	Water Bath	37
	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system.	1	Each	Capacity: 10 Lit. Operating temperature: 0 to 40 °C Accuracy: ± 0.1 °C. Resolution: ± 0.1 °C. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz, ISO 13485, CE, FDA certificates or equivalent.	Ice Bath	38

Warranty: 1 year Installation: Successful Installation at the laboratory. Training, on- site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Application: acid-base titration, redox, precipitation, complexation, dead-stop, Karl Fischer moisture method of determination; potentiometric, dead-stop and Karl Fischer ISO 13485, CE, FDA certificates or equivalent.	Automatic Titrator	30
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	Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Max Irradiance: 250 mW/cm ² . Wavelengths: 365 nm, 385 nm, 395 nm, 405 nm. Electrical Power Input: ~ 100W. Main Supply: 100-240V AC. Interior Dimensions: 300mm x 300mm x 360mm. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	UV Chamber	40
	Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measurement range: 3 - 500 N (± 1 N). Measurement range: Diameter, Length (2 - 23mm (± 0.05 mm)), 2 - 28mm (± 0.05 mm)). Thickness Measurement range: 2 - 10 mm (± 0.05 mm). Weight Measurement range: 0.02 - 124 g (± 0.001 g). Width Measurement range: 2 - 15mm (± 0.05 mm). Measurement principle constant speed: 0.1 - 3.00mm/sec, constant force Measurement principle: 10 - 200 N/sec. Power supply: 100 - 240 V / 50-60 Hz. Hardness Testing of up to 5 parameters for all kinds of tablets. Parameters: Hardness testing, Weight, Thickness, Diameter, Length, Width, Display: Touch. Separation drum/ Vibrating separation system. Alignment threshold (fixed). Alignment threshold (electronic, adjustable). Positioning arm for oblongs. (oblong Navigator, ISO 13485, CE, FDA certificates or equivalent.	Automated tablet Hardness Tester	41
Total Number of Device						44

Microbiology Department

ذرائعی: نصب و تربیتی	مقدار	واحد	مشخصات فنی	نام دستگاه	شماره
any: 1 year. llation: Successful llation at the atory Training: on- omprehensive ing for a minimum o tific personnel iting the system	1	Each	Standard version, working space: 1185x570x570mm. Includes: radial fan, illumination, differential pressure indicator, pre-filter, HEPA filter. For bench mounting ISO 13485, CFE, FIDA certificates or equivalent	Vertical Laminar Flow Bench	1
any: 1 year. llation: Successful llation at the atory Training: on- omprehensive ing for a minimum o tific personnel iting the system	1	Each	Measuring range: 0.0001g-220g, Repeatability: 0.1mg, Tare Range: Full, Linearity: 0.2mg, Response time: 3 sec. Automatic Internal Calibration, PC Interface, USB, Calibration Certificate with calibration weight set. Operating Temperature Range: 10° to 40 °C, Power supply AC 100-240 V, 50/60 Hz, ISO 13485, CFE, FIDA certificates or equivalent.	Analytical Balance	2

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		Warranty : 1 year. Installation: Successful laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	2 Each	Capacity : 150 L. Temp. Range: : 0- 60 °C. Temp accuracy: ±/- 1 °C. Temp Fluctuation: ± - 1 °C Maximum timer range: 24 Hours. Display: LCD Humidity Range: 50-90 %, rh. Power Supply: 100-230 volt . 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent.	Incubator	3
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		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two			
	1	Each	Cabinet (Material of construction): Cabinet should be made from Galvanized Iron 18 SWG sheet metal with polycarbonate paint coated finish and bottom will be supported with MS with PU coated modular stand which can be adjustable for height with leveling legs/or motorized. External surfaces to be coated with antimicrobial coating to protect against surface contamination and inhibit bacterial growth. Interior work area to be from a single piece of stainless-steel with large radius corners to simplify cleaning. The cabinet work area must have 5 no welded joints, which collect contaminants or rust. Unit: Front door Made of clear 5 mm thick Toughened glass, vertical sliding, with Feather touch Motorized operation, while opening the door UV Lamp will be cut "OFF" And while closing the door UV Lamp will be "ON" Automatically. Side Panels: Both the sidewalls are made from double layered outer (1) & inner stainless steel with return air plenum in between. Edges should be perforated to avoid entry of room air into the work zone and exit of contaminated air in to the room and such contaminated air is sucked through this full height perforation at the edges of the sidewalls. A recessed central area with drain pan to contain spills and prevent liquids from entering the power filtration unit. The BSC shall be ergonomically designed for maximum user comfort and adjustability. Fail-safe system to ensure that		
			Biosafety Cabinet class 2 Type IV		

				in case of exhaust failure, the cabinet's main fan automatically shuts down to ensure safety to the user. Air Balancing : 100% Exhaust & 0 % Re-Circulation. Direction of flow: Vertical, HEPA Filters: Type: Separator less type, Mini-Pleats HEPA Media, Media: Ultra clean glass fiber paper, Retention: 0.3 Micron .Efficiency: 99.997%.Initial Pressure: 12 mm W.G. Grade: H14 rating, Real time display panel for remaining Filter ISO 13485, CE, FDA certificates or equivalent.	
	Warranty: 1 year. Installation: Successful Laboratory training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Chamber: Vertical loading type chamber with service basket. Chamber size: 80 -120 L. Gauges: Should have a water level gauges. Display: Fully Automatic PID control ± 0.1 °C. LED display for temperature and remaining time. Operation temperature 140 °C. Temp accuracy ± 0.5 at 121 °C. Operation log pressure 15-20 °C. Timer: Automatic start and stop timer. Must have safety warning alarm. Must have Nursery accessories. Must be with calibration certification ISO 13485, CE, FDA certificates or equivalent.	Vertical Autoclave




		Warranty: 1 year. Installation: Successful installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2600 rpm. Stirring Capacity: 4L. temperature range: 80-380 °C. Maximum load: 15 to 20 KG. Body Material : Polypropylene Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity, RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Hot Plate with Magnetic Stirrer	6
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		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	litre	Capacity: 12 L. Material of construction: Transparent, unbreakable polycarbonate jar. Unit: Jar should be provided with pressure -cum -vacuum gauge attached to the lid. Jar should be ideal for all strict anaerobic test conditions. Lid should consist of O-ring gasket. It should be provided with petri dish (100 mm diameter) carrier/SS rack, Schrader valve and screws to connect to vacuum pump. Vacuum pump: Suitable oil free vacuum pump for the system. Accessories: Catalyst/gas pouch startup kit. Anaerobe indicator tablets. Lid, complete with clamp and screw, O-rings. Power supply: 100-230 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Anaerobic system with Anaerobic jar	8
		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	litre	Capacity: 5 L with easy cleaning facility. Material of construction: Body should be compact, durable, leak proof and made of stainless steel /heavy duty plastic. Unit: It should be compatible with all disinfection solutions usual concentration. It should be compatible with maximum pH range (both acid and alkali). The equipment should be of good quality and conform to national/ international standards. Power supply: AC 160-240 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Fumigator	9

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	2	Each	Temperature range : 50-300 °C. Chamber volume: 100 L. walls: stainless. Power supply : AC 100-240 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Drying Oven	10
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Ph range: 0 to 14, mv; ± 0.02 , operating temperature: 5-10 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100- 230 voh , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Bench top PH meter	11
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Material of construction: Full Stainless-steel fabricated body with duly heat cured epoxy coating. Display and counting: It should consist of: Digital display up to 4 digits with confirmation by audible tone. It should consist of Magnifying lens (greater than 2X magnification with digital marking pen). Accepts petri dish up to size 140 mm diameter with a centering adaptor for standard 90 mm petri dish. Glare free viewing low energy bright LED's. A switchable black background viewing translucent and difficult to see colonies. Zero reset button. Power supply: AC 100-230 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital Colony counter	12



	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12--24°C Capacity Range: 271 cubic feet. Door Swing: Left Hinge. Double-Swing. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Freezer (-20)	13
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 68 in. Depth With Door Open 90 Degree: 57 9/16 in. Depth: 31 in. Capacity: 17.6 cubic feet. Door Width: 28.0 in. Refrigerator Volume: 13.66 cu ft. Door Style: Countertop. Handle Material: Plastic. Location of Controls: Interior. Top Front. Deli Drawer: 1 Flexi Slide Bin. Door Bins: 1 Fixed Full-Width. Lighting: LED. Features: LED Lighting. EZ Connect IceMaker Kit (Compatible). Flexi Slide Bin. Humidity-Controlled Crispers. ISO 13485, CE, FDA certificates or equivalent.	Refrigerator	14
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 200 to 3000 rpm. Material: Rubber. Front Platform. Dimensions (L x W x H): 8.1 x 5.9 x 5.2 in (20.5 x 15.1 x 13.1 cm). Time Range: 1 to 99 min. Continuous. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital vortex mixer	15

		Warranty: 1 year. Installation: Successful laboratory training; on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	RPM range: 50-5000 RPM. Increment range: 5 RPM. finer facility 1 min to 15 min or beyond. Rotor capacity: 12 or more (5 - 15 ml). Rotor type: fixed angled rotor. Power Supply: 100-230 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent. Complete Programmable each parameters	Digital Control Centrifuge	16
		Warranty: 1 year. Installation: Successful laboratory training; on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Counting Chamber: Constructed entirely of glass. Centre of glass should contain a 15x20mm rectangle that is flanked by 0.1 mm shoulders on each side to support cover glass Rectangle and Cover glass should have optically plane surfaces Facilities for calibration of microscope. Eyepiece micrometer: Ruled into squares (grid), each of which is equal to 1/6 of the diameter of the eyepiece diaphragm opening. Cover slips: Thin 28mm x 23mm x 0.5mm 2 Nos. Thick 28mm x 23mm x 1.9mm 2 Nos. Power Supply: AC 100-230 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Howard Mold Counter	17
			19	Total number of Device			




Medicine Toxicology Department

قیمت مجموعی	قیمت فی واحد	Warranty, Installation and Training	Qty	Unit	Technical Specification	Device Name	No
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	2	Each	11.C. Plate Cutter size: 200x200 mm. Drying Rack: 10 11.C. plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. Simultaneous Separating Chamber: The vertical grooves in the transverse walls should hold up to five 200 x 200 mm 11.C. plates. Desiccator (Opener): This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro (Capillaries: Their accuracy should be better than 1%. (11.C. 3000 Series) ISO 13485, CE, FDA certificates or equivalent.	Thin Layer Chromatography (TLC)	1
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Fully PC based Atomic Absorption Spectrophotometer both flame and furnace system automatic operation. Detector: Silicones Light Source: Hollow Cathode Lamps (HCL). Background Correction: Deuterium. Wavelength range: 185-900 nm. Optical Design: Czerny Turner Spectrometer. Wavelength Precision : 0.005nm. A suitable computer system must be provided for this system that can handle all the operations. Power supply: AC 100- 240 V , 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Atomic Absorption Spectrophotometer	1

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	2	Each	Measuring range: 0.0001g-220g, Readability: 0.1mg, Tare Range: Full, Linearity: 0.2mg, Response Time: 3 sec. Automatic Internal Calibration, PC Interface, USB, Calibration Certificate with calibration weight set, Operating Temperature Range: 10° to 40 °C, Power supply: AC 100-240 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Analytical Balance	5
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Hand / Motor lift, hand lift, Height adjustment speed: manual, Height adjustment: 155 mm, Rotation speed: 10 280 rpm, Rotation speed setting: 5.5 LCD display, Drive: brushless DC motor with electronic speed control Heating capacity: 1300 w, Temp. range heating bath: 20 210 °C, Temperature accuracy bath: ±1, Overheat protection bath, cut-off at 5 °C over set temperature via separate Pt 1000, Bath temperature setting: 3.5" LCD display, Heating bath temperature control: electronic / digital, Material heating bath: stainless steel, Diameter heating bath: 255 mm, Volume heating bath: 4.5 l, Flask volume: 1 l, Finer: yes, Rate of evaporation: Ethanol: 3.5 L/h, Water: 1.2 L/h, Condensing surface: 1,200 cm2 ISO 13485, CE, FDA certificates or equivalent.	Vacuum Rotary Evaporator (it included vacuum pump and water chiller)	4



		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L. temperature range: 80-380 °C. Maximum load: 15 to 20 KG. Body Material : Polypropylene. Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity. RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V. 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Hot Plate with Magnetic Stirrers	5
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		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Volume : 20 Lt. Temperature range: 15-100 C. Temperature Resolution Ratio: 0.1 C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.	Water Bath	6
		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	RPM range: 50-5000 RPM. Increment range: 5 RPM. Timer facility 1 min to 15 min or beyond. Rotor capacity: 12 or more (5 - 15 ml). Rotor type: fixed angle rotor. Power Supply 100 230 volt , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent. Complete Programmable each parameters	Digital Control Centrifuge	7
		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12 to -24°C. Capacity Range: 24 cubic feet. Door Swing: Left Hinge, Double-Swing. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Freezer (-20)	8




		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 68 in. Depth With Door Open 90 Degree: 57.0 in. Depth: 31 in. Capacity: 17. Cabinet Width: 28.0 in. Refrigerator Volume: 13.66 cu. ft. Door Style: Contour Handle Material: Plastic. Location of Controls: Interior Up Front. Deli Drawer: 1 Flexi-Slide Bin. Door Bins: 2 Fixed Full-Width. Lighting: LED. Features: 1 LED Lighting, EZ Connect Iceemaker Kit Compatible. Flexi-Slide Bin, Humidity-Controlled Crispers, Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Refrigerator	9
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	pH range: 0 to 14, mV $\pm$1099. Accuracy: $\pm$0.02, operating temperature: 5-40 $^{\circ}$C. Calibration: 1-3 points automatic calibration with calibration instruction and self diagnosis. Temp. measuring range: 0 to 100 $^{\circ}$C. Power Supply: 100-230 volt, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Benchtop pH meter	10




		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Photometric system: Double beam . Wavelength range: 190 - 1100 nm. Wavelength accuracy : ± 0.02 nm Light Source : Halogen Lamp, Deuterium Lamp. Spectral Bandwidth: 1 nm. Scanning Speed 10 - 8000 /min. Power supply: AC 100-240 V , 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	UV-Vis Spectrophotometer	11
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range : 50-300 °C. Chamber volume: 100 L. walls: stainless Power supply: AC 100-240 V , 50/60 Hz.ISO 13485 CE, FDA certificates or equivalent	Drying Oven	12
			14	Total number of device			




Cosmetic Department

شماره	نام دستگاه	مشخصات فنی	واحد	مقدار	وزنสุทธิ، نصب و ترمینال	قیمت فی واحد	قیمت مجموعی
1	HPLC-MS	Detector: PAD or DAD . Wavelength range (190nm - 800nm); The (DAD) detector must have a flow cell that can be easily cleaned if necessary. Pump: a quaternary pump system with the capability of handling 4 solvents as mobile phase. These solvents may be used together or individually or in any combination. Flow rate (0.001 - 10ml./min, flow rate accuracy : 1 %. Operating pressure: more than 60 MPa. Pump Mode: gradient system or isocratic mode Column Oven: Thermostat system (2 °C - 90 °C) The system must have an in-built degasser, 6 bar and easy valves and methods for purging must be available. The tools required for the purging must be provided along with the system. The fittings must be easy to operate with the tools provided. Appropriate tools for maintenance must be provided. It is preferable to have some leak detection system. Some spare consumables (such as inline filters) must be provided initially. Autosampler: can inject samples into the LC system with sample volumes ranging from 0.1 microliters to 100 ml. vials. The autosampler must be capable of holding at least 100 vials at a time and must allow for programmable automated injection of these these samples into the LC system without interruption of the operation. The autosampler must be able to hold vials (approximately 1.5 ml, with screw cap and septa) that are interchangeable with standard HPLC vials provided by other vendors. Column: Standard and suitable column with guard column according to the HPLC system. A software system controlling all the aspects of the HPLC.	Each	1	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		

system mentioned above must be provided (original disk or Drive or CD).

The software should have the capability of different display parameters during the run of a sample. The post run data analysis should be available in the same software where the chromatogram of a run sample must be available for analysis. Data analysis must include standard chromatogram operations such as area, height, width and percentage estimation. The software system must also allow the easy integration of calibration data into data analysis methods. The software must be able to perform spectral analysis for UV-visible, fluorescence and RI detectors. The software data analysis system must also allow for the integration of UV spectral library information for automatic matching of the peaks with reference spectra, even if this might not be standard features. If this UV spectral matching feature is available.

A suitable computer system must be provided for this system that can handle all the operations

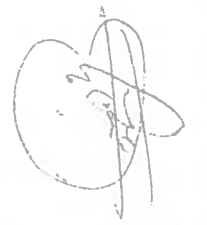
UPS system more than 30 min backup.

A generic C-18 column must be provided that can separate a mixture of polycyclic aromatic hydrocarbons. A tubing kit and maintenance tool kit must be provided along with the system. Double Quadrupole, Mass range: m/z 10-2000, Mass Stability: ± 0.5 u, 12h, polarity switching time: 15 msec, Scan Speed: 15000 u/sec, Application flow rate: 1.5 L/min to 2 mL/min, N(RA) transition speed: Max 555 channels / sec, DL maximum temperature: 300 C, Block heater maximum temperature: 500 C

					Minimum pause time: 1msec. Minimum dwell time: 0.8 msec. Interface: ESI (Standard), APCI (Option), DUIS (Option), Cross talk: <0.003%. Resolution: $R < 0.7$ FWHM. Sensitivity: ESI positive: 1 pg respersive, S/N=3,000:1 (RMS). A suitable nitrogen (N_2) generator that can supply and satisfy proposed HPLC-MS system. All proposed units should be work in electricly velnge and frequency of 220v - 230v, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.		
		Warranty: 1 year. Installation: Successful Installation in the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Optical system: all-reflective single-beam CT optical path. Focal length of monochromator: 350mm, oil/water proof air compressor. Blazed wavelength of gratings: 230nm. Number of grating grooves: 1800g/mm. Wavelength range: 190nm-900nm Wavelength accuracy: ± 0.1 nm. Wavelength repeatability: ± 0.1 nm. Spectrum bandwidth: 0.1nm, 0.2nm, 0.4nm, 0.7nm, 1.4nm. Noise: 0.005 Abs/units; 0.006 Abs(Dynamic). Baseline drift: 0.003 Abs/0.5hr; best perform. msc. Background correction D2 lamp + self reversal. Number of the lamps: 8. Number of preload lamps: software controlled. -8. Gas path safety measures: yes. Atomizer: Flame atomizer. Automation: lamp shift / wavelength / gas path / ignition / burner / safety measures C2H2 monitoring. Power Supply: AC 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Flame Atomic Absorption Spectroscopy (FAAS)	2

				Repeatability: $\pm 1\%$ Sampling and valves: Diaphragm valves, diaphragm piston valves, sliding vane rotary valves, slider valves, or liquid injection valve Auto sampler for liquid injection 10ul syringe adapter Rinse with two different solvents; Rack of samples: at least 60 positions for capacity 1-2 ml, vials. Gas supplier Nitrogen compressed gas cylinder, purity 99.998% Helium compressed gas cylinder, purity 99.998% Hydorgen compressed gas cylinder, purity 99.999% Inlet Pressure: 2-125 psig (825 kPa) Airflow, regulators and connectors All proposed units should be work in electricity voltage and frequency of 220V - 230V, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.		
	Warranty: 1 year. Installation: Successful laboratory training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm, Stirring Capacity: 4L, temperature range: 80-380 °C, Maximum load: 15 to 20 KG, Body Material : Polypropylene, Corrosion resistant surface and panels.A design that prevents liquid spillages from entering the instrument. Digital Output connectivity, RS232, Retort stand attachment(s).Set safety temperature limit displayed digitally. Power supply: AC 100-240 V ; 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Hot Plate with Magnetic Stirrer	4

		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Volume : 20 Li. Temperature range: 15-100 C. Temperature Resolution Ratio: 0.1 C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v- 230v, 50/60Hz. ISO 13485. CE, FDA certificates or equivalent.	Water Bath	5
		Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Ph range: 0 to 14. mv: ± 1999 . Accuracy: ± 0.02 . operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100-230 volt , 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent	Benchtop PH meter	6




		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range : 50-300 °C. Chamber volume: 100 L, walls: stainless. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Drying Oven	7
		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.0001g-220g, Readability: 0.1mg, Tare Range: Full, Linearity: 0.2mg, Response Time: 3 sec, Automatic Internal Calibration, PC Interface , USB, Calibration Certificate with calibration weight set . Operating Temperature Range: 10° to 40 °C. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent	Analytical Balance	2




		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	TLC Plate Cutter size: 200x200 mm. Drying Rack: 10 TLC plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. Simultan Separating Chamber: The vertical grooves in the transverse walls should hold up to five 200 x 200 mm TLC plates. Desiccator Opener: This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro Capillaries: Their accuracy should be better than 1%. Power Supply: 100- 230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Thin Layer Chromatography (TLC)	9
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		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Standard configuration: MCU-710D+MKV. 710+Automatic Solvent Change unit. Measuring method: Karl Fischer Volumetric titration. Measuring range: Water content : 0.1 to 500mgH ₂ O (depends on K ₂ F reagent factor). Concentration : 1ppm to 100% ¹ H ₂ O. Burette precision: 10mL, burette $\pm$ 0.015mL ; reproducibility $\pm$ 0.005mL. Endpoint detection: By polarized potential level detected with a twin platinum electrode. Titration form: Normal titration / Back titration. Required solvent: 30 to 100mL (in S-type titration vessel). Key operation: Touch panel. Data storage: Method: 120 (per channel). Measurement results: 5,000 samples (per channel). Operation history: 100,000 (Total for 2 channels). Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CLE, FDA certificates or equivalent.	Karl Fischer (K ₂ F) titrator	10
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 200 to 3000 rpm. Material: Rubber. Plastic Platform. Dimensions (L x W x H): 8.1 x 5.9 x 5.2 in. (20.5 x 15.1 x 13.1 cm). Timer Range: 1 to 99 min.. Continuous. Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CLE, FDA certificates or equivalent.	Digital vortex mixer	11

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed range: 30-400rpm, Heavy duty maximum load 6kg, Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Orbital Laboratory Shaker	12
		Warranty: 1 year Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Viscosity range: 0.5mPa - 70000 mPa. Accuracy: 0.5%, Balls 1 and 2: Boron Silicate Glass, Balls 3 and 4: Nickel- iron, Balls 5 and 6: Steel Fall time of measurement: 30- 300 seconds Operating temperature: -5 °C- 150 °C, Sample tube volume: 40ml Viscometer, dimension: 180x220x330 mm. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Falling ball Viscometer	13




		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Application: liquid and semi solid mixer homogenizer, PLC automated touch screen control, jacketed process vessel for temperature controlled processing Capacity: 1 L. (Model: UHOM-1/3 Ltr). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Homogenizer	14
		Warranty: 1 year. Installation: Successful laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity: 500 ml. Units: 6. Speed Range: 0-1200 rpm. Total waste: 1800 W. Dimension HxWxL (mm): 210x300x1200. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Heating Mantle	15

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0-3 g/cm ³ . Temperature range: 10-95 °C. Pressure range: 0 to 10 bar. Density accuracy: ±0.0001 g/cm ³ . Resolution: ±0.0001 g/cm ³ . Wetted parts: Borosilicate glass, PTFE. Minimum sample volume: 1.5 ml. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent	Density meter	16
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Special medium length T's 10/18 thermometer with a range 14-38 °C, Accuracy: ±0.2 °C, volume size: 50 ml. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Pycnometer	17
				17	Total Number of Device		




Herbal Department

شماره	نام دستگاه	مشخصات فنی	واحد	مقدار	وراثی: نصب و تربیت	قیمت فی واحد	قیمت مجموعی
1	Thin Layer Chromatography (TLC)	TLC Plate Cutter size: 200x200 mm. Drying Rack: 10 TLC plates with the formats 200 x 200, 200 x 100 and 200 x 50 mm. Simultan Separating Chamber: The vertical grooves in the transverse walls should hold up to five 200 x 200 mm TLC plates. Desiccator Opener: This opener should be suitable for all sizes of desiccators. Thin Layer Chromatography Filter Paper: Capillary Dispensing Pipettes: The pipettes should fill automatically when they are dipped into the sample liquid. Micro Capillaries: Their accuracy should be better than 1%. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Each	1	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		
2	Vacuum Filtration System	Max. Flow rate: 20 l/min. Capacity: 300 ml / 1000 ml. Filter diameter: 47 mm / 50 mm. Effective filtration area: 13.1 cm². Filter funnel: PES. Waste bottle: Borosilicate 1000ML glass (with drain). Funnel lid: PP. System, complete set includes: VP-17, Vacuum Pump, MF 31, Filtration Set, Silicone Tube (1m). Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Each	1	Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		

QC-I/Herbal Team

	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity: 500 ml. Units: 6. Speed Range: 0-1200 rpm. Total watts: 1800 W. Dimension HxWxL (mm): 210x300x1200. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Heating Mantle	3
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed range: 30-100rpm. Heavy duty maximum load 6kg. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Orbital Laboratory Shaker	4
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Sieve diameter: 200 mm, Quantity of sieve: 1 to 5 Nos. Vibrating frequency 1400/min, Exciting force: 3 KN, Timer: 999 min. Motor: Vertical vibration motor. Accessories: Supporting clamps & Rods (model: STXVSS8). Power Supply: 100-230 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Sieve Shaker	5



QCL-Lab Team

	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Special medium length Ts 10/18 thermometer with a range 14-38 °C. Accuracy $\pm 0.2^{\circ}\text{C}$, volume size: 50 ml. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Pycnometer	6
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Maximum number of samples per test: 6. Temperature precision $^{\circ}\text{C}$: ± 0.5. Solvent recovery %: 1p to 80. External dimensions L x D x H mm: 680 x 330 x 580. Accessories: Extraction thimbles set. Extraction vessel test. Main fields of application (food, pharmaceutical, chemical and cosmetics) Power supply: (100 to 240V) V - 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Solvent Extractor Apparatus	7
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature Range: Ambient - 5°C to 350°C. Melting Result accuracy: - Ambient + 5°C to 200.0°C - $\pm 0.5^{\circ}\text{C}$. Temperature Readability: 0.1°C Furnace Construction: Horizontal Round Metal Block. Temperature Sensor: PT100 Sensor. Should have complete GLP Compliance like Result Printouts with Sample Name, ID No., Date, Time etc for Authentication and graphical report of time v/s light unit with marking of start and end of melting. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Melting point analyzer	8

	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 68 in. Depth With Door Open 90 Degree: 57.0 in. Depth: 31 in. Capacity: 17. Cabinet Width: 28.0 in. Refrigerator Volume: 13.66 cu. ft. Door Style: Contour Handle Material: Plastic. Location of Controls: Interior Up Front. Deli Drawer: 1 Flexi-Slide Bin. Door Bins: 2 Fixed Full-Width. Lighting: LED. Features: LED Lighting. EZ. Connect Ice-maker Kit Compatible. Flexi- Slide Bin. Humidity-Controlled Crispers. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Refrigerator	9
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12--24°C Capacity Range: >21 cubic feet. Door Swing: Left Hinge. Double-Swing. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Freezer (-20)	10
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: 15-1400 °C. Heating from two sides Adjustable air inlet integrated in door, exhaust air outlet in rear of wall of furnace. Controller with touch operation. Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Muffle Furnace	11


AcetLab Team

		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	External dimension (mm): 524x1067x574. Inner dimension (mm): 483x853x560. Dehumidification system: H₂O electrolysis discharge by solid polymer electrolytic dehumidification element. Dehumidified ability (When 30% rh is set): Within 8 hours. • Humidity Range: 10 to 60% RH, 0 to 60 °C/10 measurement range 60 %RH. Temperature and humidity sensors: Temperature/humidity elements; humidity/resistance type low humidity measurement sensors. Area of dehumidifying element: about 49 cm². Temperature and humidity display accuracy: ± 1 °C. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital Dry Desiccator	12
		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Hand / Motor lift: hand lift. Height adjustment speed: manual. Height adjustment: 155 mm. Rotation speed: 10 - 280 rpm. Rotation speed setting: 3.5" LCD display. Drive: brushless DC motor with electronic speed control. Heating capacity: 1300 w. Temp. range heating bath: 20 -- 210 °C. Temperature accuracy bath: ± 1. Overheat protection bath: cut-off at 5 °C over set temperature via separate Pt 1000. Bath temperature setting: 3.5" LCD display. Heating bath temperature control: electronic / digital. Material heating bath: stainless steel. Diameter heating bath: 255 mm. Volume heating bath: 4.5 L. Flask volume: 1L. Timer: yes. Rate of evaporation: Ethanol: 3.5 L/h, Water: 1.2 L/h. Condensing surface: 1,200 cm². Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Rotary vacuum evaporator (included vacuum pump and water chiller)	13

2	Warranty: 1 year. Installation: Successful Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Ph range: 0 to 14. mv. $\pm$ 1999. Accuracy: $\pm$0.02. operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100-230 volt . 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Bench top pH meter	14
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				Measuring range: 0.0001g-220g; Readability: 0.1mg; Line Range: Full; Linearity: 0.2mg; Response Time: 3 sec. Automatic Internal Calibration; PC Interface; U/SB; Calibration Certificate with calibration weight set. Operating Temperature Range: 10° to 40 °C; Power supply: AC 100-240 V, 50/60 Hz; ISO 13485; CE, FDA certificates or equivalent.	Analytical Balance	15
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Maximum Capacity: 4100 gm. Readability : 0.01 gm. Calibration tools: Standards weights. Power Supply : AC 100-230 V, 50/60 Hz; ISO 13485; CE; FDA certificates or equivalent.	Analytical Balance (Top Pan Loading)	16
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range : 50-300 °C; Chamber volume: 100 L., walls: stainless. Power supply: AC 100-240 V , 50/60 Hz; ISO 13485; CE; FDA certificates or equivalent.	Drying Oven	17

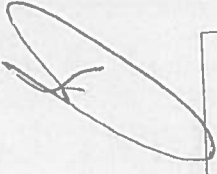




		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm, Stirring Capacity: 4L, temperature range: 80-380 °C, Maximum load: 15 to 20 KG. Body Material : Polypropylene Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity, RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V , 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Hot plate with Magnetic stirrer	18
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Volum : 20 Lt. Temperature range: 15-100 C. Temperature Resolution Ratio: 0.1 C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz, ISO 13485, CE, FDA certificates or equivalent.	Water Bath	19
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Photometric system: Double beam , Wavelength range: 190 - 1100 nm. Waveleight accuracy ± 0.02 nm. Light Source : Halogen Lamp, Deuterium Lamp, Spectral Bandwidth: 1 nm. Scanning Speed 10 - 8000 /min. Power supply: AC 100-240 V , 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	UV-Vis Spectrophotometer	20



				Measuring Mode: Optical Rotation, Specific Rotation, Specific Rotation Plus Concentration, Sugar Scale %Z(ISS). Display: On screen LCD / LED (touchscreen). Accuracy: 0.001 deg Arc or better, Measuring Range: ± 89.9 deg Arc Optical Rotation, $\pm 999.99^\circ$ Arc Specific Rotation, 0-99.9% Concentration, Optical Wavelength: 589 nm Na and Tungsten-halogen or Hg- Lamp (for 633 nm/ 578 nm / 546 nm / 436 nm / 405 nm, Light Source: Sodium/Tungsten-halogen/LED with life time 100,000 h of operation. Prism: Glan Thompson Calcite prism with life time Guarantee. Detector: PMT. Calibration Automatic: Calibration In-built via touchscreen, Calibration Standards: Certified values of Certified Reference Materials (CRM) provided by an accredited Reference Material Producer with stated metrological traceability to the SI for sugar solutions. Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Automated digital polarimeter	21
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each		




	Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	It should be a small foot print battery powered with a single Eyepiece with digital display Measurement of liquid, and viscous samples, regardless of their turbidity, viscosity, transparency and absorption. Measurement prism: Optical glass. Light source: LED (Approximating to wavelength of D-Line). Wavelength: 589 nm, Scale: Refractive Index & Brix. Measurement Range: Refractive index (nD): 1.3000 to 1.7000 Brix: 0.00 to 95.00% (5 to 75 oC ATC), Measurement Accuracy: Refractive Index (nD): 0.0004 Brix: 0.03%, Temperature control range: 5.0 to 75.0 °C, Calibration standards: Calibration block; 1 No and contact solution (1-Bromonaphthalene) and any other standard solutions. Power Supply: 100-230 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Abbs digital Refractometer 22
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			Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system		
	1	Each	Temperature Range: RT+10°C to 200°C. Display Resolution: 0.1°C. Temperature Stability: $\pm 1^\circ\text{C}$. Vacuum Degree: 133 Pa. Chamber Material: Stainless steel. Aluminum Shelves: 2. ISO 13485, CE, FDA certificates or equivalent.	Vacuum oven	23
23	Total Number of Device				

Biochemistry Department

قیمت مجزوعی	قیمت فی واحد	نصب و تربیت	مقدار	واحد	مختصات فنی	نام دستگاه	شماره
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Detector: DAD. Pump: a quaternary pump system with the capability of handling 4 solvents as mobile phase. These solvents may be used together or individually or in any combination. Flow rate: 0.001 - 10mL/min. Flow rate accuracy $\pm 1\%$. Operating pressure: more than 60 Mpa. Pump Mode: gradient system or isocratic mode. Column Oven: Thermostat system 12 C - 90 C. The system must have an in-built degasser, clear and easy valves and methods for purging must be available. The tools required for the purging must be provided along with the system. The fittings must be easy to operate with the tools provided. Appropriate tools for maintenance must be provided. It is preferable to have some leak detection system. Some spare consumables (such as inline filters) must be provided initially. Autosampler: can inject samples into the LC system with sample volumes ranging from 0.1 microliters to 100 microliters. The autosampler must be capable of holding at least 100 vials at a time and must allow for programmable automated injection of these samples into the LC system without interruption of the operation. The autosampler must be able to hold vials (approximately 1.5 ml. with screw cap and septa) that are interchangeable with standard HPLC vials provided by other vendors. Column: Standard and suitable column with guard column according to the HPLC system. A software system controlling all the aspects of the HPLC system mentioned above must be provided (original disk or Drive or CD). The software should have the capability of different display parameters during the run of a sample. The post run data analysis should be available in the same software where the chromatogram of a run sample must be available for analysis. Data analysis must	SEC-HPLC	1

of a run sample must available for analysis. Data analysis must include standard chromatogram operations such as area, height, width and percentage estimation. The software system must also allow the easy integration of calibration data into data analysis methods.

A suitable computer system must be provided for this system that can handle all the operations.

UPS system more than 30 min backup

Column: 10 C below ambient to 100 C, Temperature accuracy 0.08 C, column capacity: three 30 cm column, Dimension (HxWxD): 14x34.5x43.5cm, 180 SI C-3 Size Exclusion Column

3 µm particle size, Pore sizes: 100 Å to 100 kDa), 150 Å (0.5 to 150 kDa), 300 Å (5 to 1250 kDa), 180 SI C-5 Size Exclusion Column

5 µm particle size, Pore sizes: 100 Å (0.1 to 100 kDa), 150 Å (0.5 to 150 kDa), 300 Å (5 to 1,250 kDa), 500 Å (15 to 5,000 kDa), 1000 Å (50 to 7,500 kDa) and 2000 Å (100 to 140 kDa).

. A tubing kit and maintenance tool kit must be provided along with the system. ISO 13485, CE, FDA certificates or equivalent.

		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Adjustable Speed: 200 – 14,000 rpm. RCF Values range: Adjustable Temperature Range: -10 °C to +40 °C. Cooling: Refrigerated. Adjustable Timer: 1 min to 99 min, with continuous run function, short-spin. Acceleration/braking ramps: 10/10. Power supply: AC 100-240 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Refrigerated Centrifuge	2
		Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Ph range: 0 to 14. mv ± 1999. Accuracy: ±0.02. operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis. Temp. measuring range: 0 to 100 °C. Power Supply: 100-230 Vol., 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Benchtop PH meter	3




		Warranty: 1 year. Installation: Successful laboratory training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.0001g-220g, Readability: 0.1mg, Tare Range: Full, Linearity: 0.2mg, Response time: 3 sec, Automatic Internal Calibration, PC Interface, USB, Calibration Certificate with calibration weight set, Operating Temperature Range: 10° to 40 °C, Power supply: AC 100-240 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Analytical Balance	4
		Warranty: 1 year. Installation: Successful laboratory training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity : 150 L, Temp Range: 0-60 °C, Temp accuracy: $\pm$1 °C, Temp Fluctuation: $\pm$1 °C, Maximum timer range: 24 Hours, Display: LCD, Humidity Range: 50-90 % rh, Power Supply: 100-230 volt, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Incubator	2

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system		Each	Chamber: Vertical loading type chamber with service basket. Chamber size: 80 x 120 L. Gauges: Should have a water level gauges. Display: Fully Automatic PID control +/- 0.1 °C. LED display for temperature and remaining time. Operation temperature 140 °C. Temp accuracy +/- 0.5 at 121 °C. Operation log pressure 15-20 °C. Timer. Automatic start and stop timer. Must have safety warning alarm. Must have Nassyery accessorize. Must be with calibration certification. ISO 13485, CE, FDA certificates or equivalent.	Vertical Autoclave	6
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Gel Size (mm): 60 x 60. Number of samples: 6, 8, 11. Comb Thickness (mm): 1.0, 1.5. Max. Input Voltage (V): 100. Max Current (mA): 50. Continuous Working Time: >24 hours. Buffer volume (ml): 150 ml. Overall Dimensions (L x W x H) (mm): 197 x 96 x 64 (ISO 13485, CE, FDA certificates or equivalent.	Gel Electrophoresis System	7




		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Working temperature: Ambient + 5 ~ 200 degree°C. Time mode: 1-999 minutes. Capacity (Liters): 50. Accessory: 2 shelves. Power supply: 220V 50/60Hz ISO 13485. CE, FDA certificates or equivalent.	Oven Hot Air	8
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.00 to 50.0 NTU. Resolution: 0.01 and 1 NTU. Accuracy: $\pm 5\%$ of measured value or ± 0.5 NTU. Light source: LED, infrared at 850 nm. Lifespan: Almost unlimited. Light detector: Photodiode. Measurement time: ≤ 10 sec. Operating conditions: $\leq 50^\circ\text{C}$ ISO 13485, CE, FDA certificates or equivalent.	Kinetic Turbidimeter	9
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Sample volume: 50—150 μl. Resolution: 1 mOsmol/kg. Test time: ~ 2 min. Precision: $\text{SD} \leq 4$ mOsmol/kg [0—160 mOsmol/kg]. Linearity: $\pm 1\%$ [0—1500 mOsmol/kg]. Calibration: Two-point calibration (0 mOsmol/kg and one free selectable osmolality), optional: Three-point calibration. Control: Keypad (LCD display, 2 rows with 24 character. Power supply: 100—240 V, 50—60 Hz, 70 W. ISO 13485, CE, FDA certificates or equivalent.	Freezing point analyzer (osmol meter)	10

		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Material: 316L stainless steel for (for cover, pump head, holder of bottle, pump, support for drain tray), EPDM rubber seal, glass window toughened, polyester keys, polyphenylsulfone (PPSU) container (for drain tray), polyphenylsulfone (PPSU) guide(s) (for tubing) silicon seal, H x W x depth: 41.0 cm x 41.0 cm x 37.2 cm, with accessories: pump body H x W x depth: 27.2 cm x 33.3 cm x 37.2 cm, pump head H: 15.8 cm, input: sample type pharmaceutical, ISO 13485, CE, FDA certificates or equivalent.	Sterility tester	11
		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L, temperature range: 80-380 °C, Maximum load: 15 to 20 Kg. Body Material : Polypyrrolene, Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity, RS232 Retort stand attachment(s). Set safety temperature limit displayed digitally, Power supply: AC 100-240 V, 50/60 Hz ISO 13485, CE, FDA certificates or equivalent.	Hot Plate with Magnetic Stirrers	12
		Warranty: 1 year Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Volume : 16 Li. Temperature range: 15-100 C. Temperature Resolution Ratio: 0.1 C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz, ISO 13485, CE, FDA certificates or equivalent.	Water Bath	13

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Height: 68 in. Depth With Door Open 90 Degree: 57.0 in. Depth: 31 in. Capacity: 17. Cabinet Width: 28.0 in. Refrigerator Volume: 13.66 cu. ft. Door Style: Contour Handle Material: Plastic. Location of Controls: Interior Lip Front. Deli Drawer: 1 Flexi-Slide Bin. Door Bins: 2 Fixed Full-Width. Lighting: LED. Features: LED Lighting. EZ Connect IceMaker Kit Compatible. Flexi-Slide Bin. Humidity-Controlled Crispers. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Refrigerator	14
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Temperature range: -12—24°C. Capacity Range: 24 cubic feet. Door Swing: Left Hinge. Double-Swing. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Freezer (-20)	15
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Speed Range: 200 to 3000 rpm. Material: Rubber. Plastic Platform. Dimensions (L x W x H): 8.1 x 5.9 x 5.2 in. (20.5 x 15.1 x 13.1 cm). Timer Range: 1 to 99 min. Continuous. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Digital vortex mixer	16

			Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Temperature Range: 5 to 40°C. Humidity: 0 to 80% relative humidity. Viscosity Limit: <50 cP. Sample Bottle Clearance: 153 mm. Volume Accuracy: > 95%. Sample Flow Rate: 10 to 100 ml/min. PharmSpec 3 Software(Processor: 1.0 GHz or faster processor. Operating System: Windows 10 Enterprise 64-bit. Memory: 2GB of RAM). Standard Sensors range: 2 µm to 600 µm (chemical compatibility). Power Supply: 100-230 V, 50/60 Hz. ISO 13485. CE, FDA certificates or equivalent.	Liquid Particle Counter	17
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Warranty: 1 year. Installation: Successful Installation at the laboratory. Training: on- site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Capacity : 150 L., Temp. Range: 0- 60 °C, Temp accuracy: ±/± 1 °C, Temp Fluctuation: ±/± 1 °C, Maximum timer range: 24 Hours, Display: LCD, Humidity Range: 50-90 % rh, Power Supply: 100-230 volt, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Incubator	18
Total number of Device					
18					

Medical Equipment Department

قیمت مجموعی	قیمت فی واحد	ورانتی، نصب و ترمیم	مقدار	واحد	مشخصات فنی	نام دستگاه	شماره
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Flow under the max rotation speed : 500ml/min. Speed : 0-220rpm. Total height of hanger : 405mm. stainless steel: 304 steel. ISO 13485 CE. FDA certified or equivalent.	Sterility test pump (Complete system)	1



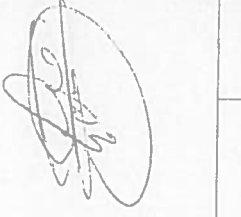
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		1 Each	Vacuum Degree: 0 ~ -90 KPa/ 0 ~ -13 psi. Accuracy: ±0.25% FS. Resolution: 0.1 KPa / 0.01 psi. Vacuum Chamber Effective Sizes: Ø270 mm x 210 mm (H). Gas Supply: Air (outside of supply scope). Gas Supply Pressure: 0.5 MPa ~ 0.7 MPa (73psi ~ 101psi). Power Supply: 100-230 volt , 50/60 Hz. ISO 13485. CE. FDA certificates or equivalent.	Leak and Seal Strength Tester	2
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		1 Each	Load capacity: 255 kgf. Max speed (mm/min): 2540. Min speed (mm/min): 0.005. Maximum force at full speed kN: 0.75. Position control resolution µm: 0.61. Total Crosshead travel (mm): 1041. Total Vertical Test space (mm): 1219. ISO 13485. CE. FDA certificates or equivalent.	Universal Suture Tensile Strength Testing machine	1




		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Test effective area: 105*100 mm, up to 105*152 mm. Effective stroke:150mm. Maximum load:500N. Accuracy:±0.5% ISO 13485, CE, FDA certificates or equivalent	Manual Peel Strength Tester	1
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Test Stroke: 1.5 mm. Size: 500mm x 590mm x 320mm Maximum Blade Length: 200mm, but longer and wider blades can be accommodated with a special adapto Maximum Blade Width: 100mm ISO 13485, CE, FDA certificates or equivalent	Razer Edge Sharpness Tester	1




		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		1 Each	Capacity : 150 L., Temp Range: 0- 60 °C, Temp accuracy: $\pm$ 1 °C, Temp Fluctuation: $\pm$ 1 °C, Maximum timer range: 24 Hours, Display: LCD, Humidity Range: 50-90 % rh, Power Supply: 100-230 volt , 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Incubator	6
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		3 Each	Measuring Range: 0-150 millimeter or 0-6 inch. Resolution: 0.01 millimeter or 0.0005 inch, Repeatability: 0.01 millimeter or 0.0005 inch, Maximum measurement speed: 1m/s, ISO 13485, CE, FDA certificates or equivalent.	Digital Vernier Caliper	7

		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Measuring range: 0.0001g-220g, Readability: 0.1mg, Tare Range: Full, Linearity: 0.2mg, Response Time: 3 sec. Automatic Internal Calibration, PC Interface, USB, Calibration Certificate with calibration weight set. Operating Temperature Range: 10° to 40 °C. Power supply: AC 100-240 V, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent.	Analytical Balance	8
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	pH range: 0 to 14, mv: ±1999, Accuracy: ±0.02, operating temperature: 5-40 °C. Calibration: 1-3 points automatic calibration with calibration instruction and self-diagnosis Temp. measuring range: 0 to 100 °C, Power Supply: 100- 230 volt, 50/60 Hz, ISO 13485, CE, FDA certificates or equivalent	Refractop pH meter	9




		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Speed Range: 50 rpm to 2000 rpm. Stirring Capacity: 4L. temperature range: 80-380 °C. Maximum load: 1.5 to 20 KG. Body Material : Polypropylene. Corrosion resistant surface and panels. A design that prevents liquid spillages from entering the instrument. Digital Output connectivity. RS232. Retort stand attachment(s). Set safety temperature limit displayed digitally. Power supply: AC 100-240 V . 50/60 Hz/ISO 13485. CE, FDA certificates or equivalent.	Hot Plate with Magnetic Stirrers	10
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1 Each	Volume : 20 L. Temperature range: 15-100 C. Temperature Resolution Ratio: 0.1 C. Power: 2 KW. The proposed units should be work in electricity voltage and frequency of 220v - 230v, 50/60Hz. ISO 13485, CE, FDA certificates or equivalent.	Water Bath	11




		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Height: 68 in. Depth With Door Open 90 Degree: 57.0 in. Depth: 31 in. Capacity: 17. Cabinet Width: 28.0 in. Refrigerator Volume: 13.66 cu. ft. Door Style: Contour. Handle Material: Plastic. Location of Controls: Interior Up Front. Deli Drawer: 1 Flexi-Slide Bin. Door Bins: 2 Fixed Full-Width. Lighting: LED. Features: LED Lighting, EZ Connect IceMaker Kit Compatible, Flexi- Slide Bin, Humidity-Controlled Crispers. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Refrigerator	12
		Warranty: 1 year. Installation: Successful Installation at the Laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Temperature range: -12--24°C Capacity Range: >24 cubic feet. Door Swing: Left Hinge, Double-Swing. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Freezer (-20)	13




		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		1 Each	Speed Range: 200 to 3000 rpm. Material: Rubber, Plastic Platform. Dimensions (L x W x H): 8.1 x 5.9 x 5.2 in. (20.5 x 15.1 x 13.1 cm). Timer Range: 1 to 99 min., Continuous. Power Supply: 100-230 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent	Digital vortex mixer	14
		Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		1 Each	Temperature range : 50-300 °C. Chamber volume: 100 L., walls: stainless. Power supply: AC 100-240 V , 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent.	Drying Oven	15




	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Chamber: Vertical loading type chamber with service basket. Chamber size: 80 -120 L. Gauges: Should have a water level gauges. Display: Fully Automatic PID control ±/- 0.1 °C, LED display for temperature and remaining time. Operation temperature 140 °C. Temp accuracy ±/- 0.5 at 121 °C. Operating pressure 15-20 °C. Timer: Automatic start and stop timer. Must have safety warning alarm. Must have Nassy accessorize. Must be with calibration certification. ISO 13485. CE, FDA certificates or equivalent.	Vertical Autoclave	16
	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system	1	Each	Standard version, working space: 1185x570x570mm. Includes: radial fan, illumination, differential pressure indicator, pre-filter, HEPA filter. For bench mounting ISO 13485, CE, FDA certificates or equivalent.	Vertical Laminar Flow Bench	17
Total number of device						33




Water purification plant

شماره	نام دستگاه	مشخصات فنی	واحد	مقدار	وزن، نصب و ترابری	قیمت فی واحد	قیمت مجموعی
1	Water Purification System (Water deionizer machine)	Product Water Type: Type 1 and Type 2. Resistivity: Type 1: 18.2MO·cm at 25°C. Type 2: 10 to 15MO·cm at 25°C. Conductivity: Type 1: 0.05µS/cm. Type 2: 0.067 to 0.1µS/cm. Feedwater Source: tap. Flow Rate: 0.61/min. Total Organic Carbon: 1 to 5ppb. Endotoxin Concentration: 0.005EU/mL. Bacterial Content: <0.01 CFU/mL. Feedwater Pressure: 1-6 Bar. RO Flow Rate: 12L/hr. Permicate performance: 12L/hr. at 10°C. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485 CE, FDA certificates or equivalent. * In case the total dissolved solids (TDS) in the water installation site exceed 150 ppm, the supplier is responsible for the prefiltration system (RO system).	Each	2	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		
2	Water Distiller machine	Distillation capacity: 10 l/h. Distillate conductivity: <2.5 µS/cm (at 25°C). Material: Stainless steel. Power supply: AC 100-240 V, 50/60 Hz. ISO 13485, CE, FDA certificates or equivalent. * In case the total dissolved solids (TDS) in the water installation site exceed 150 ppm, the supplier is responsible for the prefiltration system (RO system).	Each	4	Warranty: 1 year. Installation: Successful Installation at the laboratory Training: on-site comprehensive training for a minimum of two scientific personnel operating the system		

اسم شرکت:

آدرس:

تاریخ: 1403

- (1) معینیت غذا و ادویه وزارت صحت عامه تخصیص بودجه لازم برای تدارک احسان خدمات غیر مشورتی مشایخ این درخواست را دارد.
- (2) آفر سر بسته شتابانریخ 1403 / ساعت 02:00 بعد از ظهر یا قبل از آن به شعبه هیات خاص خریداری ماشین آلات لابراتوار + زون کشور، معینیت غذا و ادویه وزارت صحت عامه واقع در افغانستان تسلیم داده شود.
- (3) آفر ها نیکه بعد از معیاد تسلیسی ارائه گردند، بدون اینکه بارشود مسفر می گردد. پاکت حاوی آفر باید به صورت واضح عبارت نرخ قبی و تدارک 3+4 قلم ماشین آلات لابراتوار + زون مورد ضرورت لابراتوار های ولایت هرات، قندهار، ننگرهار و بلخ در بنایی نشانی شده باشد.
- (4) آفر ارائه شده در آفرها باید الی مدت (30) روز تقویمی سر از تاریخ ختم معیاد تسلیسی آفرها اعتبار داشته باشد.
- (5) در صورت تغیر در مقدار نیازمندی، اداره می تواند مقدار نیازمندی تقاضا شده را الی (15) فیصد زیاد و یا کم نماید. مشروط به اینکه قیمت مجموعی آن از حدود صلاحیت پولی برای درخواست نرخ گیری تجاوز ننماید.
- (6) ترجیح داخلی مطابق حکم چهارم طرز العمل تدارکات قابل اجرا است. (25%) (بیست و پنج فیصد) تولیدات داخلی ارجحیت دارد.
- (7) آفر گشائی درمختصر عام حتمی نبوده و فرمایش دهنده مکلف به قبول بهترین نرخ نمی باشد. در صورت رد هر یک یا تمام آفرها فرمایش دهنده کداه مسئولیت در قبال دام طلب قبی ارائه کننده ندارد.
- (8) آفر دهنده اسناد ذیل را با آفر حویش ضمیمه می نماید:
 - 1- حوار تجارنی / فعالیت / کار قابل اعتبار:
 - 2- مترشخیصیه مالیه: (اختیاری)
- (9) سند نرخ گیری تکمیل و توسط شخص با صلاحیت یا نماینده قبی / ارائه کننده در هر صفحه مهر امضاء شده باشد.
- (10) حویل دهی حسن در مرکز ولایات های ولایت هرات، قندهار، ننگرهار و بلخ می باشد.

نام کارمند صادر کننده درخواست نرخ گیری:

وظیفه کارمند:

شماره تماس:

امضای هیئت خریداری:

- (۱) اگر α و β دو عدد حقیقی باشند، آنگاه:
- (۱) $\sin(\alpha + \beta) = \sin \alpha \cos \beta + \cos \alpha \sin \beta$
- (۲) $\cos(\alpha + \beta) = \cos \alpha \cos \beta - \sin \alpha \sin \beta$
- (۳) $\sin(\alpha - \beta) = \sin \alpha \cos \beta - \cos \alpha \sin \beta$
- (۴) $\cos(\alpha - \beta) = \cos \alpha \cos \beta + \sin \alpha \sin \beta$
- (۵) $\sin 2\alpha = 2 \sin \alpha \cos \alpha$
- (۶) $\cos 2\alpha = \cos^2 \alpha - \sin^2 \alpha$
- (۷) $\sin^2 \alpha + \cos^2 \alpha = 1$
- (۸) $\tan^2 \alpha + 1 = \sec^2 \alpha$
- (۹) $\cot^2 \alpha + 1 = \csc^2 \alpha$
- (۱۰) $\sin^2 \alpha = \frac{1 - \cos 2\alpha}{2}$
- (۱۱) $\cos^2 \alpha = \frac{1 + \cos 2\alpha}{2}$
- (۱۲) $\tan^2 \alpha = \frac{1 - \cos 2\alpha}{1 + \cos 2\alpha}$
- (۱۳) $\cot^2 \alpha = \frac{1 + \cos 2\alpha}{1 - \cos 2\alpha}$
- (۱۴) $\sin \alpha = \frac{e^{i\alpha} - e^{-i\alpha}}{2i}$
- (۱۵) $\cos \alpha = \frac{e^{i\alpha} + e^{-i\alpha}}{2}$
- (۱۶) $\sin \alpha = \cos \left(\frac{\pi}{2} - \alpha \right)$
- (۱۷) $\cos \alpha = \sin \left(\frac{\pi}{2} - \alpha \right)$
- (۱۸) $\tan \alpha = \cot \left(\frac{\pi}{2} - \alpha \right)$
- (۱۹) $\cot \alpha = \tan \left(\frac{\pi}{2} - \alpha \right)$
- (۲۰) $\sec \alpha = \frac{1}{\cos \alpha}$
- (۲۱) $\csc \alpha = \frac{1}{\sin \alpha}$
- (۲۲) $\tan \alpha = \frac{\sin \alpha}{\cos \alpha}$
- (۲۳) $\cot \alpha = \frac{\cos \alpha}{\sin \alpha}$
- (۲۴) $\sec^2 \alpha = 1 + \tan^2 \alpha$
- (۲۵) $\csc^2 \alpha = 1 + \cot^2 \alpha$
- (۲۶) $\sin \alpha = \sin(\pi - \alpha)$
- (۲۷) $\cos \alpha = -\cos(\pi - \alpha)$
- (۲۸) $\tan \alpha = -\tan(\pi - \alpha)$
- (۲۹) $\cot \alpha = -\cot(\pi - \alpha)$
- (۳۰) $\sec \alpha = -\sec(\pi - \alpha)$
- (۳۱) $\csc \alpha = \csc(\pi - \alpha)$
- (۳۲) $\sin \alpha = -\sin(\pi + \alpha)$
- (۳۳) $\cos \alpha = \cos(\pi + \alpha)$
- (۳۴) $\tan \alpha = \tan(\pi + \alpha)$
- (۳۵) $\cot \alpha = \cot(\pi + \alpha)$
- (۳۶) $\sec \alpha = \sec(\pi + \alpha)$
- (۳۷) $\csc \alpha = -\csc(\pi + \alpha)$
- (۳۸) $\sin \alpha = \sin\left(\frac{\pi}{2} + \alpha\right)$
- (۳۹) $\cos \alpha = -\cos\left(\frac{\pi}{2} + \alpha\right)$
- (۴۰) $\tan \alpha = \cot\left(\frac{\pi}{2} + \alpha\right)$
- (۴۱) $\cot \alpha = -\tan\left(\frac{\pi}{2} + \alpha\right)$
- (۴۲) $\sec \alpha = -\csc\left(\frac{\pi}{2} + \alpha\right)$
- (۴۳) $\csc \alpha = \sec\left(\frac{\pi}{2} + \alpha\right)$
- (۴۴) $\sin \alpha = -\sin\left(\frac{3\pi}{2} + \alpha\right)$
- (۴۵) $\cos \alpha = \cos\left(\frac{3\pi}{2} + \alpha\right)$
- (۴۶) $\tan \alpha = \tan\left(\frac{3\pi}{2} + \alpha\right)$
- (۴۷) $\cot \alpha = \cot\left(\frac{3\pi}{2} + \alpha\right)$
- (۴۸) $\sec \alpha = \sec\left(\frac{3\pi}{2} + \alpha\right)$
- (۴۹) $\csc \alpha = -\csc\left(\frac{3\pi}{2} + \alpha\right)$
- (۵۰) $\sin \alpha = \sin\left(\frac{5\pi}{2} + \alpha\right)$
- (۵۱) $\cos \alpha = -\cos\left(\frac{5\pi}{2} + \alpha\right)$
- (۵۲) $\tan \alpha = \cot\left(\frac{5\pi}{2} + \alpha\right)$
- (۵۳) $\cot \alpha = -\tan\left(\frac{5\pi}{2} + \alpha\right)$
- (۵۴) $\sec \alpha = -\csc\left(\frac{5\pi}{2} + \alpha\right)$
- (۵۵) $\csc \alpha = \sec\left(\frac{5\pi}{2} + \alpha\right)$
- (۵۶) $\sin \alpha = \sin(2\pi - \alpha)$
- (۵۷) $\cos \alpha = \cos(2\pi - \alpha)$
- (۵۸) $\tan \alpha = -\tan(2\pi - \alpha)$
- (۵۹) $\cot \alpha = -\cot(2\pi - \alpha)$
- (۶۰) $\sec \alpha = \sec(2\pi - \alpha)$
- (۶۱) $\csc \alpha = \csc(2\pi - \alpha)$
- (۶۲) $\sin \alpha = \sin(\pi + \frac{\pi}{2})$
- (۶۳) $\cos \alpha = -\cos(\pi + \frac{\pi}{2})$
- (۶۴) $\tan \alpha = \cot(\pi + \frac{\pi}{2})$
- (۶۵) $\cot \alpha = -\tan(\pi + \frac{\pi}{2})$
- (۶۶) $\sec \alpha = -\csc(\pi + \frac{\pi}{2})$
- (۶۷) $\csc \alpha = \sec(\pi + \frac{\pi}{2})$
- (۶۸) $\sin \alpha = \sin(\frac{\pi}{2} - \frac{\pi}{2})$
- (۶۹) $\cos \alpha = \cos(\frac{\pi}{2} - \frac{\pi}{2})$
- (۷۰) $\tan \alpha = \tan(\frac{\pi}{2} - \frac{\pi}{2})$
- (۷۱) $\cot \alpha = \cot(\frac{\pi}{2} - \frac{\pi}{2})$
- (۷۲) $\sec \alpha = \sec(\frac{\pi}{2} - \frac{\pi}{2})$
- (۷۳) $\csc \alpha = \csc(\frac{\pi}{2} - \frac{\pi}{2})$
- (۷۴) $\sin \alpha = \sin(\frac{3\pi}{2} - \frac{\pi}{2})$
- (۷۵) $\cos \alpha = \cos(\frac{3\pi}{2} - \frac{\pi}{2})$
- (۷۶) $\tan \alpha = \tan(\frac{3\pi}{2} - \frac{\pi}{2})$
- (۷۷) $\cot \alpha = \cot(\frac{3\pi}{2} - \frac{\pi}{2})$
- (۷۸) $\sec \alpha = \sec(\frac{3\pi}{2} - \frac{\pi}{2})$
- (۷۹) $\csc \alpha = \csc(\frac{3\pi}{2} - \frac{\pi}{2})$
- (۸۰) $\sin \alpha = \sin(\frac{5\pi}{2} - \frac{\pi}{2})$
- (۸۱) $\cos \alpha = -\cos(\frac{5\pi}{2} - \frac{\pi}{2})$
- (۸۲) $\tan \alpha = \cot(\frac{5\pi}{2} - \frac{\pi}{2})$
- (۸۳) $\cot \alpha = -\tan(\frac{5\pi}{2} - \frac{\pi}{2})$
- (۸۴) $\sec \alpha = -\csc(\frac{5\pi}{2} - \frac{\pi}{2})$
- (۸۵) $\csc \alpha = \sec(\frac{5\pi}{2} - \frac{\pi}{2})$
- (۸۶) $\sin \alpha = \sin(\frac{7\pi}{2} - \frac{\pi}{2})$
- (۸۷) $\cos \alpha = \cos(\frac{7\pi}{2} - \frac{\pi}{2})$
- (۸۸) $\tan \alpha = \tan(\frac{7\pi}{2} - \frac{\pi}{2})$
- (۸۹) $\cot \alpha = \cot(\frac{7\pi}{2} - \frac{\pi}{2})$
- (۹۰) $\sec \alpha = \sec(\frac{7\pi}{2} - \frac{\pi}{2})$
- (۹۱) $\csc \alpha = \csc(\frac{7\pi}{2} - \frac{\pi}{2})$
- (۹۲) $\sin \alpha = \sin(\frac{9\pi}{2} - \frac{\pi}{2})$
- (۹۳) $\cos \alpha = -\cos(\frac{9\pi}{2} - \frac{\pi}{2})$
- (۹۴) $\tan \alpha = \cot(\frac{9\pi}{2} - \frac{\pi}{2})$
- (۹۵) $\cot \alpha = -\tan(\frac{9\pi}{2} - \frac{\pi}{2})$
- (۹۶) $\sec \alpha = -\csc(\frac{9\pi}{2} - \frac{\pi}{2})$
- (۹۷) $\csc \alpha = \sec(\frac{9\pi}{2} - \frac{\pi}{2})$
- (۹۸) $\sin \alpha = \sin(\frac{11\pi}{2} - \frac{\pi}{2})$
- (۹۹) $\cos \alpha = \cos(\frac{11\pi}{2} - \frac{\pi}{2})$
- (۱۰۰) $\tan \alpha = \tan(\frac{11\pi}{2} - \frac{\pi}{2})$
- (۱۰۱) $\cot \alpha = \cot(\frac{11\pi}{2} - \frac{\pi}{2})$
- (۱۰۲) $\sec \alpha = \sec(\frac{11\pi}{2} - \frac{\pi}{2})$
- (۱۰۳) $\csc \alpha = \csc(\frac{11\pi}{2} - \frac{\pi}{2})$
- (۱۰۴) $\sin \alpha = \sin(\frac{13\pi}{2} - \frac{\pi}{2})$
- (۱۰۵) $\cos \alpha = -\cos(\frac{13\pi}{2} - \frac{\pi}{2})$
- (۱۰۶) $\tan \alpha = \cot(\frac{13\pi}{2} - \frac{\pi}{2})$
- (۱۰۷) $\cot \alpha = -\tan(\frac{13\pi}{2} - \frac{\pi}{2})$
- (۱۰۸) $\sec \alpha = -\csc(\frac{13\pi}{2} - \frac{\pi}{2})$
- (۱۰۹) $\csc \alpha = \sec(\frac{13\pi}{2} - \frac{\pi}{2})$
- (۱۱۰) $\sin \alpha = \sin(\frac{15\pi}{2} - \frac{\pi}{2})$
- (۱۱۱) $\cos \alpha = \cos(\frac{15\pi}{2} - \frac{\pi}{2})$
- (۱۱۲) $\tan \alpha = \tan(\frac{15\pi}{2} - \frac{\pi}{2})$
- (۱۱۳) $\cot \alpha = \cot(\frac{15\pi}{2} - \frac{\pi}{2})$
- (۱۱۴) $\sec \alpha = \sec(\frac{15\pi}{2} - \frac{\pi}{2})$
- (۱۱۵) $\csc \alpha = \csc$

၁၆၆၆ ခုနှစ်၊ ဇန်နဝါရီလ ၁၆ ရက်

- (9) $\frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$
 (8) $\frac{d}{dx} \ln x = \frac{1}{x}$
 (7) $\frac{d}{dx} e^x = e^x$
 (6) $\frac{d}{dx} \sin x = \cos x$
 (5) $\frac{d}{dx} \cos x = -\sin x$
 (4) $\frac{d}{dx} \tan x = \sec^2 x$
 (3) $\frac{d}{dx} \cot x = -\operatorname{cosec}^2 x$
 (2) $\frac{d}{dx} \sec x = \sec x \tan x$
 (1) $\frac{d}{dx} \operatorname{cosec} x = -\operatorname{cosec} x \cot x$

سیدنا ابی بنی اسحاق

הנהגתו היתה נכונה ונבונה.

החלטה: הנהלת המועצה תמנה את חברי המועצה להגות את המסמך.

۱۱. سیستم و اقلایم و جغول