1	/		14	uma	in C	) -1en	tic.	S		v		2							i					
	Item#	Item	BOQs	Quantity	AMS		Compaq business internatio	GMS	HA SHAF	Hospicare system	Lab service	1	Medi Laser	MOD scientific traders	Muslim medical services	Muslim trading agency	Pak glorius enterprise	Pakistan hospital	RAYS technologi es		Shazup enterprises	Vantage technologi- es	Western scientific	
	Humai	n Genetics and Molecular Biology eq	uipment																_					4
		Real time PCR	• With 6 excitations (450–680 nm) and 6 emissions (500–730 nm) filter sets for multiplexing, must have at least 5 decoupled channels/20 filter combinations with white led or better for maximum dye versatility and flexibility, multiplexing capability of up to 6 targets  • Dye compatibility: Fam/Sybr Green, Vic/Joe/Hex/Tet, Aby/Ned/Tamra/Cy3, Jun, Rox/Texas Red, Mustang Purple, Cy®5/Liz™, Cy®5.5  • Able to support Taqman® probes and the Sybr® green DNA binding dye chemistry in the same run.  • Block ramp temperature at least 6.5 °c/sec for 0.2 ml block, temperature uniformity and accuracy of at least 0.4°c and 0.25°c, respectively, sensitive enough to detect differences as small as 1.5-fold in target quantities in singleplex reactions.  • The instrument should be able to perform stand & fast thermal cycling on the same module without any hardware modification, must have a heated lid assembly and features to assist with 21 CFR part 11 compliance with no additional charges.  • Software:  • The instrument should be provided with complimentary software that is both instrument and cloud based and should have basic modules for absolute and relative quantification in gene expression analysis and genotyping analysis module for both Taqman and HRM based genotyping analysis.  • It should be able to allow both Taqman® and	1	ty with some dyes, no support for TaqMan & SYBR in the same run, no fast thermocycling option, no cloud based software, no	some dyes, not able to run TaqMan &	Not quoted	Not quoted	Oualified	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not guoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	
H		<del>f</del>			<del> </del>		1	1		1	1	1	1	1	1	- ter quere	r or quotes	r tot quotou	rior quotou	riot quoteu	riot quoted	rior quoteu	rior quoted	l l
	2		• 96 well, touch screen with gradient PCR option and a gradient range of 30-100°C and temperature differential range of 1-25°C. • The System capacity should be 1x96 well plate or 96x0.2 ml tubes or 0.2 ml tube strips, Max. block ramp rate 3-4 degrees/sec, Max sample ramp rate:3.35 degree/sec, Each pair of heating/ cooling elements and metal block(s) must be insulated, The instrument must have a safety feature above 50° C, temperature accuracy should be ±0.5°C of the programed target or better (35°C to 99.9°C), temperature uniformity should be ±0.5 °C well-to-well, standard 0.2 ml format sample block, adjustable heated lid with software to view the real time PCR steps.	4		Qualified	Not quoted	Not quoted	Qualified	Not Qualified, sample ramp rate not quoted, no information about isulated heating/coo ling element.	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not Qualified, sample ramp rate not quoted, no information about isulated heating/coo ling element.	Not quoted	Not guoted		Not Qualified, sample ramp rate not quoted, no information about isulated heating/coo ling element.	Not quoted	Not quoted	

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4																						
	and the second and all the second	Complete system with Chemiluminescence , UV and Fluorescence imaging modes, equipped with		eta da e		a settingui (elle (tempe en com						and the second second second second second			No				encono in substituto de			
		supercooled 16 bit CCD camera for excellent publication ready imaging with low background														Not-	,				,	
		noise, image resolution 4MP at least, with at least trans-UV, white and epi-white light illumination,									1					qualified. No						
		motor driven 1.2f lens, auto workflow selection and control with high reproducibility, auto-exposure and						e son						3		Chemilumi nescence					٠.	
		auto-focus with faster exposure times, imaging area at least 650 cm2.														mode included,	Not- qualified.					
	Gel documentation system	<ul> <li>Applications should include fluorescence (including standard UV), colorimetry, densitometry,</li> </ul>	1													No information	No UV					
	Ger documentation system	chemiluminescence, chemifluorescence and stain free imaging. Capable of imaging and analyzing 1-D	, , ,	e 977					Not- qualified.						1 to 14 to 1	provided	motor					
		electrophoresis gels, dot blots, slot blots and colony count, Molecular weight determination, Band/lane		20					No information							about imaging	driven lens.					
		matching analysis with comparative dendrogram							provided							area dimensions	1					
		creation, background subtraction, USB connectivity with fast data transfer, GLP/GMP Compliance, high							about GLP/GLM							, GLP/GLM						
		sensitivity down to pg detection. Supplied with application driven image capture and analysis							compliance, No							, No	compliance, No					
		software with support to analyze data on multiple user systems.							multiple software							multiple software	multiple software					
		• Should be quoted with compatible computer and UPS of required specifications to combat electrical							liscences included,							liscences included,	liscences included,					
3		fluctuation.		Not quoted	Qualified	Not quoted	Not quoted	Not quoted	No UPS quoted.	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	No UPS quoted.	No UPS quoted.	Qualified	Not quoted	Not quoted	Not quoted	Not quoted
															,					40		
		With changeable fixed angle & swing bucket rotors																				
		of upto 5000 rpm, 10000 rpm & 14,000 rpm for 15 & 50 ml, eppendorf (1.5 ml) and PCR plate																				
		configuration.  • Swing bucket rotor capacity 750mlx4. The											,									
		centrifuge should also be able to accommodate mix loading of 250 ml,750ml & PCR plates on the same															Not					Not
	, v	rotor, capable of identifying the rotor type automatically, 14000 RPM, CFC-Free refrigerant,															qualified. Adaptors					qualifiedA daptors for
	Refrigerated centrifuge	built in condensation drain, wide temperature range of -9 \( \text{C} - + 40 \) \( \text{C} \), modifiable during the run	1					4									for 15 ml & 50 ml					15 ml &50 ml capacity
		operation, must have dynamic compressor control, "fast cool" function to maintain constant 4 °C at															capacity is low, Noise					is low, Noise level
		maximum speed, lowest attainable temperature is 0 °C. Must have a standby cooling function, The noise							1 - Mark	***							level is not less than	A TOTAL CONTROL OF THE PARTY OF	,			is not less than
		level should be less than 54 Db(A) with fixed angle rotor, certified aerosol-tight rotor lids, 10			respective in					1 . 5				*			54Db,No Built in					54Db,No Built in
		acceleration and 10 deceleration ramp.  • Should be provided with:									-						condensati on drain,					condensati
		Swing Bucket rotor 750mlx4 capacity  Adaptors for 15 ml (at least 15mlx56 capacity)															no			,		on drain,
		☐ Adaptors for 50 ml (at least 50mlx28 capacity)															information provided					information provided
		☐ Adaptors for PCR plates ☐ Suitable electric stabilizer		Nat access 1	Nat access	Nat access	NI=4 =	Outlie 4	No.	N	N-4 1	N		N			for some BOQ					for some BOQ
4				Not quoted	not quoted	inot quoted	Not quoted	Quanned	Not quoted	inot quoted	inot quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	points.	Qualified	Not quoted	Not quoted	Not quoted	points.

4								N														
						,		Not- qualified. No 200- 400 L capacity, No autofill. no digital temp					5								5	
	Liquid nitrogen inventory system		1					display, no SS transfer no cryo gloves, no measuring						Till.			Not- qualified. No 200- 400 L capacity,					
	5	200-400 L capacity, vacuum insulation, vial & straw storage, option with data logger, auto fill, digital temp display, SS transfer hose, standard and mini storage racks, cryo gloves, liq level measuring stick, refill Liq. Nitrogen cylinder, Cryogenic transfer vessels (2lit, 4-5 lit)		Not quoted	Not quoted	Not quoted	Not quoted	stick, no refill cylinder, no cryogeneic transfer	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	No autofill, no digital temp display, no SS transfer, no refill		Not quoted	Not quoted	Not quoted	Not quoted
	Freezer -20°C	Stainless steel 34 CU Ft. capacity, digital temp control, CE Certifications, -12 to -25 C temp range, 1400 Liters capacity, Double door, auto defrost, should include casters, integrated controller, should have high & low temp alarms.	2	N. a. marad	N. a. m. a. d. d.	National	National	Out State	Notaria	N	N	N	Not Qualified, capacity not fullfilled, no information provided for some BOQ	N.								
	Analytical balance	Electronic Analytical Balance with digital microprocessor control, automatic internal calibration, with overload protection, easy settings and stable results.  Should be provided in following 2 capacities (1 each) 1) Capacity 80 g (sensitivity 0.01 mg) 2) Capacity 220 g (sensitivity 0.1 mg)	2	Not quoted					Not quoted  Not quoted			-					Not quoted	Qualified (Single bidder)		Not quoted		
	Vertical Slab Gel Electrophoresis unit with all accessories	16 x 16 cm gels, platinum electrodes, multi-purpose. Able to accommodate up to 4 gels simultaneously. With central cooling core for smooth electrophoresis. Choice of glass plates, spacers, and sandwich clamps to cast 2 gel lengths, 16 or 20 cm. Should be supplied with appropriate gel caster, glass plates, spacers (1/1.5 mm), coombs, sandwich clamps and alignment cards.	1 .	Not quoted				Not qualified, gel size is not	Not quoted								Not qualified, gel size is not	Not quoted	-			The complete of
	Horizontal gel electrophoresis units with all accessories	UV-transparent gel trays, single mold construction, color coded electrodes to ensure correct positioning, easy to remove with simplifying cleaning, clear plastic construction for easy sample visualization. Should be provided in following 3 sizes (1 each) with all accessories (including gel trays, coombs, gel caster);  1) Agarose gel electrophoresis system with 7x10 cm gel tray, 8 and 15 well coombs, sample throughput 8-30  2) Agarose gel electrophoresis system with 15x15 cm gel tray, 15 and 20 well coombs, sample throughput 1-120  3) Agarose gel electrophoresis system with 25x10 cm	3					Not qualified,									Not qualified,					
Ş		gel tray, 26 and 51 well coombs (compatible with multi-channel pipets), sample throughput 24-96		Not quoted	Qualified	Not quoted		gel sizes are not	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted		gel sizes are not	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted
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Universal power sup	ply for electrophoresis units	220/240, universal power supply, Output: 500 V (fully adjustable in 1V steps), 2.5A (fully adjustable in 0.001A steps), 500 W (fully adjustable in 1W steps), 4 pairs of output terminals. Safety features including No-load detection, sudden load change detection, ground leak detection, overload/short circuit protection, overvoltage detection, input line protection, auto power-up after power failure.	2	Not quoted	Qualified	Not quoted	Not quoted	Not qualified, 2 pairs of output terminal, safety features no quoted	1	Not quoted	Not quoted	Not qualified, constant voltage, conctant current, saftey features no quoted		i Not quotec	d Not quoted	l Not quoted	i Not quoted					
$\mathrm{CO}_2$ incubators	double, water jacketed	Manufacturing Country: USA and EU Only Capacity 170 liters or better.  The temperature range +4° to 50° C. with range of 0.2-20 % CO2 range, temperature stability should be +1 @ 37° C  Six sided direct heating technology, should be No Need of HEPA filter. fan less chamber, infrared based temperature sensors. The instrument chamber should be made from single sheet (seamless chamber) 72 hr data/chart logger for temperature and CO2 level with alarm settings. Should be provided with accessories (CO2 cylinder and CO2 regulator)	1	, Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not Qualified, HEPA filter required, Fan is present	Not quoted	infrared sensor, No seamless	Not Qualified, HEPA filter required, Fan is present, No infrared sensor, No seamless chamber	Not Qualified, 5 sides only, HEPA filter required, Fan is present, No seamless chamber	seamless		Not quoted					
Water purification	system with Cartridge kit	Type 1 and Type 2 water output, 10 Liters tank, Conductivity $\mu$ S/cm 0.067-0.1, Resistance $M\Omega$ x cm 15 – 10, water output performance: 6L/hr, Feed water supply: tap water. Should produce purified water that is suitable for media preparation, make up water for buffers and media, rinsing of laboratory glass, preparation of reagents and samples, feed water for autoclaves and ultrapure water filtration system. Ready to use with all accessories (including RO/pretreatment cartridge, sterile 0.2 $\mu$ m filter, pressure regulator). Origin: USA, Europe	1	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Qualified	Qualified	Not quoted	Not quoted	Not quoted	Not quoted						
	rification unit with UV/UF system	Tissue Culture Grade ultrapure water output, complete system for RO and distilled water/ultra low organic, type1 water with spare replaceable cartridges. Equipped with UV and UF system. Feed water supply: pre-treated water 6 Liters or better internal fank with vent filter, Conductivity μS/cm 0.055, Resistance MΩ x cm 18.2, RO flow rate: 3L/hr, Total Organic Carbon: 1 to 5ppb, Endotoxin Concentration: 0.001 EU/mL, Bacterial Content <0.01 CFU/mL, Particles >0.2μM/mL <1, Feed water Pressure 1-6 Bar, Bacterial retention: 99%. Typical applications for ultrapure water should include life sciences, cell and tissue cultures, molecular biology and microbiology. Ready to use with all accessories (including Internal storage tank with vent filter, RO/pretreatment cartridge, ultrapure polisher cartridge, sterile 0.2μm filter, pressure regulator, UV lamp and UF filter and	1														\$2000000000000000000000000000000000000	Not- qualified. Bacterial count not <0.1 CFU/mL, feed-water pressure not 1-6 Bar, no information provided				
13		wall bracket. Origin: USA, Europe		Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Qualified	by bacterial retention <99%	Not quoted	Not quoted	Not quoted 1	Not quoted						

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and the second	Speed Vac		. 1												Principles (Anna Se Calabra)			qualified. Not quoted with falcon tube and PCR plate rotors. No	***************************************			and the second section of the section of the second section of the secti
1.5		Speed 1400 rpm, integrated diaphragm vacuum pump, capacity should be 300 ml, 70x1.5 ml, 2xMTP/PCR & 6x15/50 ml, 4 heating levels for optimized drying, should have desiccator mode.		Not quoted	Not quoted	Not quoted	Not guoted	Oualified	Not guoted	I Not quoted	Not guoted	Not guoted	Not guoted	Not auoted	Not quoted	Not guoted	provided for speed range, 4 heating levels and dessicator mode	information provided for 4 heating levels and dessicator mode.	Not auoted	Not auoted	Not auoted	Not quoted
16	Bench top general purpose laboratory centrifuge	Capacity 100mlx4, Max Speed: 100-4400 Rpm, Max RCF: 3000xg, Automatic imbalance detection: Yes, Acceleration time:25sec, Deceleration time:25sec, Soft brake function, low Noise level< 45 Db(A), Key lock to prevent unintentional adjustments, Set Rpm Function: Able to start timer countdown only when selectable speed is achieved by using a "at set rpm" function, Stainless steel rotor chamber. Accessories: Should be supplied with swing bucket rotor with 3 ml, 15 ml & 50 ml tube adaptors and rotary knobs.		Not quoted						Not qualified, Noise level is not less than 45Db, No soft brake function, no information provided for some BOQ	1	Not quoted	Not qualified, Noise level is not less than 45Db, No soft brake function, no information provided for some BOQ	Not quoted		Not qualified, Noise level is not less than 45Db, No soft brake function, no information provided for some BOQ	Not qualified, Noise level is not less than 45Db, No soft brake function, no information provided for some BOQ		Not qualified, Noise level is not less than 45Db, No soft brake function, no information provided for some BOQ	Not quoted		Not qualified, Noise level is not less than 45Db, No soft brake function, no information provided for some BOQ
							a section						Not- qualified. No electronic safelock, no.						Not- qualified. No information provided for high- tech microproce ssor controller,	Not- qualified. No		
-		Capacity 50 liters, high tech. microprocessor controller fully automated, should have at least 3 sterilization modes for drying and warming of solids, semi-solids and liquids, Safe lock, electronic, designed parameters for temperature and time, provided with visible and audible signals, built in diagnostic functions, low temperature sensor, safety features including over pressure safety valve, over temperature protection system, dry scorch protection system, self-induction pressure interlocking device	1		va r								information provided for high- tech microproce ssor controller, visible and audible signals, built-in diagnostic functions, safety features and CE						modes, electronic safelock, visible and audible signals, built-in diagnostic functions, safety features	information provided for 3 sterlization modes, electronic safelock, visible and audible signals, built-in diagnostic functions, safety features and CE	***************************************	
17	Ice Flakes machine	over current and short circuit protection, stainless steel interior, 220 volts, , CE compatible.  Product type: Ice flakes, Capacity 350 pounds, ice flakes/ 24 hours, 220 Volts, with adjustable legs, steady flow of ice, low energy and water consumption. Bin capacity at least 40 Kg, more user friendly (slanted window for ice flakes collection), Air cooled condenser, water line with a shut off valve, floor drain, the front side serviceable. Made of	1	Not quoted	Not quoted	Not quoted	compatibili	Not quoted	Not quoted	Not quoted	Not quoted			compatibili	Not quoted	Not quoted						
18		durable and rust-free rotocast plastic. Origin US/EU.		Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	709	THE RESERVE TO SHARE THE PARTY OF THE PARTY	Not quoted		Not quoted						

		, and the second																				
				5				Not qualified,														
19	Incubation Oven	Capacity Minimum 50 liters or above. Temperature range should be ambient +10°C to 100°C. Stainless steel chamber, Calibrated digital PID controller, Independent overheat thermostat, Inner glass door, Digital timer, Programmable control. ESCO/Binder/Memmert/equalent.	1	Not quoted	Not quoted	l Not quoted	I Not quotec	remperatue ranges not fulfilled, n informatio provided for some BOQ points.	o n	d Not quotec	l Not quotec	l Not quoted	Not quotec	I Not quotec	Qualified	Not quote	d Not quote	d Qualified	Not quoted	Not quoted	Not guoted	Qualified
20	Inverted microscope with camera	<ul> <li>Fluorescence and transmitted light (brightfield &amp; phase contrast) microscope (manual stand)</li> <li>High quality objectives (at least 5-positions), should include 2x/4x, 20x, 40x and 100x (for IF slides).</li> <li>High quality CCD camera 1280 x 960 pixels, options of colour/monochrome, at least 1.3 Megapixels, Captured images: 16-bit, publication quality images.</li> <li>Light source optimal for both transmitted light and fluorescence imaging.</li> <li>At least 4 fluorescence filter positions (with choice of selecting suitable fluorescence filters according to application requirement from a range of fluorescence filters available)</li> <li>Mechanical X/Y scanning stage, interchangeable stage should be able to accommodate most vessel types and sizes, including flasks, Petri dishes, multiwell plates, and slides.</li> <li>Software capable of image analysis, design, counting, multichannel overlay in co-localization fluorescence imaging and more basic applications.</li> <li>Applications should include routine and demanding fluorescence imaging applications (immunohistochemistry (IHC) and Immunofluorescence (IF) analysis of cells and tissue sections), routine cell and tissue culture, cell confluence determination, cell counting and more.</li> <li>Should be provided as complete system with all accessories including LCD display.</li> </ul>		Not quoted	Not quoted	Qualified	Qualified	Qualified	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not-qualified. No 4 fluorescentilter positions (only DAP & GFP available), no information provided for camera lightsource image analysis software functions including auto cell counting and multi- channel overlay. Old model quoted.	n	Not-qualified. No fluorescent mode, no 5 position objectives, no details provided for captured image quality, light source, interchange able stage, image analysis software functions including auto cell counting and multichannel overlay.	Not quoted	Not quoted	Not quoted
21	Orbital shaking bench incubator	Orbital shaking incubator having microprocessor control with Digital Display for Speed, Temperature, and Time. Orbit:1.9 cm, Speed range: 15 – 500 rpm with 1 rpm increments, Platform size should be at least 32x28 cm or better, Timer 0.01 – 99.9 h with continuous or timed operation modes, Motor type: Solid State, DC Brushless motor and with Multi step programming.  Should be Nonvolatile with automatic power failure restart. Drive type: Triple-eccentric counter balance. Certification: should meet UL, CSA and CE standards.  Applications should include bacterial or cell cultures. ACCESSORIES:  • Universal platform.  • Flask clamps:  • 10 ml (qty 10)  • 25 ml (qty 5)  • 50 ml (qty 5)  • 50 ml (qty 2)  • 10 ml, 25 ml, 50, 125, 250, 500 ml flasks  • 1,2 & 3 liter flasks Origin: USA/Europe	1	Not quoted				Not- qualified. No temp. control available as it is an open air system, not quoted with required flasks, no information provided about auto power failure				Not quoted							Not quoted			

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22	pH meter	PH mode -2 to 19.999, 3 point auto calibration, provided with stand (benchtop) PH MV conductivity, TDS salinity, resistivity and temperature measurements, automated temperature compensations, user friendly, digital display, automated buffer recognition, , with plastic coated electrode with stand., Accuracy + 0.002, 220 Volts.	1	Not quoted	Not quoted	Not quoted	Not quoted	d Qualified	Not quoted	Not quoted	Not quoted	Not quoted	l Not quoted	Not quoted	Not quoted	Not quoted	i Not quoted	Qualified	Qualified	Not quoted	Not quoted	Not quoted
23	Pipette dispenser	Electronic LED Digital Single Channel Pipettor, Capable of pipetting, multi dispensing, series dispensing and mixing. Volume Range: 0.5-10ul and 5-100 ul Dispenser should must have dial based multiple settings like Aspirate & dispenser, save favorite settings, sequential dispensing, automatic dispensing. Number of dispensings:100 or better, with step counter, sleep mode, 3 mode of operations, compatible with general use pipette tips, operating lever tip ejection and residual stroke lock.	2	Not quoted	Not quoted	Not quoted	Not quoted	Not Qualified, Not compatible with general use of pipette I tips.	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Qualified	Qualified	Not quoted	Not quoted	Not quoted	Not quoted
24	Non refrigerated table top microfuge	Capacity: 12x1.5/2 ml tubes Speed: 13400 Rpm (100 Rpm steps),12000xg Rotor: Aluminium (Metal rotor bowl) Acceleration and deceleration time < 13 sec Noise Level <49 Db(A) Timer: 15 s to 30 min Separate short-spin key for quick centrifugation. Operational Ventilation flow: Yes Automatic Lid opening at the end of run. Origin USA/Europe.	2	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not qualified, Noise level is not less than 49Db, no information provided for some BOQ points.	n Not quoted	Not quoted	Not qualified, Noise level is not less than 49Db, Short spin key is not quoted, no information provided for some BOQ points.	n Not quoted		is not less than 49Db, No soft key, no information provided for some BOQ	No short spin key, no information provided for some	qualified, Noise level is not less than 49Db, no	Not qualified, Noise level is not less than 49Db, no informatior provided for some BOQ points.	Not quoted		Not qualified, Noise level is not less than 49Db, no information provided for some BOQ points.
25	Biological Safety Cabinet	Class II BSC, for Biosafety level I-III. Stainless Steel, 4 ft or better cabinet Width, microprocessor controlled display, auto front window, manual adjustable height stand, Factory installed LED and UV Light, 1 set of armrests, equipped with high efficiency HEPA filter or better (ALPA filter), 99.995% MPPS, should have service fixtures (including electrical and water).	1	Not quoted					Not quoted				Not- qualified. Cabinet width not 4 ft, no information provided for service	Not- qualified. no information provided for cabinet width, microproce ssor control display, auto front window, adjustable height stand, factory installed LED & UV and service			Qualified			Not- qualified. Cabinet width not 4 ft, no information provided for stainless steel working area and service	Not quoted	
26	X-ray film viewing machine	Adjustable tamp min water consumtion 220 y. decor	1	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted				
27	Glassware washer	Adjustable temp, min water consumtion,220 v, dryer enabled	1	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted				
28	Vacuum pump	oil free & double stage	2	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Qualified	Not quoted	Not quoted	Not quoted				

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		from Library preparation to sequencing			I	T		1	qualified												qualified	1.
		analysis.						(	No fully											-	semi-	-
		Throughput should be 2-130 M reads (0.3-							auto												auto	
		9 1																			library	
	Ì	50 GB of data output).							library									1				
	Physiological System Control Control (State Control Co	The system should be flexible to support —	and the second second second second					A Comment	prep., no	1000 C	langer or pro-			-	and a set of any	Market mingelige of					prep., no	-
		wide range of NGS needs ranging from							option								1				option	
		microbial genome sequencing, targeted				1			for WES,												for WES	,
		panel sequencing to WES applications.							sequenci												sequenci	i
		The System should be able to perform the				1			ng run										N.		ng run	
		analysis of the DNA & RNA samples with							times											ļ	times	
		sample volume upto 1 ng with higher				İ			considera												considera	a
	,						Ì											1			bly	1
		sensitivity & should work for FFPE DNA			1				bly		1											
		or RNA samples with the maximum volume				1			longer									1			longer	1
	Next generation sequencer	for sample required 10ng.	1						than						-	al all day 1					than	y
		The instrument run time should be <3.5							specified,	,											specified	١,
		hours from sequencing to BAM file &	-						pipetting												No	
		reporting can be done on the same day.							steps and												informati	i
		There should not be more than 3-5 pipetting			1				setup												on	
		steps in library preparation & template							time												provided	
		designing & 30-minutes total setup time for							greater												for gas	
		library & template prep.			1				than										1		and	
									specified,												water	
		There should be no centrifugation involved			1																	
		from Library prep to sequencing.	72		1				centrifug												supply	
		There should be no requirement of							ations,										1		requirem	
		Gases/water throughout the procedure.	-						gas and										1		ents,	
		The system should be able to process single							water												support	
29		or multiple samples without wastage of		Not quoted	Not quoted	Not quoted	Not quoted	Qualified	supply	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	of single	Not quo
	Refrigerated table top microfuge	Capacity: 24x1.5/2 ml tubes, Rotor: Aluminum (opt bowl design for quite operation), Speed: 15000 Rpm (50 rpm steps) 21,130 x g Temprature range: -10 to +40 C FastTemp function: quick pre-cooling of the centrifuge, e.g. from ~ 21 °C to 4 °C in only 8 minutes, low Noise Level <48 Db(A) or better Built-in condensation drain: to eliminate water accumulation in the rotor chamber. Soft Key: option, should be able to start timer countdown only when selectable speed is achieved, Must follow safety standards, Quick Lid locking, Separate short-spin, Dynamic Compressor Control								Not qualified, No rotor opti-bowel design is fullfilled, Noise level is not less than 48Db, No built in condensati on drain, No short spin key, no information provided for some			Not qualified, No built in condensati on drain No optibowel design, Noise level is not less than 48Db, No short spin key, no information provided for some						Not qualified, No built in condensati on drainNo opti-bowel design, Noise level is not less than 48Db, No short spin key, no information provided for some			Not qualified No built condensa on drain opti-bow design, Noise le is not les than 49E No short spin key no informat provided for some
		technology (DCC) for optimized cooling.		Net cont 1	Nat	Not suct 1	Not a	Ovolified	Not assets 3	BOQ	Not guata	Not costs 3	BOQ	Not quated	Not guata	Qualified	Qualificat	Qualificat	BOQ	Not quoto d	Not quoted	BOQ
30				Not quoted	Not quoted	Not quoted	inot quoted	Qualified	Not quoted	points.	INOL quoted	Not quoted	points.	Not quoted	INOT quoted	Quanned	Quantied	Quantied	points.	Not quoted	inot quoted	points.
		For karyotyping, FISH analysis and																				
		comparative genomic hybridization. With	1																			
	77 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					\$100 Per 100 P				. 1	CONTRACTOR OF STREET	The second secon						THE CASE OF THE PARTY OF THE PA	a contract of the contract of			
	Karyotyping system complete with microscope	complete software, microscopy system and	1		1			1													1	
31	Karyotyping system complete with microscope	complete software, microscopy system and camera.	1	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Qualified	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Not quoted	Not que

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17		For Western Blotting using Nitrocellulose	1																1			
	)	or PVDF Membrane; Compatible with	1							1									ĺ			
	the party of the state of the s	Radioactive, Chromogenic,							n Petron													
		Chemiluminescent, Fluorescent, and																				1 1
		Chemifluorescent Detection, should be able																				
		to accommodate mini (7.5 x 8.4 cm) or midi																				
		$(8.5 \times 13.5 \text{ cm}) \text{ (W x L)})$ size gels, should																				
	Dry blot transfer system	enable fast (30 min.) immunodetection.	1								Ì							i				
		Should be provided as complete system																				
		including blot holders, two independent		1	1999																	
1				1									Ì				NIat					
		blot holder frames, 2 antibody collection		1													Not Qualified,					
	· · · · · · · · · · · · · · · · · · ·	trays, vacuum tubing, rolling pad and blot-	* * * * .			tota reservation.		mun pauvin		144 18							no			e relative e pres	(1 m) 1/11m	92.95.15.15.19.000
		roller, 2 wetting trays and a quick start															information					i I
		guide.															on gel size.					i I
		MERCK SNAP I.D system or equalent.	1														use flex					i I
32				Not quoted	Qualified	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	cards	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted
		bucket rotors of upto 5000 rpm, 10000 rpm																				
		& 14,000 rpm for 15 & 50 ml, eppendorf																				
		(1.5 ml) & PCR plate configuration.																				
		The centrifuge Must be able to			1																	
		accommodate mix loading of 15, 50, 250																				
		ml,750ml & PCR plates on the same rotor,																				
		capable of identifying the rotor type																				
		automatically,																				
		14000 RPM, CFC-Free refrigerant, built in	1		1								,									
		condensation drain, wide temperature range																				, I
		of $-9\Box C$ + $40\Box C$ , modifiable during the															Not					NI-4
		run operation, must have dynamic					£ 2										Not qualified.					Not qualifiedA
		compressor control, "fast cool" function to	l														Adaptors					daptors for
	Refrigerated centrifuge	maintain constant 4 °C at maximum speed,	1														for 15 ml &					15 ml &50
		lowest attainable temperature is 0 °C. Must															50 ml					ml capacity
		have a standby cooling., The noise level															capacity is					is low,
		should be less than 54 Db(A) with fixed															low, Noise					Noise level
		angle rotor, The instrument Must follow															level is not					is not less
		safety standards set by IEC 1010-2-020,															less than 54Db,No					than 54Db,No
		certified aerosol-tight rotor lids, 10															Built in					Built in
		acceleration and 10 deceleration ramp.															condensati					condensati
		Additional accessories:															on drain,				- 1	on drain,
-		• 48X1.5/ML ROTOR															no					no
		• 6x15/50 ml rotor (12,000 rpm)			196.5					10.00							information					information
		• Swing Bucket rotor upto 750 ml tubes					1.00										provided					provided
		(39,000 rpm)				, ,					~ .	ego in the	, .				for some BOQ	-				for some BOQ
33		• Adaptors for 15 ml		Not quoted	Not quoted	Not quoted	Not auoted	Qualified	Not quoted	Not quoted	Not anoted	Not quoted	Not quoted	Not quoted	Not quoted		~	Qualified	Not quoted	Not quoted		
Canamall	ahayatawy itawa			1	1	1	1		1	1	1	1	que tra		or quotou	. rot quotou	points.	X.	riot quoteu	1 tot quoted	rot quoted	Joints.
General	aboratory items	It I and most look down outlon oir monitors			1																	
2.4	Touch-o-Matic burner, mixed gas	Hand rest lockdown option, air regulator,	2		No.	N	NI . I	N	N		NT				.,							
34		ID Tubing		Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted 1	Not quoted	Not quoted
	Desiccator	Nalgene 246 mm, 4/case, cabinet type,	1															* v.				
35	Desiccator	18x12x12"	1	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted
	D!4		1																			
36	Desiccator plates	Nalgene, plates 230 mm 6/case	1	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Not quoted 1	Not quoted	Not quoted
2.5	CO <sub>2</sub> Regulators		2																			
37	CO <sub>2</sub> regulators	For Co2 Incubator		Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted 1	Not quoted	Not quoted
	Pipette Jars with cover, Nalgene case	16.5 x 51.4cm size, 6/ case, Pipette jars with	2											T	T							
38	i ipette dats with tover, margene case	cover, Nalgene case.		Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Not quoted	Qualified	Not quoted	Not quoted	Not quoted ?	Not quoted	Not quoted
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		For media filtration, positive pressure of up to 10 liters/batch, Stainless steel pressure																				
33	Liquid Tissue Culture Media Filtration Kit	tank, Pressure Gauge, 100 psi maximum operating pressure, Stainless steel pressure, safety /relief valve (ASME approved) with automatic pressure relief at 100 psi (7 kg/cm2) and manual relief capability, Air pressure hose: 6 ft. section of 3/8 in. I.D. reinforced air pressure line complete with quick-disconnect fittings, Tubing: two 10 ft sections of 1/2 in. I.D. Tygon tubing (Type S-50-HL, Class VI, Autoclavable) complete with snap-grip hose/tube clamps.  0.45 µm filter, a positive pressure source, collection vessel, and media/reagent bottles		Not quoted	d Not quoted																	
	Filtration Assembly	Stainless steel with funnel. For support buffer filtration, 250 ml Filter Holder, 47 mm, stainless steel, Stainless steel funnel, support frit and base; stainless steel funnel	2																			
40		cover; anodized aluminum spring clamp; silicone stopper		Not quoted																		
4:	Filter flask	1 L, 2.5 L, 4 & 5 L, Pyrex, vacuum resistant	4	Not quoted																		
42	Desiccator cabinet DRY-KEEPER	Auto desiccators, methyl methacrylate plastic, electronic control, air tight, gas-kit lined door, dial hygrometer 0-100 scale to measure inside relative humidity, 220 volts.	2	Not quoted																		
43	Lab lamp	Flexible arm, 360o sweep and feature twin.	12	Not quoted	Not guoted	Not quoted	Not quoted	Not guoted	Not quoted	Not quoted	Not quoted											
44	Lab trolley, Stainless steel	1032 x 508 x 960(h)mm stainless steel, with abrasion resistant, non-marking and shock absorbent wheels	3									Not quoted										
45	Carboys	20 L rectangular(4/case)/Round, Polypropylene and polypropylene copolymer made, chemically and thermally resistant with holding grip.	4	Not quoted																		
46	Harvard trip balance,	Double pan, sliding mass, Stainless steel, magnetic damping, self-aligning beam design and floating agate bearings.	1	Not quoted																		
47	Glass Cutter set (Diamond)	Diamond tip	1	Not quoted																		
48	Glass tube cutter	Spring-loaded to stay open until used. Cuts tubing up to 38 mm diameter. Made of nickel-plated zinc-alloy die-casting.	1	Not quoted																		
49	laboratory Jack, standard	Made of high quality stainless steel corrosion resistance and lift very stability, Adjustable	3	Not quoted																		
5(	Kik Step	As per sample picture.	6	Not quoted																		
51	Pipette cleaning sets, Nalgene	Should be made of rugged, high-density polyethylene, include pipet jar, washer/rinser, basket	1	Not quoted																		
52	Cryogenic Gloves	As per sample picture.	2	Not quoted																		
53	Gas burners	Laboratory gas burners for varying lab functions, should work with natural gas.	2	Not quoted																		
54	Transparent. latex rubber tube roll	Array of different diameters, as per sample picture.	1						2			Not quoted										
	Silastic lab tubing roll	Array of different diameters, as per sample picture.	1	Not quoted	Not quoted	Not auoted	Not auoted	Not auoted	Not quoted	Not quoted	Not quoted	Not guoted	Not auoted	Not quoted	Not auoted	Not quoted	Not auoted	Not quoted				

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56	Cell Counting chambers	Cell Counting Neubauer Chamber with manual cell counter	2	Not quoted																		
57	Baharach Fyrite gas analyzer	CO2 gas, range: 0 to 7 or above. To measure carbon dioxide for biological incubator monitoring, humidity sensor Ω-100 %, built-in gas moisture removal, separate pump key, humidity probes.	Las ac	Not quoted		Not quoted																
58	Hydraulic Jack	Hand Pallet, Capacity : 5000kg, Fork Length : 1150mm, Fork Width : 540mm, Lifting Height : 200mm	1								*											Not quoted
Furnitu	re		***												77.2							
59	Lab cabinets with shelves	As per sample picture.	20	Not quoted																		
60	Instrument Table	For placing equipment, according to specifications. Wooden frame and MDF.	9	Not quoted																		
Electron	nics																					
61	Microwave oven	Capacity 40 liters with clear visibility front door.	4	Not quoted																		
62	UPS	6 KVA, should not be refurbished.	3+1 = 4	Not quoted																		
63	Refrigerator	General purpose, 16 cFt. Locally available.	1	Not quoted																		

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