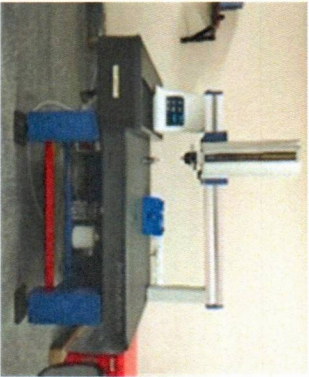




Research facilities at RUAS

No	Faculty/Dept	Location (GG/RTC)	Equipment Name	Date of purchase and Funding agency	Details of equipment	Image of the equipment	Research Thrust area and outcome
1	FET/MME	RTC, Peenya	Coordinate Measuring Machine		<p>This device measures the geometry of physical objects by sensing discrete points on the surface of the object with a probe with high accuracy. It is bridge type with X axis 500 mm, Y axis</p>		<p>Development and quality control in industries related to manufacturing, automotive, and aerospace industries. MTech and Research scholars are extensively using it for their research purpose.</p>


Peenya

					400 mm, Z axis 300 mm, maximum measuring speed of 8 mm/s, resolution of 0.0005 mm, maximum measurable height of 545 mm and a maximum table loading of 180 kg		
2	FET/AAE	RTC, Peenya	Low Speed Wind Tunnel		An open circuit test section size of 0.6 m x 0.6 m x 2.0 m with maximum fan speed of 900 rpm and maximum air flow velocity of		<p>Allows for cutting-edge research in the field of aerodynamics.</p> <p>This tunnel complements the theoretical and computational aspects of aerodynamic flows, It is used for consultancy projects</p>

Keyum

				35 m/s is available		
3	FET/AE	RTC, Peenya	Supersonic Wind Tunnel	<p>This tunnel is a blow down type with a test section size of 50 mm x 50 mm. It can achieve a Mach number of 3.6 with a test time of 30sec. The air storage tank volume is about 5m³ and the maximum air storage tank pressure is 12bar. In addition, Schlieren visualizati on system is available</p>		<p>The supersonic wind tunnel is capable of achieving a Mach number of 3.6 which is ideal for compressible flow measurements. These tunnels complement the theoretical and computational aspects of aerodynamic flows. It is used for consultancy and research projects</p>


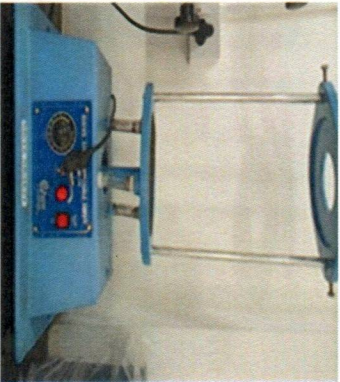
Keyum

					to visualize shock waves over bodies of interest.		
4	FET/Workshop	RTC, Peenya	CNC Vertical Machining Center Model Winner		Has Computer Numerical Control with vertically oriented spindles that approach workpiece mounted on worktable from above and equipped with tool magazine system and automatic tool changer. It has brand ace		Used for consultancy works


Peenya

					micromati c table with longitudin al travel of 400mm Rapid Traverse :32 / 32 / 32 40 / 40 / 40 with a feed rate of 1 — 10000 mm / min and a tool storage capacity of 12 Nos. The table size is 650 x 350 mm with a max load on table standard of 200 / 400 kgf. The spindle Speed is 60 — 6000 rpm and		
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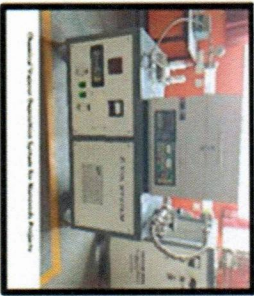

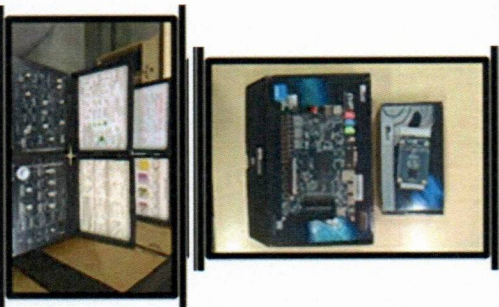
Keyun

					the spindle power is 5.5 / 3.7KW		
5	FET/MME	RTC, Peenya	Digital Calorimeter		A calorimeter is an object used for calorimetry, or the process of measuring the heat of chemical reactions or physical changes as well as heat capacity.		Used in the study of thermodynamics, chemistry, and biochemistry
6	FET/Workshop	RTC, Peenya	Sieve Shaker		Sieve shakers are used for separation and size determination of particles. A typical sieve		Can be used for the gradation studies of various materials



Peenya

					shaker separates particles by passing them through a series of chambers with mesh filters and agitating the sample in order to obtain complete separation .		
7	FET/MME	RTC, Peenya	Brookfield's Viscometer		Used in both controlled stress and controlled rate modes to characterize creep behaviour as well as yield stress and viscosity profiles		Used in the research of composite materials



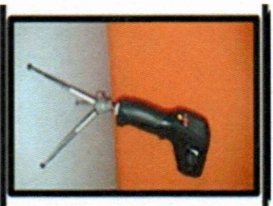
Peenya

8	FET/AAE	RTC, Peenya	Chemical Vapour Deposition System	31-03- 2014, Depart ment of Science and Technol ogy	This is used to produce high- quality, and high- performan ce, solid materials		Used in the research area of Coatings: Vapour Depositions and Spin coating
9	FET/MME	RTC, Peenya	TC make BLDC Motor	1-4- 2014, Gok- Univer sity of Agricul ture Dept	BLDC motors are used in agriculture		Used in the research of development of Multifunctional Agricultural Robot
10	FET/AAE	RTC, Peenya	FPGA Development Board and E&C Lab equipment and boards	7-7-14, Aeronau tics Researc h and Develop ment Board (AR&DB)	FPGA developm ent board allows designers to test their FPGA code in the real world.		Development of Vision Based Auto Pilot System for Indoor Navigation of MAV


Peenya

11	FET/ECE	RTC, Peenya	PCB Board Fabricator	12-1- 2016, Aeronau tics Research h and Develop ment Board (AR&DB)	PCB fabrication is the process of transcribin g a circuit board design onto the physical structure of the board		Design and Development of Long Range Video- Transmitter for MAV Application
12	FET/MME	RTC, Peenya	CNC Wire EDM machine	3-2-17, Karnata Council for Technol ogy Upgrada tion (KCTU)	CNC Wire EDM cut through the work piece by utilizing a fine, electrically charged metal wire usually made of brass		Hardened Steel Machining

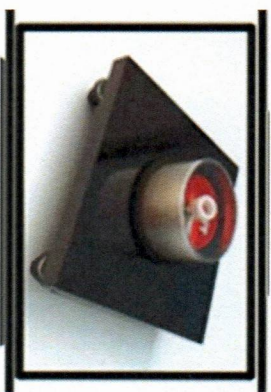

Peenya

13	FET/MME	RTC, Peenya	Optical Measuring Microscope	3-2-17, Karnata ka Council for Technol ogy Upgrada tion (KCTU)	These microscop es deliver maximum measuring accuracy		Hardened Steel Machining
14	FET/MME	RTC, Peenya	Piezo Based Mill Tool Dynamometer	3-2-17, Karnata ka Council for Technol ogy Upgrada tion (KCTU)	These tools help to measure machining forces during milling operations		Hardened Steel Machining
15	FET/MME	RTC, Peenya	Digital tool tip temperature indicator	3-2-17, Karnata ka Council for Technol ogy Upgrada tion (KCTU)	This provides exposure to various temperatu re		Hardened Steel Machining

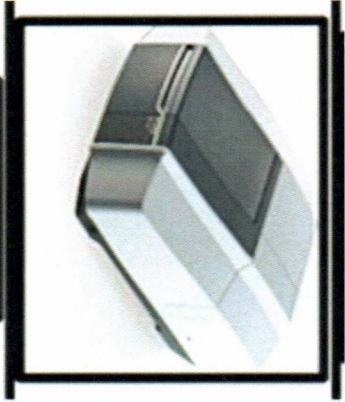
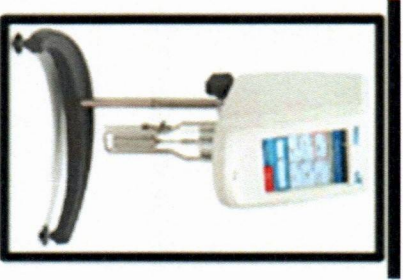
Keyun

16	FET/MME	RTC, Peenya	Brookfield Cone and Plate Viscometer	12-7-17, Karnata ka Council for Technol ogy Upgrada tion (KCTU)	Brookfield Cone/Plat e Digital Viscomete r measures the torque to overcome the viscous resistance to the induced movement caused by the presence of sample fluid between the spindle and a stationary flat plate		Research on composite materials and technologies
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Peenya

17	FET/MME	RTC, Peenya	Naio Scanning Tunneling Microscope (STM)	12-7-17, Karnata ka Council for Technol ogy Upgrada tion (KCTU)	This microscop e provides a three- dimension al profile of the surface. It helps in characteri zing surface roughness , surface defects etc		Research on composite materials and technologies
18	FET/MME	RTC, Peenya	Rheometer Thermosel System	12-7-17, Karnata ka Council for Technol ogy Upgrada tion (KCTU)	This is a system equipped with an oven intended for viscosity measurem ents up to 300° C by coaxial geometry.		Research on composite materials and technologies

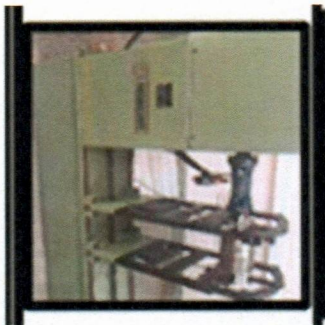


Peenya

19	FET/MME	RTC, Peenya	Shimadzu UV-Vis Spectrophotometer	12-7-17, Karnataka Council for Technology Upgradation (KCTU)	This has powerful functions like Photometric measurement, Quantitative measurement, Kinetics, Spectrum Scan, DNA/RNA/Protein test, multi wavelength test etc.		Research on composite materials and technologies
20	FET/MME	RTC, Peenya	Brookfield Viscometer	12-7-17, Karnataka Council for Technology Upgradation (KCTU)	Brookfield viscometer is a rotational viscometer used to measure the viscosity. The measuring body (spindle) is		Research on composite materials and technologies

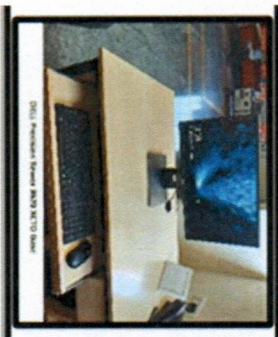
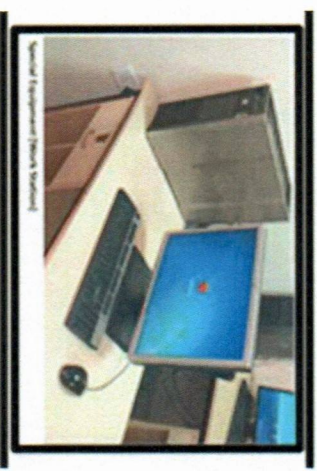
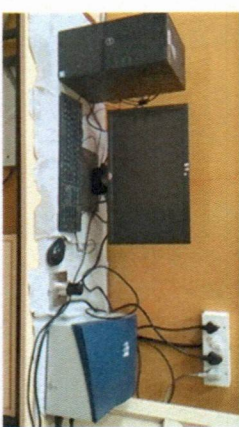

Peenya

23	FET/MME	RTC, Peenya	Hydraulic Press with Accessories for Sheet Metal working and testing	12-7-17, Karnataka Council for Technology Upgradation (KCTU)	Hydraulic press is used for forging, clinching, moulding, blanking, punching, deep drawing, and metal forming operations		Used for automated farm machinery design and development of small farmers
24	FET/MME	RTC, Peenya	3D Printer	12-7-17, Karnataka Council for Technology Upgradation (KCTU)	3D printer is used in construction of 3-dimensional object from a CAD model or a digital 3D model.		Used for automated farm machinery design and development of small farmers
25	FET/MME	RTC, Peenya	MIG Welding Equipment and accessories	12-7-17, Karnataka Council for Technology Upgradation	Helps in quickly making very high-quality welds		Used for automated farm machinery design and development of small farmers

Peenya

			tion (KCTU)	This machine is used to balance the moving parts of a machine, or piece of industrial machinery		Used for automated farm machinery design and development of small farmers	
26	FET/MME	RTC, Peenya	Dynamic balancing machine	12-7-17, Karnataka Council for Technology Upgradation (KCTU)			
27	FET/MME	RTC, Peenya	Wheel balancing machine	12-7-17, Karnataka Council for Technology Upgradation (KCTU)		Used for automated farm machinery design and development of small farmers	
28	FET/ECE	RTC, Peenya	100:1 Micrometal Gearmotor HP 6V with Extended motor shaft	21-12-17, Life Sciences Research Board	These are small brushed DC gearmotors		Design and development of a multi DOF Bionic Arm with Control Assist Mode Functionality


Keeyun

29	FET/ECE	RTC, Peenya	Academic Lab suite IC Design Server and IPMI Management Module for Connoi Server SSP Prime	21-8-17, ISRO Respond	Helps in integrated circuit design and developm ent		Design and analysis of an integrated optic micro ring resonator array based sensor system for detection of multiple gases
30	FET/AAE	RTC, Peenya	Special Equipment : Work Station	18-1- 2017, Aeronau tics Researc h and Develop ment Board (AR&DB)	Work station		Performance enhancement of a single stage transonic axial compressor through reduction of tip leakage and secondary flow losses
31	FMPS / Chemistry	RTC, Peenya	Thermal Conductivity Analyzer		The Modified Transient Plane Source (MTPS) method employs a single sided sensor. MTPS method has the	 	The thermal conductivity of solids/polymers/composite s pastes, liquids and nano fluids can be measured. Main research thrust area is Silicone chemistry. PhD research scholars are utilizing the equipment and publications also produced. Consultancy works are also carried out using this equipment

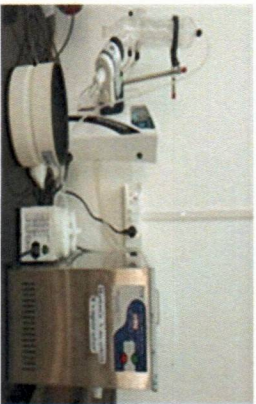
Peeyan

					highest precision, sensitivity, shortest test time, and is the easiest to use among all three techniques. The thermal conductivity range for this equipment is 0.03 to 10 W/m.K and the temperature range varies from Room Temperature to 250 °C		


Page 1

32	FMPS / Chemistry & Physics	RTC, Peenya	FT-IR Spectrophoto meter		<p>FTIR (Fourier Transform Infra-red Spectroscopy) is a precise method used for identifying organic chemicals in a wide range of applications. It is also possible to identify some inorganic compounds. Paints, resins, adhesives, polymers, drugs and coatings are some of examples. It could also be</p>		Used for research on identifying organic chemicals and some inorganic compounds
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Payam

				used for drug – excipient compatibility studies during formulation development		
33	FMPS / Chemistry & FLAHS/BT	RTC, Peenya & GG Campus	Rotary Vacuum Evaporator	Rotary evaporator is used in chemical laboratories for the efficient and gentle removal of solvents from samples by evaporation. The vacuum evaporators lowers the pressure above a bulk liquid which in		Use to remove solvents efficiently via the process of evaporation

Neeyan

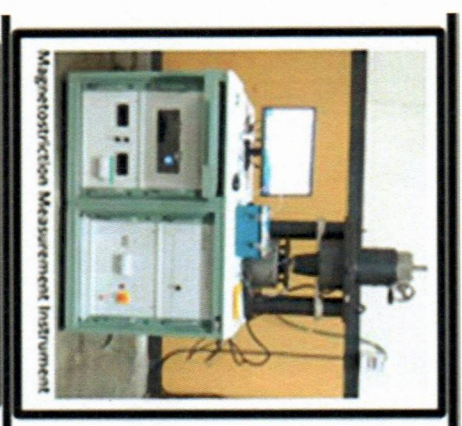
				turn lowers the boiling points of the component liquids in it		
34	FMPS/ Physics	RTC, Peenya	Probe Sonicator	<p>This is an ultrasonic probe sonicator in which ultrasonic energy is produced by converting the electrical energy into mechanical vibrations. This probe sonicator is an ideal instrument to accelerate the chemical</p>		Used for the research in nanotechnology and is widely used by PhD scholars

Peenya



					and or physico chemical reactions, for the purpose of liquid degassing and also for sample cleaning i.e., to removes all dirt & foreign bodies from components which are immersed in the cleaning liquid		

Nequm

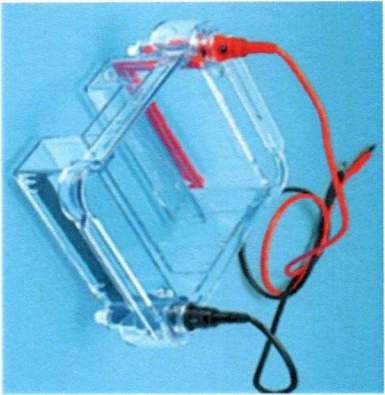

35	FMPS/ Chemistry	RTC, Peenya	Magnetostricti on measurement instrument	12-03- 19, Science and Enginee ring Researc h Board (SERB)	This equipmen t measures quantitativ ely magnetost riction to indicate mechanica l striction in magnetizi ng direction caused when magnetic steel sheet sample was alternately magnetize d and is used for research and developm ent of magnetic steel sheet	Design and development of high performance magnetostrictive cobalt ferrite thin films for sensors and actuator applications
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Neeyan

36	FMPS/ Chemistry	RTC, Peenya	Die sets	12-03-19, Science and Engineering Research Board (SERB)			Design and development of high performance magnetostrictive cobalt ferrite thin films for sensors and actuator applications
37	FMPS/ Chemistry	RTC, Peenya	Thermal conductivity analyser	14-2-2020, Life Sciences Research Board (LSRB)	This gas analyzer measures gas concentration by utilizing the difference of thermal conductivities between two gas components		Development of thermal conductive elastomeric composites for liquid cooled garments to mitigate thermal stress

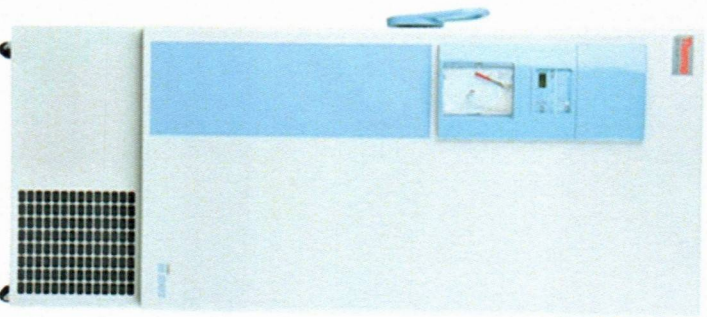
Peenya

38	FLAHS/BT	GG Campus	Electrophoresis Unit, Submarine	Unit includes buffer chamber, safety lid with cables, UV transparent tray and one each 1.5 mm thick 15 and 20 well comb		Used to separate nucleic acids and proteins (DNA/RNA) fragments. Used for research purposes.
39	FLAHS/BT		Vertical Electrophoresis Unit	It comprises three sizes of gel chamber, Mini 10 x 10cm, Mini Wide 20 x 10cm and WAVE Maxi 20 x 20cm. Each gel tank system includes a leak free casting option to		Used for nucleic acid and protein sequencing via vertical gel electrophoresis.


Nayun

					cast your own polyacrylamide gels and the omniPAGE mini can utilize a wide variety of commercially available precast gels from all major manufacturers		


Nequm

40	FLAHS/BT	GG Campus	Minus 80 Freezer		-80°C lab freezers are designed to protect samples. Additional features include energy- savings models that meet today's sustainabil ity demands. They protect samples with the right, energy- efficient ultra-low temperatu re freezers.		Used in research related to medical and clinical applications and also in industrial settings for the storage of samples that require ultra low storage temperatures.
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Neyun

41	FLAHS/BT	GG Campus	Thermal Cycler	<p>It is single aluminium alloy block of 32 wells compatible for 0.2ml PCR tubes and strips. Gradient temp. is from range 30- 100°C with a control accuracy of $\pm 0.2^{\circ}\text{C}$ (30 - 99.9°C). The heating rate is 5°C/sec and the Cooling rate is 4°C/sec.</p>		Used for research in molecular biology to amplify segments of DNA
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Neeyun

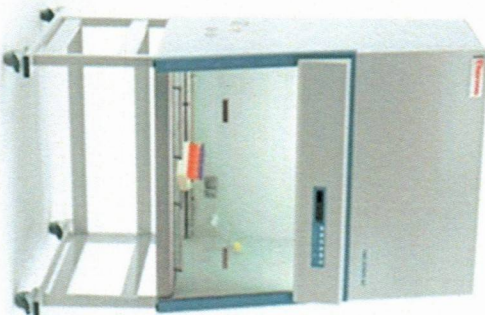
42	FLAHS/BT	GG Campus	MINI Electro blotter Units	<p>Mini Gel Tank is a vertical mini-gel electrophoresis system. This can be used for wet tank transfers using the Mini Blot Module. The unique design of the blot module allows for the use of less transfer buffer which lowers buffer requirement and keeps methanol needed to</p>		Used in molecular biology/ biochemistry / immunogenetics
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Neeyun


43	FLAHS/BT	GG Campus	Microtiter Plate reader		<p>^a minimum. This has five measurement technologies, including Absorbance, Fluorescence Intensity, Luminescence, AlphaScreen, QuantGene SinglePlex, and Time-Resolved Fluorescence. It adjusts the optimal reading range based on signal intensities, and built-</p>	Measures chemical, biological or physical reactions, properties, and analytes within the well of a microplate




Keyur

				in safety controls		
44	FLAHS/BT	GG Campus	Biosafety Cabinet Class II — Type A2	This includes cabinet; adjustable height stand; factory-installed UV light; and one set of armrests. These safety cabinets deliver superior protection with proprietary airflow design, exceptional ergonomics for a safe and comfortable environment, and		Protect cultures from contamination

Key

				outstanding energy efficiency for operational cost savings		
45	FLAHS/BT	GG Campus	CO ₂ Incubator	These CO ₂ incubators provide a premium clean room compatible solution where cultures can grow in a controlled, protected environment. This has optional variable oxygen control which allows for precise control of the culture		Used to culture cells to provide it with the optimum temperature, moisture (sterile environment) and to maintain optimum pH

Kayvan

				environment which is critical particularly with more sensitive cells. It also has airborne contamination protection		
46	FLAHS/BT	GG Campus	Cryopreservation Unit	This unit stores cells, tissues and biological samples. The samples can be safely hold for up to seven months without replenishing LN2		Used to preserve organelles, cells, tissues etc by cooling the samples to very low temperatures. High theoretical interest and practical importance of such studies



Nayana

47	FLAHS/BT	GG Campus	Inverted Phase Contrast Microscope		<p>This microscope has high-performance optics configured in it. It is durable, compact and ideal for modern workstations</p>		<p>This helps in the research of cell culture analytics, Vitro Fertilization (IVF) and imaging fluorescence stains</p>
48	FLAHS/BT	GG Campus	Binocular microscope		<p>This microscope has coaxial coarse/fine knobs. It has a quadrupie revolving nose piece (fixed), plane stage of 120 x 132mm. With right hand mechanical</p>		<p>This helps to view the microbial world and to examine tissues and cells</p>


Kayun

					l stage, condensor 1.25 (oil immersion) with aperture iris diaphragm and blue rinor is available. The observatio n tube (indination 45° interpupil ary distance adjustmen t range, observatio n 53-75 millimeter s) with diopter adjustmen t on the left		


Noting

49	FLAHS/BT	GG Campus	Stereozoom microscope		<p>This consists of German imported optics L.E.D light in microscope with hi definition clarity, hassle Free focus with 2 objectives and 2 lenses</p> 	Helps in three-dimensional view of a specimen and dissection
50	FLAHS/BT	GG Campus	Olympus CX23 Binocular Microscope	<p>The built-in LED light source provides uniform and stable illumination for long term with low power consumption, and its reduced blue color preserves vivid</p> 	Helps in the view of a specimen	


Keyman

				colors of the sample.		
51	FLAHS/BT	GG Campus	BOD (Biological Oxygen Demand) Incubator	This is a double walled modular structure with 80mm thick PUF insulation. The observation glass door helps for quick view and avoid temp. variation. The refrigeration system is CFC Free R 134 A / R 404 (Eco Friendly)		Used for cell culture and fungal growth and to measure the amount of oxygen consumed by microorganisms in water or wastewater samples or storage, testing of Bacteria, fungi and other micro-organisms


Keyur

52	FLAHS/BT	GG Campus	Sorvall ST4 Plus Centrifuge	<p>This device is used for the separation of fluids, gas or liquid, based on density. The separation is achieved by spinning a vessel containing material at high speed. Centrifugal force pushes heavier materials to the outside of the vessel. It has a capacity up to 4L, including 196 blood tubes and</p>		Used for research purposes and used to purify cells, sub-cellular organelles, viruses, proteins, and nucleic acids
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Kayum

				96, 15ml conical tubes and 13 available rotors		
53	FLAHS/BT	GG Campus	Microprocessor Colony Counter	<p>The instrument uses the latest microprocessor technology and advanced engineering techniques so as to give enhanced accuracy and reproducibility. A built-in averaging facility allows the calculation of average colony counts</p> 	Used to estimate or count of microorganisms by counting individual colonies for physiological or biochemical studies. It is applicable to life sciences, cell and molecular biology and Pharmaceutical research.	

Neeraj

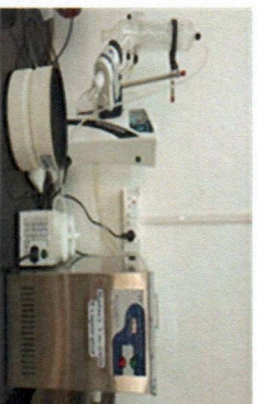
					using multiple dishes. The optimum viewing of colonies is aided by peripheral glare free illumination graticule disc provided in the instrument.		
54	FLAHS/BT	GG Campus	Borosil Labquest Steam Distillation		This is a borosilicate glass assembly along with SS steam generator. It has a process kill switch to halt the process in case of accidental door opening.		

Keyum

					<p>The detachable bottom drip tray provides extra protection against acidic attack during sample loading. Anytime alkali addition during the distillation cycle is possible. The magnifier magnifies the colony area</p>		
55	FLAHS/BT	GG Campus	Gerber Centrifuge		<p>Gerber centrifuge is used for separating particles from a solution according</p>		Used to determine the fat content of substances

Keyun

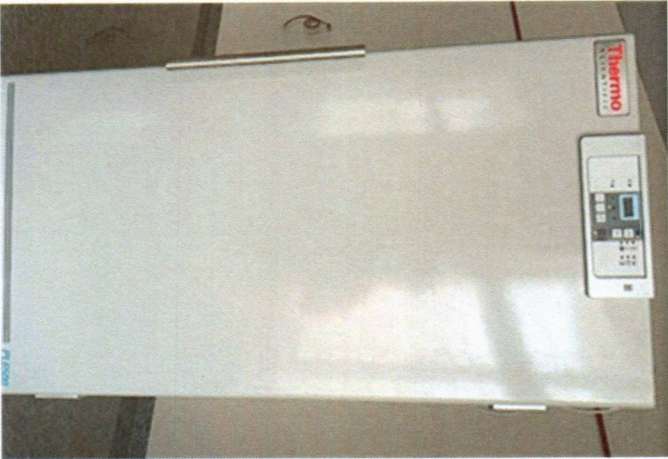
					to their size, shape, density, viscosity and rotor speed. The particles are usually cells, subcellular organelles, viruses, large molecules such as proteins and nucleic acids. It works on the basic theory of sedimentation		
56	FLAHS/BT	GG Campus	Rotary Vacuum Evaporator		Rotary evaporator is used in chemical laboratories for the efficient and gentle		Use to remove solvents efficiently via the process of evaporation



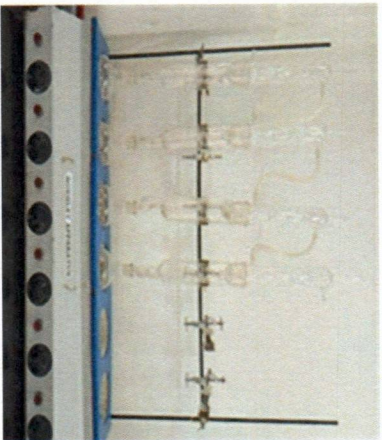
Keyum

					removal of solvents from samples by evaporation. The vacuum evaporators lower the pressure above a bulk liquid which in turn lowers the boiling points of the component liquids in it		


Very I

57	FLAHS/FT	GG Campus	-40° C Deep Freezer	Each unit is fitted with digital temperature controller for easy temperature settings; other accessories that may include are temperature chart recorder, data logger, buzzer alarm and caster wheels etc. These units are designed in either vertical (upright) or horizontal designs.		Ideal for routine storage of samples in the clinical, pharmaceutical and biomedical research
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Key in

					They play important role in safe storage of reagents, frozen vaccines and other temp. sensitive specimens that require freezing temperature up to - 40 degree.		
58	FLAHS/FT	GG Campus	Soxhlet Apparatus		It is used for the extraction of a lipid from a solid material. Soxhlet extraction is used when the desired compound has a limited solubility		Used widely for extracting valuable bioactive compounds from various natural sources

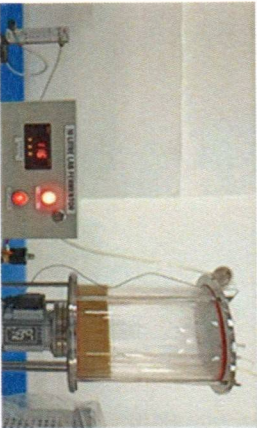
Keyun

					in a solvent, and the impurity is insoluble in that solvent. It allows for unmonitored and unmanaged operation while efficiently recycling a small amount of solvent to dissolve a larger amount of material		
59	FLAHS/FT	GG Campus	Water bath		A water bath is laboratory equipment made from a container filled with heated water. It is		

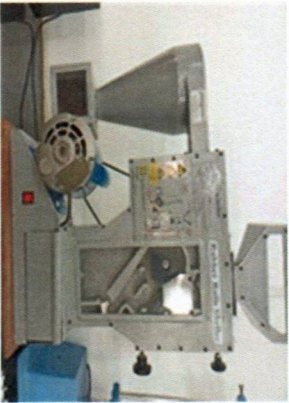
Keyum

					used to incubate samples in water at a constant temperature over a long period of time. It is also used to enable certain chemical reactions to occur at high temperature. Water baths are preferred heat sources for heating flammable chemicals, as lack of open flame prevents ignition	

Keyun

60	FLAHS/FT	GG Campus	Lab Fermentor (Capacity: 10L)	<p>Fermentation is a metabolic process that produces chemical changes in organic substrates through the action of enzymes. In biochemistry, it is narrowly defined as the extraction of energy from carbohydrates in the absence of oxygen. In food production, it may more broadly refer to</p>		Used in basic research and development, manufacturing of biopharmaceuticals, food and food additives, chemicals, and other products
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Figura

				any process in which the activity of microorganisms brings about a desirable change to a foodstuff or beverage. Fermentor is sterilized using high pressure steam between batches.		
1	FLAHS/FT	GG Campus	Rice milling equipment (Rubber Rolls Sheller)	The rubber roll sheller is used in rice processing plants if the paddy rice is to be shelled carefully at high capacities.		This equipment assist and support researchers, food producers, processors, marketers, and entrepreneurs to develop new products and to improve upon and promote existing ones

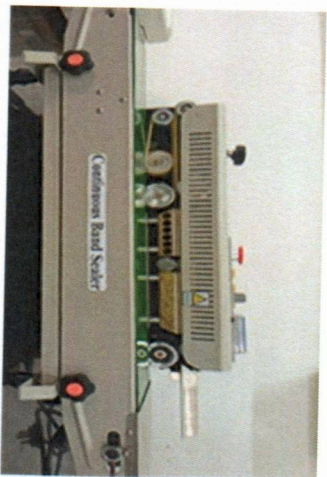
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Verma

2	FLAHS/FT	GG Campus	Freeze drier	<p>Freeze drying is the removal of ice or other frozen solvents from a material through the process of sublimation and the removal of bound water molecules through the process of desorption. This is an excellent method for preserving a wide variety of heat-sensitive materials</p>		Used for the research on the application of Vacuum Freeze-drying Technology for Food processing
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Kayum

				such as proteins, microbes, pharmaceuticals, tissues & plasma		
3	FLAHS/FT	GG Campus	Continuous Band Sealer	Continuous Band Sealer Machine is capable of sealing a wide range of bags such as stand-up pouches (Doypack), gusseted bags, pillow-type bags, sachets, barriers bags. The typical products being packaged with these units		


Prayur

					include Aggregate s, Coffee, Chemicals, Spices, Soaps, Sauces, Snacks, Cookies, Chocolate s, Cereals, Dyes, Grains, MREs, Pastas, Pet Food, Pastries, Flours, Parts, Tortillas, Vegetables , and many other products		
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4	FLAHS/FT	GG Campus	Environmental Chamber	<p>An environmental test chamber replicates conditions which is used to accelerate the effects of exposure to the environment. Thermal Shock testing is used to simulate how materials will react when exposed to changes in extreme climatic conditions, such as going from extremely cold to extremely</p>		<p>Used to conduct research on materials subjected to multiple environmental conditions like temperature and humidity conditions, temperature only conditions</p>
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Keyur

				hot conditions in a very short period of time (usually only few seconds)		
5	FLAHS/FT	GG Campus	Vacuum packing machine – Hitech Pack	Vacuum packing is a method of packaging that removes air from the package prior to sealing. This method involves placing items in a plastic film package, removing air from inside and sealing the package.		Use to effectively preserve foods.

Key

				Shrink film is sometimes used to have a tight fit to the contents.		
6	FLAHS/FT	GG Campus	Rotational Viscrometer (LABMAN)	Viscosity is usually described as the property of a fluid which determines the rate at which local momentum differences are equilibrated. Rotational viscosity is a property of a fluid which determines the rate at which		Used in the research of manufacturing of High-quality food

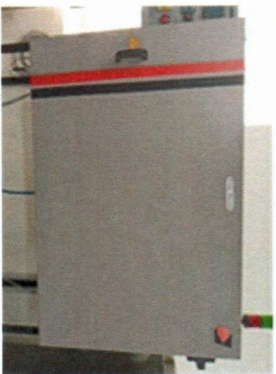
Peyman

					local angular momentum difference are equilibrated. If there is a lack of equilibrium between these degrees of freedom, then the rate of equilibration will be determined by the rotational viscosity coefficient	
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Keyman

7	FLAHS/FT	GG Campus	Deep Fryer – GVP		<p>Deep fryers generally have a basket to lower the food into the oil tank and raise it when the food has finished cooking. Fryer baskets purchased separately are not standardized and when selected, need to fit into the deep fryer.</p>		Used in the research of deep frying practices
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Keycard

8	FLAHS/FT	GG Campus	Tray drying unit	Tray dryer can be electrically heated, and steam heated. Tray Dryer comes in 6 trays, 12 trays, 24 trays, 48 trays, 96 trays and 192 trays. It is an automate d dryer with RH, temperatu re sensor, data logger with computer		Used for the research in food preservation
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Neelima

9	FDS/Oral medicine and radiology	GG Campus	Cone Beam Computed Tomography (CBCT)	<p>A Panaromic image can be constructed from a CBCT full mouth or full skull scan.</p> <p>Carestream CS 9300 has panoramic imaging and Cephalometric capabilities that allows to take the required scans as desired.</p> <p>Sectional: 5x5 FOV, 1144 MGy/cm², Maxilla/Mandible: 10x5 FOV, 612</p>		<p>Radiographic imaging for accurate, three-dimensional (3D) imaging of hard tissue structures. Research on dental image analysis and consultancy. Publications in reputed journals</p>
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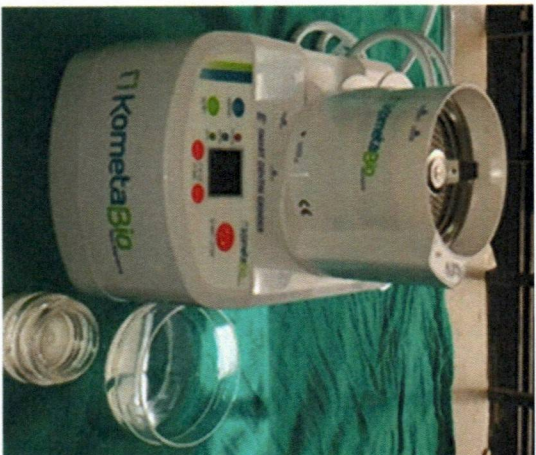
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				<p>MGy/cm², Full mouth: 10x10 FOV, 1070 MGy/cm², Full Skull: 17x 13.5 FOV, 2497 MGy/cm²</p>		
10	FDS	GG Campus	Sigma High Pressure Triple Walled Vertical Autoclave	<p>This is a sterilizing machine which works on the principle of high-pressure steam for sterilizing flasks, medical tools, beakers, etc. The vertical chamber design maximizes space utilization, while</p>		<p>Used for effective sterilization requirements in bacteriological and research laboratories, hospitals and clinics</p>

Kyus

				microprocessor control system enables comfortable working		
11	FDS	GG Campus	Stereo Microscope	This is an optical microscope with a fixed or adjustable magnification objective and is designed for observation of samples at low magnifications (max 300 times). These top-level zoom microscopes are perfect for		Used to examine the specimen with high-performance precision and generate three-dimensional images allowing observation for the highest demanding microscopy applications



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				analyzing all kinds of material surfaces or to observe and prepare biological samples		
12	FDS	GG Campus	Smart Dentin Grinder-Kometabio White	This portable grinder with electric and manual operation mode and digital display has a wattage of 300-500W and frequency 8Hz. This uses extracted teeth to create superior quality, autogenous dentin		Used in the assessment of inorganic and organic components in demineralized tooth graft material. Conference presentation done using the Smart Dentine grinder for AIP conference, and published in AIP conference proceedings. The apparatus is in use for clinical study


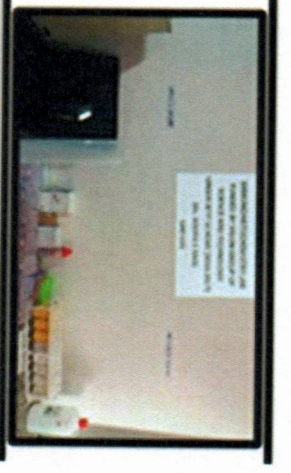
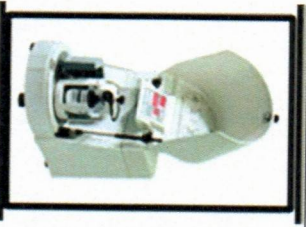
Keyur

					<p>graft, chairside within 15 minutes. Hence it reduces healing time, maintains bone mass and ridge height which is necessary for rehabilitation. It also reduces cost and no fear of graft rejection. The grinder has a sieve and 12 autoclavable jars and reagents for graft preparation.</p>		
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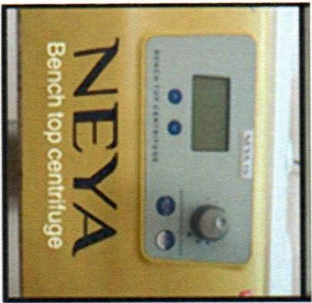

Neeyan

13	FDS	GG Campus	Platinum Crucible	1-5-2015, DBT Welcome Trust	They are generally used for sample preparation, wet chemistry, ash testing, and Loss on Ignition (LOI)		Development of Novel Zirconia Reinforced Mica Glass Ceramic Composite for Dental Restorative Applications
14	FDS	GG Campus	Trinocular optical Microscope	2-1-2018, Vision Group on Science and Technology (VGST)	This microscope is primarily used to study biological specimens such as cells and microorganisms and their vital processes		Evaluation and correlation of the prognosis of cystic lesions to decompression by clinical, histological, radiographic assessment and molecular marker expression

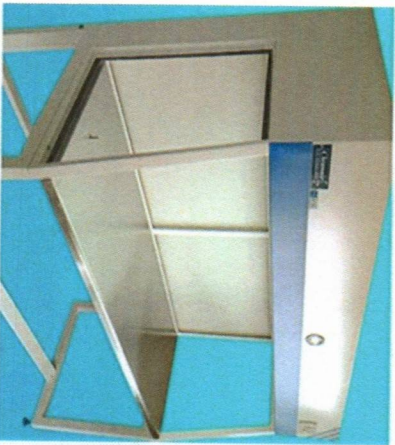
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15	FDS	GG Campus	IHC Lab, pH meter, Decloaking Chamber and Hot Air Oven	2-1-2018, Vision Group on Science and Technology (VGST)	Useful for heat induced antigen retrieval		Prognostic significance of ALDH1, Bmi1&OCT4 in Oral Epithelial Dysplasia and Oral Squamous Cell carcinoma
16	FDS	GG Campus	IHC Lab, Humidifying chamber and Paraffin/ Processing and Staining section	2-1-2018, Vision Group on Science and Technology (VGST)	Used for analysing the prolong effect of humidity on components to fix quality parameter		Prognostic significance of ALDH1, Bmi1&OCT4 in Oral Epithelial Dysplasia and Oral Squamous Cell carcinoma
17	FDS	GG Campus	Ball Milling Machine	30-9-2019, India Alliance Fellowship	This is a small cutting machine that uses a CAD/CAM system		Experimental and simulation studies on prediction of crack initiation and propagation of fracture in dental ceramic restorations

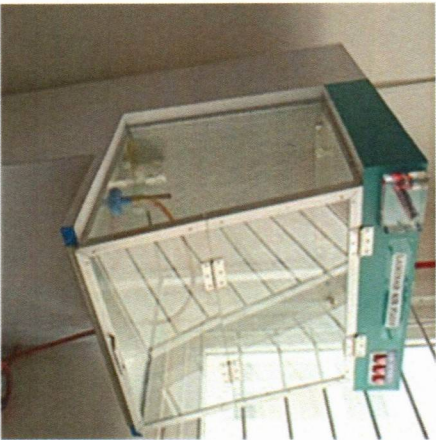
Neeraj

18	FDS	GG Campus	Bench Top Centrifuge	15-10-19, Indian Council for Medical Research (ICMR)	This equipment to separate and purify molecular mixtures in a liquid medium based on the density gradient		Characterization of liquid platelet rich fibrin as a novel drug delivery system for mineral trioxide aggregate and bioceramic
19	FDS	GG Campus	Deep Freezer	15-10-19, Indian Council for Medical Research (ICMR)	Used to store products/samples for longer periods		Characterization of liquid platelet rich fibrin as a novel drug delivery system for mineral trioxide aggregate and bioceramic


Neelima

20	FPH	GG Campus	Horizontal Laminar Air Flow Cabinet	<p>Laminar air flow cabinets provide an aseptic space to work with a product or specimen, without contaminating it with particulates such as microorganisms. For user protection, where chemically hazardous or infectious materials are going to be used in the laminar flow equipment, a biological</p>		<p>Used in the pharmaceutical industry to protect drugs and chemicals from contamination. Used widely for in research and development purposes</p>
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Neqma

				safety cabinet is required.		
21	FPH	GG Campus	Sigma Vertical Laminar Air Flow Cabinet	A laminar air flow cabinet (LAF) is designed for preventing contamination of biological samples, semi-conductor wafers and sensitive materials. Laminar air flow cabinet maintains a unidirectional flow of HEPA-filtered air over the work area and protects the		Used in the pharmaceutical industry to protect drugs and chemicals from contamination and provide a sterile environment. Used widely for in research and development purposes

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					working environment from dust and other air-born particulates. It consists of stainless Steel Cabinet, Filter pad or pre-filter, HEPA Filter, Fan or blower, UV Lamp, Working stations Fluorescent lamp etc.		
22	FPH	GG Campus	Spectrophotometer		This equipment is micro controller based, standalone unit with automatic source optimisation and		Used for the research of drug concentration

					200 – 1100 nm range, 1nm bandwidth . The data processing (through optional PC) has Peak- pick, Point-pick, Expansion / Overlaying / Averaging / Subtraction / 1st to 4th derivatives of spectra, besides storage and retrieval of data		
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Verma