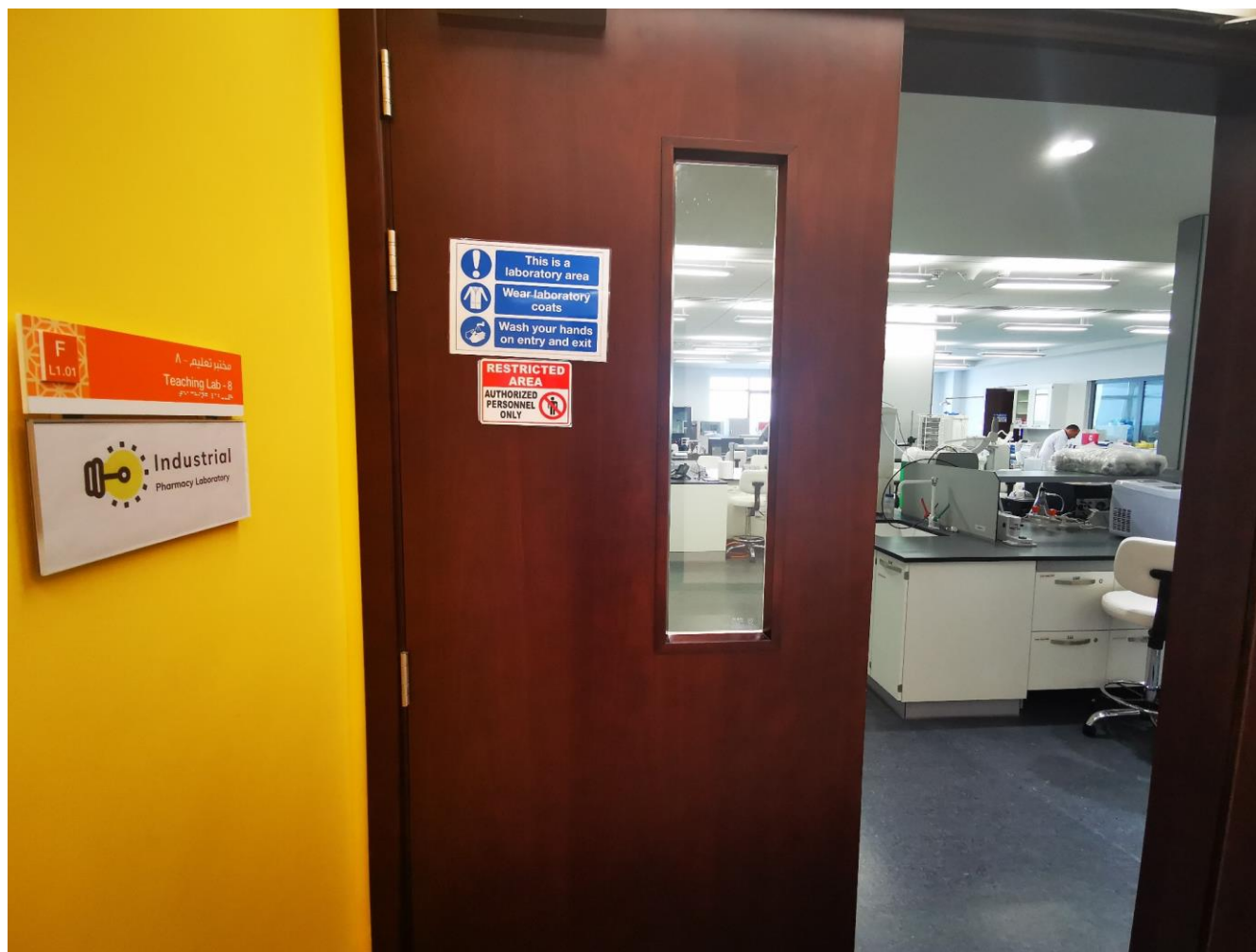





Industrial


Pharmacy Laboratory




Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>The High Performance Liquid Chromatography is used for identifying, quantifying and purifying individual components of a mixture. The separation principle of HPLC is based on the distribution of the analyte (sample) between a mobile phase (eluent) and a stationary phase (packing material of a column). Different constituents of a sample are eluted at different times based on their physicochemical properties.</p> <p>The Photo Diode Array Detector is a UV/vis spectrophotometer, which operates at fixed resolution of 1.2 nm and within a range of 200-800 nm.</p> <p>The Electrochemical Detector allows DC, pulse and scan modes of operation for analysing a wide range of compounds.</p>	Alliance HPLC Waters e2695 separation module connected to 2998 Waters PDA Detector and 2465 Waters Electrochemical Detector	HPLC: e2695 Waters PDA: 2998 Waters ECD: 2465 Waters	Waters/ Qatar Scientific


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
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Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>The Ultra Performance Liquid Chromatography is a liquid chromatography technique used to separate different components in a mixture. UPLC operates at higher pressures (15,000 psi) and allows for lower particle sizes in columns.</p> <p>The TUV Detector is a tunable, dual-wavelength UV/Visible detector specifically designed and optimized for the entire line of ACQUITY UPLC systems.</p>	<p>Acquity Waters UPLC connected with TUV Detector</p>	<p>Acquity H-class system</p>	<p>Waters/ Qatar Scientific</p>


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>The High Performance Liquid Chromatography is used for identifying, quantifying and purifying individual components of a mixture. The separation principle of HPLC is based on the distribution of the analyte (sample) between a mobile phase (eluent) and a stationary phase (packing material of a column). Different constituents of a sample are eluted at different times based on their physicochemical properties.</p> <p>The Diode Array Detector is designed for highest optical performance long-life deuterium with RFID tag and tungsten lamps for highest intensity and lowest detection limit over a wavelength range of 200 – 800 nm.</p> <p>The FLD Detector is designed for highest optical performance, flash lamp for highest intensity and lowest detection limit. Multi-wavelength mode for on-line spectra. Easy front access to flow cell for fast replacement.</p>	Agilent Technologies infinity connected with DAD Detector and FLD Detector	HPLC-DAD/FLD: 1260 Infinity	Agilent/ Labins


Instrument Application	Name of the Instrument	Model no	Manufacture/Supplier
 <p data-bbox="203 1046 1227 1222">Liquid chromatography-mass spectrometry (LC-MS) is a technique that uses liquid chromatography (or HPLC) with the mass spectrometry. It is an analytical chemistry technique that combines the physical separation capabilities of liquid chromatography (or HPLC) with the mass analysis capabilities of mass spectrometry. LC-MS is commonly used in laboratories for the qualitative and quantitative analysis of drugs.</p>	Liquid Chromatography Mass Spectrometry	LCMS-2020	Shimadzu/Zahrawi

Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>A drying chamber which can operate routine drying and sterilization tasks with a temperature range up to 300 °C. The ED series ensures fast, uniform drying and comes with a controller and LCD display.</p>	Binder Convection oven	ED-115	Binder/ BDH


Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="199 1082 1229 1185">A standard oven used to heat or dry samples, comes with a microprocessor control system, over-temperature safety limit, manual restart, and a heavy-gauge steel construction for durability.</p>	VWR standard Oven	1324G2	VWR International/ BDH

Instrument Application	Name of the Instrument	Model no	Manufacture/Supplier
 <p data-bbox="199 1038 1229 1139">A standard oven used to heat or dry samples, comes with a microprocessor control system, over-temperature safety limit, manual restart, and a heavy-gauge steel construction for durability.</p>	VWR standard Oven	1324G2	VWR International/ BDH


Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Used for drying application needs in vacuum, digital temperature controller, digital vacuum switching gauge.</p>	VWR® Vacuum Oven, Stainless Steel	1470-2	VWR International/ BDH


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="203 1217 1232 1315">Freeze-drying is used in sample preparation and for the preservation and storage of biologicals, pharmaceutical samples, especially suited for substances that are heat sensitive.</p>	Freezone Triad/ Freeze dry system	7400030	Labcono/ Sedeer

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Electrospinning is a technique for generating ultrathin fibres. It is an efficient method which uses electric field to produce fine fibres, reducing their diameter to the nanometre scale. These fibres have wide applications in industry such as pharmaceutical, medical, etc.</p>	Electrospinning Machine	Na Bond NEU	Na Bond/ BOD


Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Used for cleaning of components, degassing of HPLC solvents/mobile phases, mixing fluids and compounds.</p>	Ultrasonic water bath	Grant XUB25	Grant/ Qatar scientific

Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Laboratory Water Bath can be used as a standard water bath or as a boiling water bath. User simply sets temperature into "boiling mode". The unit has digitally controlled temperature with a built-in timer.</p>	Shaking Hot TUB	290400-2	Boekel/ BOD


Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="199 1174 1229 1241">Setting and monitoring cleaning cycles up to 99 min, and displays solution temperature in °C. Can be also used for degassing of HPLC solvents/mobile phases.</p>	Branson ultrasonic cleaner	5510E-DTH	Branson/ EWI

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>The centrifuge is designed to separate liquid suspended materials having different densities and particle size. It provides fast, efficient processing of micro-volume samples.</p>	Micro CL 21R Centrifuge	75002470	Thermoscientific/ Sedeer


Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>This speed vac can be used for sample preparation prior to chromatography analysis.</p>	Speed Vac concentrator	ISS110-230	Thermoscientific/ Sedeer

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Milli-Q® Direct systems produce both pure and ultrapure water directly from tap.</p>	<p>Milli-Q water purification system</p>	<p>Direct 8</p>	<p>Millipore/ Sedeer</p>


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="203 1114 1171 1145">Milli-Q® Direct systems produce both pure and ultrapure water directly from tap.</p>	Milli-Q water purification system	Direct 8	Millipore/ sedeer

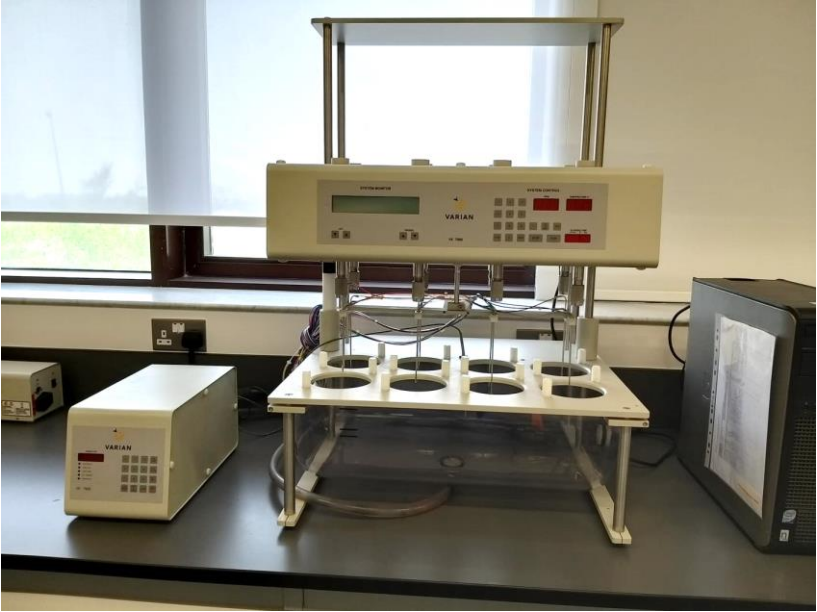
Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Outstanding optical performance, perfect for a wide variety of imaging applications, polarising techniques, and polarizing microscopy under both diascopic and episcopic illumination.</p>	Polarizing Microscope	Eclipse LV100NPOL	Nikon/ BOD


Instrument Application	Name of the Instrument	Model no	Manufacture/Supplier
 <p data-bbox="203 874 1229 1011">It is used for heating, stirring and evaporation. The Reacti-Therm™ Heating/Stirring Module provides uniform dry heat to the samples, coupled with the Reacti-Vap™ Evaporator (simultaneous or separate delivery of pressurized gas) to provide a complete solution for derivatization or other small-scale reactions, like HPLC or GC.</p>	Reacti Vap Evaporator	TS 18826	Thermoscientific/ Technolab


Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>High speed, small volume sample concentrator. Commonly used for evaporation of solvents following solid phase extraction clean-up of drug samples.</p>	Turbo Vap LV	TV0913N15175	Caliper/ BOD

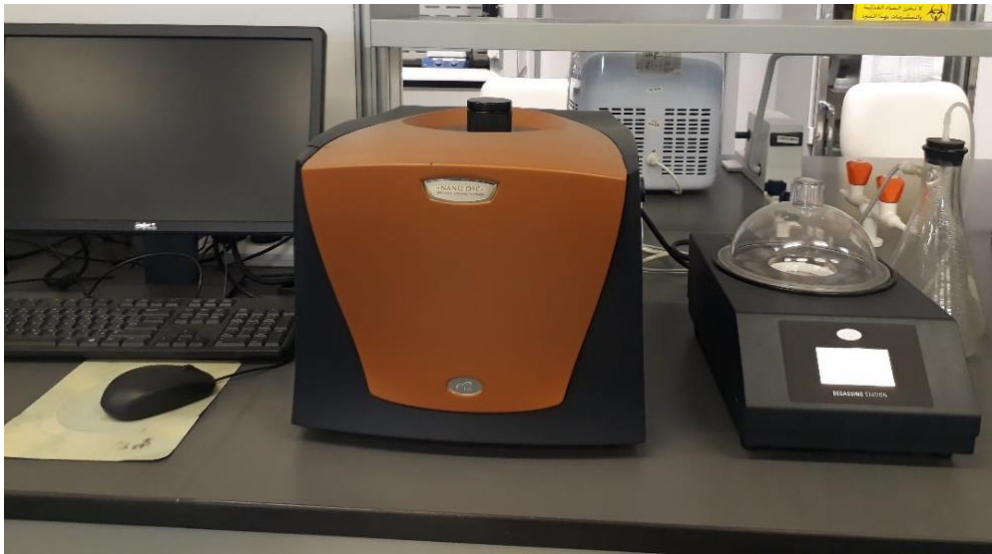
Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="203 962 1227 1062">Dissolution testing measures rate of dissolution from a dosage form, such as tablet, capsule, etc. The dissolution of a drug is important for its bioavailability and therapeutic effectiveness.</p>	Dissolution Apparatus	VK7000	Varian/ Labins


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Evaluate the disintegration characteristics of formulations and the quality control of different dosage forms.</p>	Tablet disintegration tester	PTZS	Pharmatest/ Trioscare

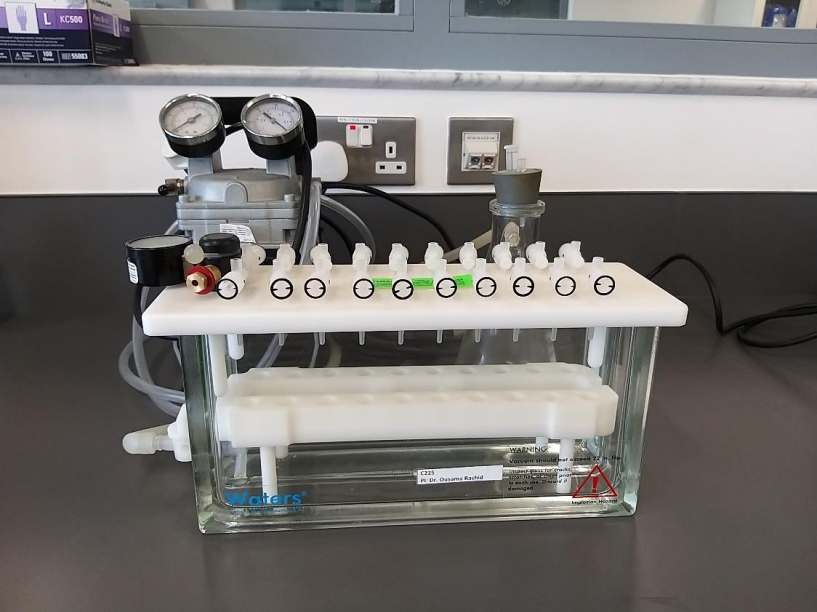
Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="199 940 1229 1003">Testing tablet hardness, and three other physical parameters: diameter, length and thickness.</p>	Tablet Hardness tester	TBH125	Erweka/ Techno lab

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="201 965 683 1005">Testing tablet friability and/or abrasion.</p>	Tablet Friability tester	TAR220	Erweka, Techno lab

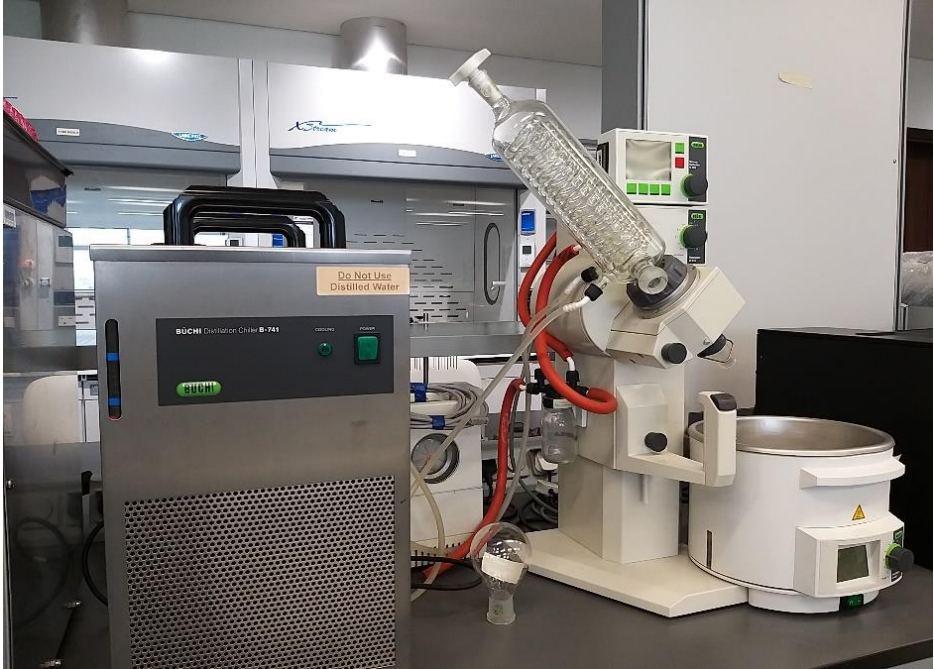
Equipment/Instrument

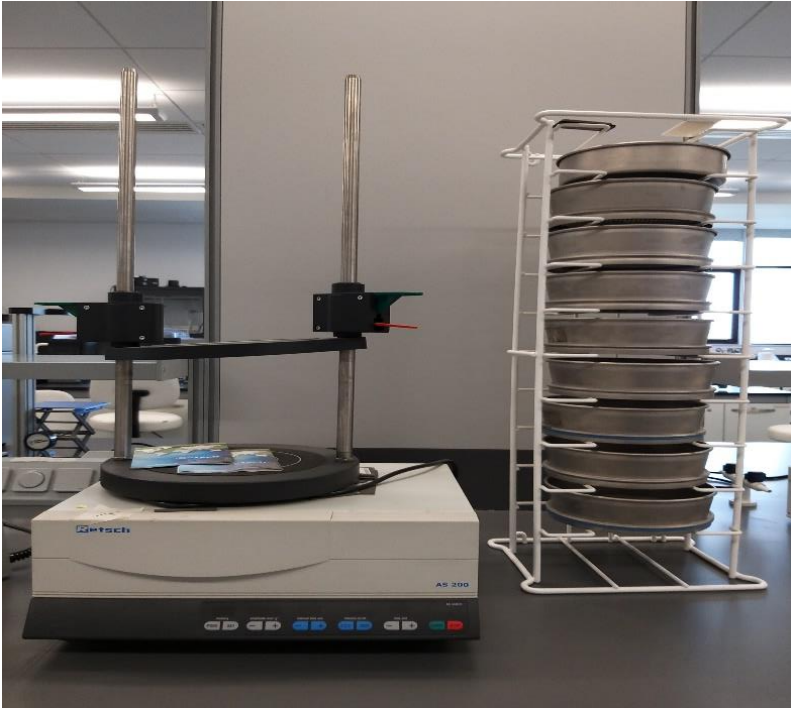
Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Determines the thermal stability and heat capacity of proteins and other macro-molecules in dilute solutions.</p>	Nano DSC	602000	TA instruments/ Zahrawi


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Automatic operation, supply two-four litres of distillate per hour, good distillate quality, conductivity approx. 2.3 $\mu\text{s}/\text{cm}$ at 25 °C. It complies with international pharmacopeia requirements.</p>	GFL Water Distiller	2004	GFL/ BOD


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>The vacuum manifold can enhance the robustness and reliability of pharmaceutical applications and permits samples to elute directly to test tubes using solid-phase extraction cartridges. Pharmaceutical laboratories use solid phase extraction to concentrate and purify samples for analysis.</p>	20-Position SPE Manifold	Wat200608	Waters/ Qatar scientific

Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Rotary evaporators provide a complete solution for laboratory solvent evaporation processes by integrating a vacuum controller, vacuum pump, and recirculating chiller.</p>	Rotavapor	R-210	Buchi/ BDH


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="203 1059 1227 1161">The analytical sieve shakers of the series AS 200 are used in research & development, quality control of raw materials, suitable for dry and wet sieving, excellent separation efficiency even with short sieving times.</p>	Sieve shaker	AS200	Retsch/ BOD


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="203 1059 1227 1158">High pressure homogenisation is an efficient and easy technique for liposome/emulsion processing. Pharmaceutical emulsions can be processed to a reduced size and narrow distribution.</p>	EmulsiFlex	EmulsiFlex-C3	Avestin/


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>The single punch Erweka tablet press EP-1 can manufacture tablets.</p>	Tablet machine	EP-1 Tablet press	Erweka/ Technolab


Equipment/Instrument


Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>UV/Vis spectroscopy is used in analytical chemistry for the quantitative determination of different analytes. In the pharmaceutical lab, the main use is in the area of in vitro dissolution and release testing studies.</p>	UV-Visible spectrophotometer	Cary 50 Conc	Varian/ Labins

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="197 1123 1223 1193">Freezer temp range -18 to -25 °C, designed for general-purpose lab storage and routine sample protection.</p>	Thermo scientific Freezer	ES series	Thermoscientific/ Sedeer

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Store samples at temperatures from 1° to 12 °C.</p>	Thermo scientific Fridge		Thermoscientific/ Sedeer

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="208 1045 492 1077">Upright Freezer.- 20 °C.</p>	Lab freezer	FF-130	DAEWOO/ BOD

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p data-bbox="199 1023 1209 1086">Store samples at temperatures from 1 to 8°C. Designed for general-purpose lab storage and routine sample protection.</p>	Thermo scientific Fridge	Revco	Thermoscientific/ Sedeer

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
 <p>Designed to measure small mass in the sub-milligram range. The measuring pan of an analytical balance is inside a transparent enclosure with doors so that dust does not collect and so any air currents in the room do not affect the balance's operation.</p>	Analytical Balance	Kern ABJ-NM	Kern/ BOD

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>DSC is a thermal analysis apparatus measuring physical properties of a sample and determines the temperature and heat flow associated with material transitions as a function of time and temperature.</p>	<p>Perkin Elmer DSC-8000& Intracooler cooling accessory.</p>	<p>DSC-8000</p>	<p>Perkin Elmer/ Petro Emphor</p>

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>Equipment designed to evaluate the mechanical properties of materials.</p>	<p>Instron Tensile Tester & -air vacuum pump</p>	<p>3343L1477</p>	<p>Instron/ BDH</p>

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>X-ray diffraction is a powerful technique for characterizing crystalline materials. It provides information about structures and phases.</p>	<p>Bruker XRD with chiller</p>	<p>XRD D8 Advance</p>	<p>Bruker/ Khalid Scientific</p>

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
In the pharmaceutical lab, drug dissolution testing is routinely used to provide in vitro drug release information for quality control purposes.	Agilent Dissolution apparatus	709-DS	Agilent/ Labins

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>Gel Permeation Chromatography (GPC) or Size Exclusion Chromatography (SEC), is a technique used to determine the average molecular weight distribution of a polymer sample. GPC separates molecules in polymers by size and provides the molecular weight distribution of a material.</p>	GPC MAX	VE2001GPC	Viscotek/ BDH

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>The Zetasizer Nano range of instrument is used to measure particle size, Zeta potential and molecular weight of particles or molecules in a liquid medium.</p>	Zetasizer	ZEN3600	Malvern/ BDH

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>Spray drying and spray chilling is widely used in the pharmaceutical field. Spray drying produces a dry powder from a liquid or slurry by rapidly drying with a hot gas. Spray congealing produces particles by spraying the melt into a cooling chamber while low temperature air is passing.</p>	Mini Spray drier	B-290	Buchi/ Petro Emphor

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>FTIR is a technique used to obtain an infrared spectrum of absorption or emission of a solid or liquid, the spectrum corresponds to the characteristic functional groups and bands present in a chemical substance.</p>	Fourier-transform infrared spectroscopy	FT/IR 4200	JASCO/ BDH

Equipment/Instrument

Instrument Application	Name of the Instrument	Model no	Manufacture/ Supplier
<p>DSA is an image analysis method for determining the contact angle from the shadow image of a sessile drop and the surface tension or interfacial tension from the shadow image of a pendant drop.</p>	<p>Drop shape analyzer</p>	<p>DSA25E</p>	<p>KRUSS/ Mannai</p>









