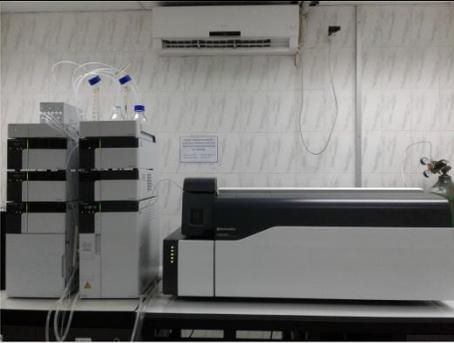
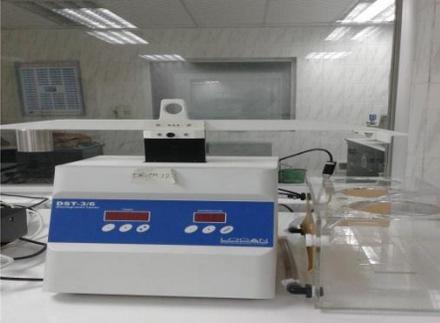


Major Analytical Instruments	Picture	Purpose
<p>Isotope dilution LC/MS/MS Mass Spectroscopy with accessories</p>		<p>Primary and reference technique for qualification, quantification and confirmation of inorganic(s) at isotope level with highest accuracy, precision and sensitivity as well as lowest uncertainty</p>
<p>Isotope dilution Laser Ablation ICPMS</p>		<p>A type of mass spectrometry which is capable of detecting metals and several non-metals at concentrations as low as one part in 10^{15} (part per quadrillion, ppq) on non-interfered low-background isotopes. This is achieved by ionizing the sample with inductively coupled plasma and then using a mass spectrometer to separate and quantify those ions.</p>
<p>Isotope dilution Gas Chromatography Mass Spectrophotometer-Mass Spectrophotometer</p>		<p>Primary and reference technique for qualification, quantification and confirmation of organic(s) at isotope level with highest accuracy, precision and sensitivity as well as lowest uncertainty.</p>
<p>Homogenizer (Heavy duty)</p>		<p>Sample preparation equipment required for pulverization of large volume of sample such as 30 kg or L for Proficiency Testing (PT) program.</p>

<p>Accessories for Mass Spectrophotometer (SPE complete set, Kuderna Danish concentrator), Microwave Digester & Special Glassware set</p>		<p>Accessories required for different MS system for extraction and concentration of organic molecules from complex matrix matched certified reference material.</p>
<p>Automatic Sieve shaker</p>		<p>Automatic system for both powder and liquid type CRM homogenization, drying, gravimetric dispensing, bottling, sealing, labeling batch by batch basis.</p>
<p>Auto Titrator</p>		<p>It titrates automatically.</p>
<p>Protein distillation apparatus</p>		<p>Semi automated system to distillate protein from different type of matrices.</p>

Automatic CRM and Calibration Equipment Set		Labeling dispensing, bottling & sealing machine (powder and liquid)
PC based UV-Visible Spectrophotometer (UV-VIS)		It is routinely used in analytical chemistry for the quantitative determination of different analytes, such as transition metal ions, highly conjugated organic compounds, and biological macromolecules.
Bomb Calorimeter		A bomb calorimeter is a type of constant-volume calorimeter used in measuring the heat of combustion of a particular reaction. Bomb calorimeters have to withstand the large pressure within the calorimeter as the reaction is being measured.
CHNS Analyzer		CHN Analyzer is a scientific instrument which can determine the elemental concentrations in a given sample. It is used to measure Carbon (C), Hydrogen (H) and Nitrogen (N).

<p>Biochemistry Analyzer</p>	 <p>The image shows a HumaStar 600 biochemistry analyzer. It is a white machine with two large red doors on the front. The brand name 'HumaStar 600' is visible on the top panel.</p>	<p>The Biochemistry Analyzer is an instrument that uses the pale yellow supernatant portion (serum) of centrifuged blood sample or a urine sample, and induces reactions using reagents to measure various components, such as sugar, cholesterol, protein, enzyme, etc.</p>
<p>Dissolution Tester</p>	 <p>The image shows a Copley dissolution tester. It consists of a white control unit with a digital display and buttons, mounted on a metal stand. Below the unit are several glass vessels (beakers) held in place by a rotating mechanism.</p>	<p>In the pharmaceutical industry, drug dissolution testing is routinely used to provide critical in vitro drug release information for both quality control purposes, i.e., to assess batch-to-batch consistency of solid oral dosage forms such as tablets, and drug development, i.e., to predict in vivo drug release profiles.</p>
<p>Disintegration Tester</p>	 <p>The image shows a disintegration tester in a laboratory setting. It is a white machine with a blue control panel and a digital display. The machine is used to test whether tablets or capsules disintegrate within a defined period of time when placed in a liquid medium.</p>	<p>Tablet disintegration testers. Disintegration testing determines whether tablets or capsules disintegrate within a defined period of time when placed in a liquid medium.</p>
<p>Hardness Tester</p>	 <p>The image shows a Logan Instruments HDT-400L hardness tester. It is a blue machine with a control panel that includes a digital display and several buttons labeled 'TEST', 'SELECT', 'MENU', 'CLEAR', 'DISCARD', 'RETEST/STOP', and 'START/PAUSE'.</p>	<p>Tablet hardness testing, is a laboratory technique used by the pharmaceutical industry to test the breaking point and structural integrity of a tablet "under conditions of storage, transportation, and handling before usage". The breaking point of a tablet is based on its shape. It is similar to friability testing, but they are not the same thing.</p>

<p>Friability</p>		<p>Friability is designed to evaluate the ability of the tablet to withstand aberration in packing, handling and shipping.</p>
<p>Ion chromatography</p>		<p>Ion chromatography (or ion-exchange chromatography) is a chromatography process that separates ions and polar molecules based on their affinity to the ion exchanger. It works on almost any kind of charged molecule—including large proteins, small nucleotides, and amino acids.</p>
<p>Atomic Absorption Spectrophotometer</p>		<p>Atomic absorption spectrometry has many uses in different areas of chemistry such as clinical analysis of metals in biological fluids and tissues such as whole blood, plasma, urine, saliva, brain tissue, liver, muscle tissue, semen, in some pharmaceutical manufacturing processes, minute quantities of a catalyst that remain in the final drug product, and analyzing water for its metal content.</p>
<p>Distillation Unit for Acid</p>		<p>A device for acid purification. It <i>uses</i> contactless infrared lamps to vaporize the surface liquid at a specific temperature.</p>

<p>Microwave Digestion System</p>	 <p>A white microwave digestion system with a red handle on the right side. The text 'ETHOS EASY' is visible at the top left, and 'ADVANCED MICROWAVE DIGESTION SYSTEM' is at the bottom right.</p>	<p>It dissolves heavy metals in the presence of organic molecules prior to analysis by inductively coupled plasma, atomic absorption, or atomic emission measurements.</p>
<p>Muffle Furnace (600⁰C)</p>	 <p>A large, industrial-grade muffle furnace with a stainless steel door and a control panel at the bottom. A yellow warning triangle is visible on the door.</p>	<p>It is designed to control a programmed temperature profile. The profile is in the format of ramps and dwell segment.</p>
<p>Mercury Analyzer</p>	 <p>A blue and white laboratory instrument, identified as a DMA-90 Mercury Analyzer. It has a control panel on the left and a sample chamber on the right.</p>	<p>To measure the amount of mercury in liquid and semi-liquid samples.</p>
<p>Energy Dispersive X-Ray Fluorescence Spectroscopy (EDXRF)</p>	 <p>A white laboratory instrument with a large sample chamber on top and a control panel on the front. The text 'Thermo 3.0' is visible on the front panel.</p>	<p>It is an analytical technique used for the elemental analysis or chemical characterization of a sample.</p>

<p>Fourier Transform Infrared Spectrophotometer (FT-MIR)</p>		<p>It is used to obtain an infrared spectrum of absorption or emission of a solid, liquid or gas. An FTIR spectrometer simultaneously collects high spectral resolution data over a wide spectral range.</p>
<p>Graphite Furnace Atomic Absorption Spectrophotometer (GFAAS)</p>		<p>It is based on the fact that free atoms will absorb light at frequencies or wavelengths characteristic of the element of interest (hence the name atomic absorption spectrometry). Within certain limits, the amount of light absorbed can be linearly correlated to the concentration of analyte present.</p>
<p>Binary Gradient High Performance Liquid Chromatography with PDA Detector (HPLC) with SPE Attachment</p>		<p>HPLC has been used for manufacturing (e.g. during the production process of pharmaceutical and biological products), legal (e.g. detecting performance enhancement drugs in urine), research (e.g. separating the components of a complex biological sample, or of similar synthetic chemicals from each other), and medical purposes.</p>
<p>Preparative HPLC with fraction collector and UV-VIS Detector</p>		<p>It is used to fraction high-purity (and in some cases large quantities of) compounds required for subsequent evaluation, analysis, and processes in the shortest possible time.</p>

<p>Total Organic Carbon Analyzer (TOC)</p>		<p>TOC analyzers measure the CO₂ formed when organic carbon is oxidized and/or when inorganic carbon is acidified.</p>
<p>Gas Chromatography Mass Spectrophotometer (GC-MS) with FID & Headspace Sampler, Auto Sampler and SPM</p>		<p>It is an analytical method that combines the features of gas-chromatography and mass spectrometry to identify different substances within a test sample.^[1] Applications of GC-MS include drug detection, fire investigation, environmental analysis, explosives investigation, and identification of unknown samples.</p>