Differential Scanning Calorimeter (DSC)

Brand: Perkin Elmer

Model: Sapphire DSC

Perkin Elmer Sapphire DSC **is a** high-precision differential scanning calorimetry device that can operate between –50 °C and 250 °C. Thanks to its very low heat flux detection capacity, it can clearly measure even very small thermal events. With its fast heating-cooling ratios, stable baseline and advanced sensor structure, it determines all thermal transitions such as glass transition, melting, crystallization, phase transformation and decay with high accuracy. It can be used on a wide range of materials, from polymers to metals, alloys, and composites, offering the opportunity to analyze in different atmospheres.

SMART MATERIALS RESEARCH LABORATORY Extension Number: 3563

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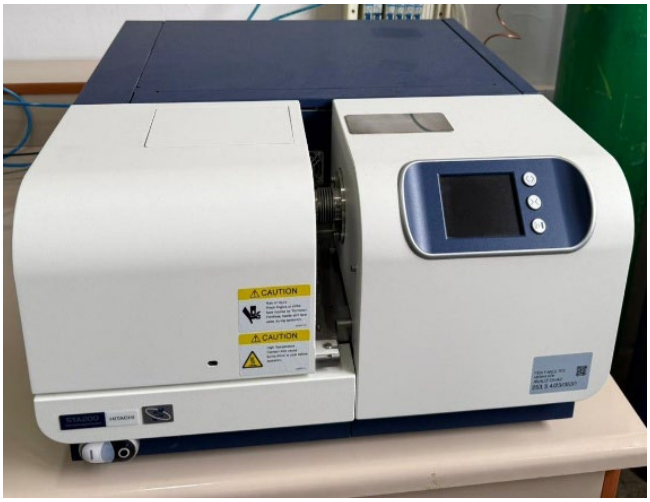
Thermogravimetric/Differential Thermal analysis (TG/DTA)



Brand: Hitachi

Model: STA-200

The Hitachi TG/DTA simultaneous thermal analyzer is a high-precision thermal analysis system that can operate between room temperature and 1000 °C, simultaneously recording the weight change (TG) and thermal events (DTA) of a sample. Thanks to its sensitive sensor structure operating in a wide temperature range, the device simultaneously determines processes such as degradation, oxidation, dehydration, phase transformations and reaction heat. Its ability to measure under controlled atmosphere (nitrogen, argon, air, etc.) enables accurate investigation of thermal stability and reaction mechanisms of organic-inorganic materials. It offers reliable TG/DTA analysis in a wide range of application areas such as polymers, ceramics, metal oxides, alloys, composites and advanced functional materials.

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Thermal evaporation system

Brand: Leybold System

Model: Univex 300

Thermal evaporation system is a physical vapor deposition (PVD) technique that allows metal or semiconductor target materials to be deposited as thin films on solid surfaces by passing them into the vapor phase by resistive heating under high vacuum. In these systems, which usually operate at pressure levels of 10^{-5}–10^{-6} mbar, the source material is heated on tungsten, molybdenum or tantalum crucible/filament and the evaporated atoms condense on the substrate in linear motion to form a homogeneous, high purity and controlled thickness thin film.

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Tube furnace

Brand: Protherm

Model: Protherm

A tube furnace is a precision heat treatment device that operates with coils of resistance wrapped around a quartz or ceramic tube, ensuring uniform heat distribution in high-temperature applications. These systems, which have programmable temperature control, generally allow operation in inert/reactive gas atmospheres. It provides stable temperature in the range of 300–1300 °C, making it possible to subject materials to controlled heat treatment in many thermal processes such as sintering, crystallization, phase transformations, reduction, oxidation, carbonization, and powder-metallurgy processes. The uniform environmental heating of the sample in the tube makes tube furnaces especially preferred in oxide nanoparticle synthesis**,** alloy production**,** solid state reactions and polymer/composite thermal degradation studies.

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Polishing Device

Brand: Metallographic polisher

Model: MPS200

A polishing device is a laboratory equipment used for surface preparation of metal, ceramic, polymer, and composite samples, performing grinding and polishing under controlled speed and pressure . Thanks to the sandpapers or diamond suspension pads placed on the rotating disc, the roughness on the surface of the sample is removed and a flat, homogeneous and scratch-free surface is obtained. This instrument provides high-quality surface preparation, especially before characterization techniques such as microstructure analysis (optical microscopy), SEM/EDS examinations, microhardness measurements, and determination of phase boundaries. Thanks to its features such as adjustable rotation speed (RPM) and water supply system, it offers repeatable and controlled surface treatment.

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Oven

Brand: Weightlab

An oven is a heat treatment device with precise temperature control used for drying, dehumidification, sterilization and keeping of samples at a constant temperature in a laboratory environment . Ovens, which generally operate in the range of **50-250 °C**, allow the samples to be dried in a controlled manner thanks to the convection system that provides homogeneous heat distribution in the internal volume. It is widely used in solvent removal, pre-drying, wet weight measurement and thermal conditioning of polymer, ceramic, metal powders, biological samples and solution-based samples. Adjustable PID temperature control, timer function and homogeneous air circulation in the internal volume make the ovens a critical equipment for experimental reproducibility.

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Ultraviolet–Visible Spectroscopy (UV-Vis)

Brand: Perkin Elmer

Model: Lamda 45

The Perkin Elmer Ultraviolet–Visible Spectroscopy (UV–Vis) instrument is an advanced optical analysis system that measures the light absorption properties of samples in the range of 200–1000 nm.

UV-Vis Device; It is one of the laboratory equipment that helps us analyze the material by measuring the interaction of light with matter. Essentially, they are used to study the effects that occur when a substance absorbs or transmits light. This allows us to obtain many important information such as determining the concentration of the substance, component analysis and reaction kinetics. UV spectrophotometers are devices that operate only at wavelengths in the ultraviolet region. These devices are used to analyze the wavelengths at which molecules absorb UV light.

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Electrical conductivity device

Temperature-controlled vacuum electrical conductivity measurement device is an advanced characterization system used to determine the electrical conductivity of polymer, ceramic, thin film, and composite materials over a wide temperature range and under controlled atmospheric conditions. The instrument allows the sample chamber to operate under vacuum, thus eliminating errors caused by oxidation and moisture. Thanks to the integrated PID-controlled furnace, precise temperature screening can be carried out from room temperature to high temperatures (usually 600–1200 °C). Accurate resistance/conductivity measurement of low and high conductivity materials is performed with four-lead probe, two-lead probe or van der Pauw geometries. This system is widely used in the analysis of phase transitions, activation energy, thermal excitation processes, and temperature-dependent conduction mechanisms in materials.

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Muffle Furnace

Brand: Protherm

A muffle furnace is a laboratory furnace heated by well-insulated resistances used for burning samples at high temperatures, determining ash, and completely removing organic components. These devices, which generally operate in the range of 300–1100 °C, are widely preferred in ash analysis, sintering, calcination, oxidation and phase transformation studies of polymer, ceramic, mineral, metal and composite samples thanks to their homogeneous temperature distribution and rapid heating-cooling capabilities . The high-temperature resistant refractory chamber and precise PID temperature control ensure stable operation for experimental reproducibility. Muffle furnaces are also critical equipment for applications such as calcination of nanoparticles of materials and crystal structure stabilization after heat treatment.

Communication:

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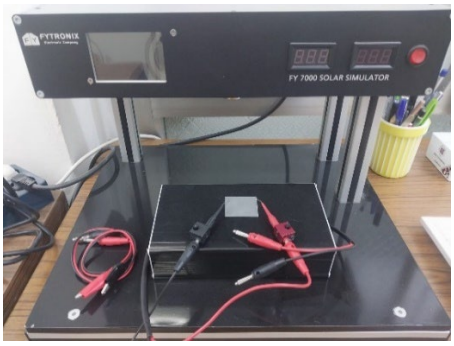
Solar I-V Characterization System



Solar I-V Simulator
Brand Name: Fytronix
Model: FY 7000

FYTRONIX brand Solar Simulator unit is mainly used as FY 7000 model Solar I-V Simulator device system, which automatically adjusts the light intensity to any lighting power between 0.1-100 mW/cm2 and measures Current-voltage, Power-voltage, lnI-Voltage, Isc-Density and Photovoltaic mechanism Analysis.

Dark I/V measurements are commonly used to analyze the electrical properties of solar cells. Dark I/V measurements are more sensitive than light I/V measurements in determining parameters such as series resistance, shunt resistance, diode factor, and diode saturation currents. The Solar Simulator system automatically measures current-voltage (I-V), power-voltage (P-V) under various light intensities, and automatically analyzes the photovoltaic mechanism (I-V). With the measurement data obtained with the solar simulator, the following electrical diode and photovoltaic parameters can be determined: Ideality factor (n), Obstacle height (Φ), Rectification ratio (RR), Open circuit voltage (Voc), Short circuit current (Isc), Voltage at Pmax (Vmax), Current at Pmax (Imax), Maximum power output (Pmax), Series resistance (Rs), Photoresponse (PR).

The Solar I-V Characterization System is a complete current-voltage (I-V), current-time (I-t) and power-to-voltage (PV) measuring instrument with the following components: Solar Simulator, I-V Characterization System, Welding Meter, Sample Holder, Connections, Solar cell probes. SOFTWARE: Solar IV characterization software, Solar life-life software, Transient photocurrent software, Photovoltaic mechanism analysis software.

Properties:

Fytronix Solar Simulator 7000
Solar simulator Class AAA
Spectral Mathematics Classification A (IEC 60904-9 2007) A (JIS C8912) A (ASTM) E927-10)
Power Requirements: 120-240 VAC, 300W 50-60 Hz, output 12 VDC, 5A.
Operating Temperature Range 20 °C to 30 °C
Optical Power: 1000 W/m² (1 SUN) 20± Adjustable
AM1.5 G Filter Voltage range: -20 V to +20 V Current range: 10 nA to 500 mA
Effective irradiance: 100 mW/cm² ± 2 mW/cm² Emission bandwidth: 300 - 1100 nm
Radiative aperture: 30mm-50mm diameter Working distance: 40 to 100mm or more

Communication:

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Solar C-V Characterization System

C-V analyzer (C-V ANALYZER 001)
(plug-in device)
Brand Name: Fytronix

Model: CVS9000

The solar simulator can also **measure capacitance-voltage-frequency under different densities with a CVS 9000 SYSTEM model CV Analysis System add-on**. The CV analysis system analyzes all electrical capacitance-voltage-frequency characteristics of photodiode, Schottky diode, heterojunction diode, solar cells, and sensors under dark and light conditions. The CV Analysis System includes the following elements:

Probe Holder and electrical connection cables,
Software
C-V analyzer,
Frequency range: 50 Hz- 8 MHz

The Fytronix FY-CV 9000 System measures the following characteristics: Capacitance-voltage (C-V) under various frequencies**,** Calibrated conductivity-voltage (Gadj-V) UNDER VARIOUS FREQUENCIES FY-CV 9000 System Software automatically analyzes C-V characteristics by the conductivity method. In doing so, it corrects the C-V and G-V characteristics of electronic devices with a series resistor.

Communication:

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Electrospinning Device

Electrospinning System
Brand Name: Fytronix
Model: ESP 9300

Electrospinning systems are systems that enable the production of nanofiber (nanofiber) materials from polymer solutions in a high electric field created by a high-voltage power source. The electrospinning process uses high voltage to create an electric field between a drop of polymer solution at the tip of a needle and a collector plate). ESP-9300 is a complete electrospinning production system.

Features of Electrospinning Device: Real-time imaging system. The camera is at the heart of Electro-Hydrodynamic atomization. Taylor cone constancy is required to achieve a constant coaxial/simple electrospinning/electrospraying process. Camera imaging is important to check the real-time performance of the process.

High voltage welding; 0-30 kV high voltage power supply.
Feature of multi-needle platform
Rotating disc collector: Aluminum material,
Dimensions (DxL): At least 100 mm x220 mm,
Rotation Speed: Between 35-650 RPM,
Coating Distance: 30 mm – 230.5 mm),
Plate collector;
Material: Stainless Steel
Dimensions: at least 200 x 250 mm,
Coating Distance: 30 mm – 230.5, mm,
Syringe system; Single Channel Syringe Pump or double channel. The dual-channel syringe pump allows fiber production with a tri-axial nozzle in future studies.
2 programmable syringe pumps; Flow Rate: Between 0.727 µL/hr (min. 1 ml syringe) and 2120 ml/hr (max. 60 ml syringe),
In addition, the ability to use it with a syringe of at least 140ml,
Each pump can be programmed at different flow rates.
Metal Needle Platform; Multi-nozzle metal block feature suitable for attaching at least 4 or less than 4 electrospinning needles. Triple nozzle coming out of a single needle.

Communication:

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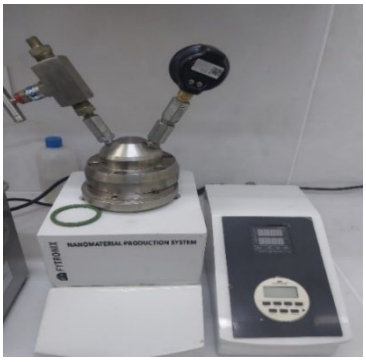
Hydrothermal Device



Solar Physics Technologies Hydrothermal System (Hydrothermal Device)
Brand Name: Fytronix
Model: Hydrothermal 9000 (SP-X5)

The hydrothermal system produces all materials, such as organic materials and metal oxides, from solutions and creates integrated solutions for various applications. X-5, on the other hand, produces material from the solution in the form of powder and thin films on any substrate.

Properties:
High-pressure reactor
Touch screen
Volume: 100 ml, 250 ml and 500 ml
Reaction temperature
Reaction time
Heating speed
When the reaction is completed, the system is automatically cooled by the air cooling system
The system is controlled by the heating rate
Homogeneous heating in XYZ directions
100 ml, 250 ml and 500 ml PTFE or black carbon:TFE sample holder.
Hydrothermal PTFFE sample holder Nanomaterial and functional fabrication system performs the following: Synthesis of powder, nanopowder materials, Synthesis of thin films in microstructure or nanostructure, Control of nanosize of materials by reaction time, Control of nanosize and nanostructure by reaction temperature, Control of nanosize and nanostructure by internal pressure, Control of structure of materials by external pressure, Control of structure of materials by solution pH, Control of materials by heating rate control of the structure of materials, control of the structure of materials with atomic ratios.

The system produces the following materials or more: Full ceramics, Bioceramics, Polymer nanocomposites, Polymers, Metal complexes, Organometallic complex, Metal complex nanocomposites, Bioglass ceramic materials, Carbon-based materials, Graphene, Graphene Oxide, Boron-based materials, Coating of metal oxide films on substrate, Coating of bioceramic films on substrate, Graphene-nanocomposites, Nanocomposite metal oxide materials, Metal oxide semi- conductors, boron nitride, boron carbide, film growth on any substrate, battery materials, solar cell materials, ferroelectric materials, piezo materials, PL materials, chalcogenide materials, biomaterials, hybrid materials, and many more.

Communication:

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Spin Coater (Spin Kaplama Cihazı)

Static Dynamic Multi RPM Spin Coater
Brand Name: Fytronix
Model: FY-9000

Spin coating is used to prepare thin films for various applications. Glass (lam), silicon wafer, ITO glass, etc. A small deposit of liquid material is placed in the center of a substrate, such as spin coating is applied at high speed on the rotated substrate. The centripetal acceleration results in the formation of a thin film of material on the substrate. It depends on the solution properties such as film thickness, viscosity, drying rate, solids percentage, surface tension, etc., and the RPM and coating time. One of the most important factors in spin coating is repeatability, as small variations in the parameters that define the spin coating process can result in large changes in the coated film. A typical spin process consists of a dispensing step where the resin liquid is deposited onto the substrate surface, a high-speed spin step to thin the liquid, and a drying step to remove excess solvent from the resulting film.

Spin coating methods; static spin coating, dynamic spin coating and multiple rpm coating methods.

The Fytronix FY-9000 System Spin Coating Device coats organic materials, metal oxides, and all solutions. The spin coating device is a complete solution coating system.

The device includes the following elements:

Spin coating device
Spin speed: 100-12000 RPM
Spin coating time: 1-9999 sec
Solution pouring time: 1-99 sec
Static Spin Coating Method
Dynamic Spin Coating Method
Multiple RPM Spin Coating Method
Acceleration range: 1-2000 Rpm/s

Communication:

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Muffle Furnace

Muffle Furnace
Brand Name: Carbolite
Model: CWF 12/5

A muffle furnace is a laboratory device used to heat materials to extremely high temperatures by isolating them from fuel and combustion byproducts, including gases and fly ash. They are used in the aerospace, automotive, surface treatment, tooling, ceramics, glass, pharmaceuticals, chemicals, plastics, engineering, electronics, mining and extraction, iron-steel and coal-coke industries, for pilot and production-scale production, in chemical, materials science, engineering and industrial research, test and development laboratories. These are also used in many research facilities, for example by chemists, to determine how much of a sample is flammable and non-volatile (i.e., ash). Likewise, after the alloys are produced, they are also used in the applications of heat treatments for homogenization or aging.

The maximum temperature of the Carbolite brand CWF 12/5 model muffle furnace is 1200 °C. It has a digital and programmable control unit. It can be set to the desired temperature value. The internal volume of the furnace is about 5 liters. The sensitivity is ±1 degree.

Carbolite CWF 12/5 features:

Hopper Furnace maximum temperature	1200°C
Hopper volume	5 L
Hopper size	135x140x250mm (HxWxD)
External dimensions	585x375x485mm (HxWxD)
Connection:	220 V, 50-60 Hz, 2,017 kW, single phase
PID controller	A ramp to the set point
Temperature uniformity within ±5°C H x W x D (mm)	85 x 90 x 125
Max. Power (W) / Holding power (W)	2400 / 850

Communication:

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Manual Hydraulic Press (Laboratory Pellet Press)

15T Manual Hydraulic Press, Laboratory Pellet Press
Brand Name: Specac
Model: GS15011

The Manual Press is designed for use in a wide range of hydraulic press applications. Powdered materials are turned into pellets by applying a press in appropriate amounts. This Specac brand press model is 15 tons and is suitable for preparing solid samples for measurements such as FTIR and XRF analysis. When used with Specac dischargeable pellet dies, it is perfect for making KBr discs in FTIR analysis. The presses can also be used with Specac Heated Plates for applications such as the preparation of thin polymer films.

Key Features of a Manual Hydraulic Press:

The rugged and durable design includes polycarbonate safety guards, adjustable top support, adjustable pressure relief valve, vacuum port, and low pressure gauge option.

Properties:
Maximum height (at handle): 610 mm
Width: 310 mm
Depth: 190 mm
Weight: 50 kg
Lower piston stroke: 25.4 mm
Upper support screw travel: 89 mm
Distance between pressing surfaces (max.): 152 mm
Distance between pressing surfaces (min.): 38 mm
Bottom pressing surface diameter: 86 mm
Top pressing surface diameter: 32 mm
Maximum width of the sampling area (side to side): 143 mm
Maximum depth of sampling area (front to back): 141 mm

Communication:

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MSE Furnace (Kül Fırını)

Brand: MSE

MSE Furnace; It is an advanced muffle furnace that can reach high temperatures in a laboratory environment and is widely used in material processing. This device performs critical operations such as **heat treatment, sintering, calcination, ash determination, and phase transformation** on ceramics, metals, polymer derivatives, and powder materials with precise temperature control. Designed to modify or analyze the structural, chemical, and physical properties of samples, the MSE Furnace is used as an essential piece of equipment, especially in materials science, metallurgy, chemistry, and engineering laboratories.

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Binder redLINE (Oven)

Brand: Binder redLINE

The Binder redLINE is an oven drying system designed for drying, heating, and thermal aging of samples under controlled conditions in laboratory applications. Providing uniform temperature distribution, it is often used in applications such as dehumidifying materials, accelerating chemical reactions, stability testing, and low-temperature heat treatments due to its precise temperature control, which can reach up to 300 °C. With its durable construction and safe operation features, the Binder redLINE serves as an essential thermal treatment equipment in materials science, chemistry, biology, and industrial quality control laboratories.

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Dielectric Measuring Device

Brand: Fytronix Electronic

A dielectric measuring device is a system used to characterize the electrical properties of materials under frequency and temperature. Apparatus; It measures parameters such as **dielectric constant (ε'), dielectric loss (ε''), tan delta, capacitance, resistance, and impedance**. It can operate over a wide **frequency range (10^{-2}–10^{7} Hz or higher)** and at different **temperatures (–150°C to +600°C).** Thanks to its electrode systems, it is compatible with thin film, ceramic, liquid and powder samples. The data obtained from the measurements are **used to determine** the polarization behavior, conductivity, and relaxation mechanisms of the materials.

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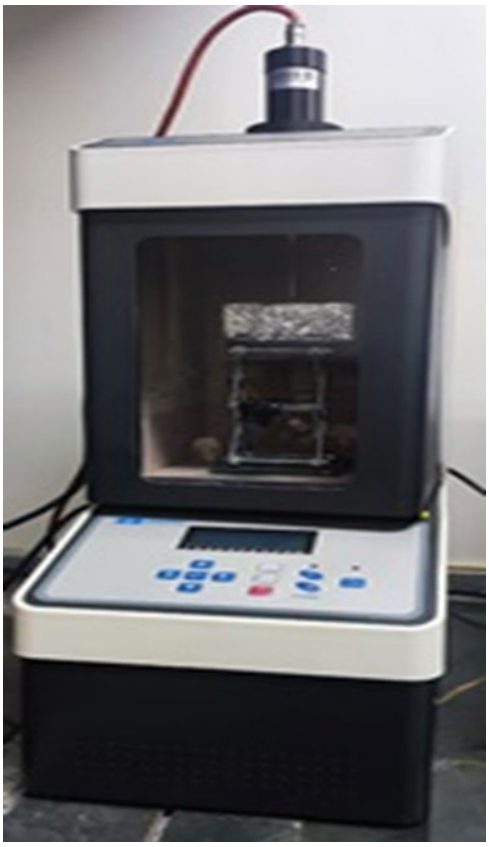
Ultrasonic Homogenizer



Brand: SXSONIC Ultrasonic Processor

An ultrasonic homogenizer is a device that homogenizes particles in liquid and semi-liquid mixtures using ultrasonic vibrations at high frequency. Its working principle is based on the cavitation effect, which releases energy through the formation and collapse of microscopic bubbles in the liquid; In this way, particles break down, insoluble substances disperse and emulsions are formed. Widely used in laboratory and industry, ultrasonic homogenizers are preferred for processes such as preparing nanoparticle suspensions, cell lysis, mixing polymer and resin solutions, and homogenizing pharmaceutical, food, and cosmetic products.

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pH Meter

A pH meter is a laboratory device that measures whether a solution is acidic, basic, or neutral. It detects the density of hydrogen ions (H^+) in the solution and gives the pH value numerically. It is widely used in chemistry, biology, environment, and food analysis.

Brand: METTLER TOLEDO

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Memmert Unb 400 Oven

The maximum temperature is 220°C.
The internal volume is 53 liters.
Natural air circulates.
The inner and outer casing are made of stainless steel.
It has an integrated digital timer and LED display visual panel.

It is used for drying the samples to be produced (removing water and moisture), etc.

Communication

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Nucleon Oven

Usable volume: 4 liters

Temperature Operating Range : Ambient Temperature +5 °C to 90 °C Control System : Analog

Timer : 0 – 60 Min + Indefinite Operating Power Values : 230 V, 50 Hz.

Frequency : 28 kHz Inner & Outer Chamber: Stainless Steel Inner Chamber

Communication

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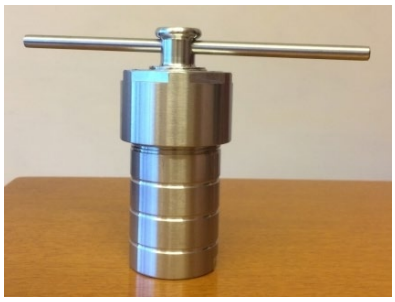
Hydrothermal Reactor



It has a solution volume of 100 mL. It is used in the sample production process by hydrothermal method.

External Dimensions: Diameter: 80 mm Height: 170 mm

Inner Chamber Dimensions: Diameter: 38 mm Height: 85 mm

Maximum Operating Temperature : 250 °C Maximum Operating Pressure : ≤3 Mpa

Inner Chamber : PPL (Polypropiolactone) Outer Chamber : SS 316 L

Communication

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Reis Nevola Muffle Furnace

The maximum operating temperature is 1200 °C and it is used for the calcination processes of the samples to be produced. This device **performs critical operations such as** heat treatment, sintering, calcination, ash determination, and phase transformation on ceramics, metals, polymer derivatives, and powder materials with precise temperature control.

Communication

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Milling

This is a semi-automatic vertical milling machine used for drilling, slotting, milling and surface smoothing on metal or polymer surfaces in precision machining applications. The machine provides high accuracy in laboratory-scale mechanical fabrication and experimental part preparation work.

Technical Specifications

Model: OPTImill BF 20L

Type: Vertical (column type) milling machine

Spindle speed: Variable speed adjustment with digital display (control panel with RPM display)

Motor control: Electronic speed control potentiometer and direction selection switch (L–O–R)

Emergency stop: Large type "Emergency Stop" button

Table movement: Manual axis control (sliding table on the X–Y axes; Vertical movement wheel control on the Z axis)

Spindle direction: Clockwise/counterclockwise direction selection

Communication

Nuclear Physics Research and Development Lab Ext. Number: 3567

Unit Managers	Extension	E-mail Address
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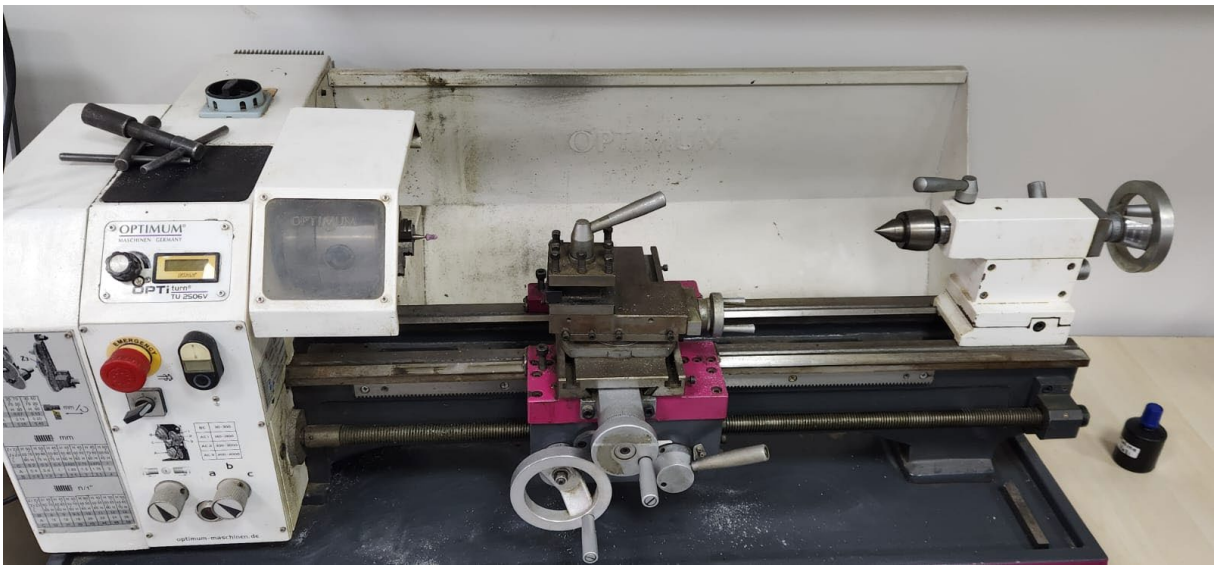
Lathe



The OPTIturn TU 2506V is a semi-automatic metal lathe for precision metal removal, drilling, grooving, external and internal turning of cylindrical metal workpieces. It is used in laboratory-scale sample production, prototyping of mechanical parts, and manufacturing of experimental device components.

Technical Specifications

Model: OPTIturn TU 2506V

Type: Metal lathe with manual control

Spindle control: Electronic control with digital speedometer (potentiometer with RPM adjustment)

Emergency stop: Large type "Emergency Stop" button

Positioning: Manual X–Z axis carriage, turret insert clamping head

Counter tailstock: Adjustable tailstock structure, suitable for fixing cylindrical workpieces from two ends

Spindle protection: Transparent safety cabinet

Communication

Nuclear Physics Research and Development Lab Ext. Number: 3567

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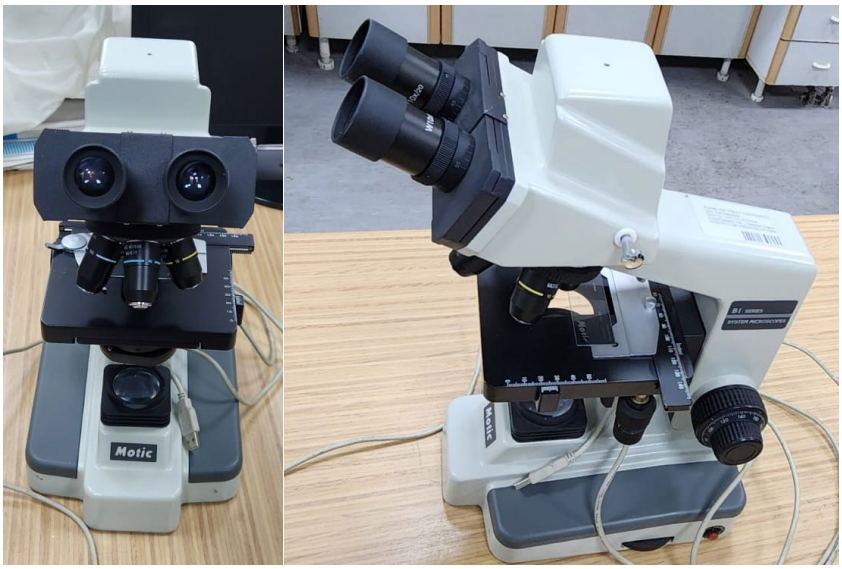
Microscope



The Motic B1 Series biological microscope is a binocular research microscope used for observing the microscopic structures of biological samples in thin sections or preparations by magnifying them with an optical system. In the laboratory, the material is used for surface examinations, cellular structure observations and microstructural analysis.

Technical Specifications

Model: Motic B1 Series

Magnification System: Binocular rotating objective revolver system

Objectives: Multiple magnification options (e.g. 4x, 10x, 40x, 100x oil immersion option)

Eyepieces: Wide-field, adjustable dual eyepieces

Sample Site: Precision XY-axis mechanical table

Lighting: Transmission type lighting system with lower light source

Focusing: Precise focusing with coarse and fine adjustment knobs

Communication

Nuclear Physics Research and Development Lab Ext. Number: 3567

Unit Managers	Extension	E-mail Address
Prof. Dr. Soner ÖZGEN	3715	sozgen@firat.edu.tr

Welding Machine

The GekaMac ARC 200 PFC is a manual arc welding machine with inverter technology used in the laboratory for joining, repairing metal parts or assembling experimental setups. It allows steel, alloy metals and various metal parts to be joined with electrodes.

Technical Specifications

Model: ARC 200 PFC

Welding Type: MMA (Manual Metal Arc) / Stick electrode welding

Working Principle: Inverter-based DC arc welding

Current Range: Adjustable welding current via digital panel

Power Control: PFC (Power Factor Correction) supported, energy-efficient driving system

Output Connections: Two-pronged electrode and chassis cable connection

Portability: Lightweight and compact design, suitable for field and laboratory use

Communication

Nuclear Physics Research and Development Lab Ext. Number: 3567

Unit Managers	Extension	E-mail Address
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Drying Oven

This device is a natural convection oven (drying oven) device used for sample drying, dehumidification, low-temperature heat treatment and material stabilization studies in the laboratory environment. The samples are prepared for chemical or physical analysis by subjecting them to prolonged processes under controlled temperature.

Technical Specifications

Brand: FINE TECH – SHIN SAENG (KOREA)

Model: SDONN

Working Principle: Natural convection heating

Power Supply: 220 V AC / 50 Hz

Control Panel: Digital temperature control unit

Inner Body Structure: Heat-insulated metal inner chamber, cover with glass window

Usage: Precise temperature controlled drying and heat treatment

Communication

Nuclear Physics Research and Development Lab Ext. Number: 3567

Unit Managers	Extension	E-mail Address
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Semiconductor Characterization Device

Make/Model: KEITHLEY 4200-SCS

It is used in the processes of analyzing the electrical properties of semiconductor materials.

Communication:

LABORATORY: LABORATORY OF NANOSCIENCE AND NANOTECHNOLOGY Extension: 3498

Unit Manager	Extension	E-mail Address
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UV-Violet Spectrometer

Brand/Model: SHIMADZU UV-3600

It is used to analyze the properties of materials such as absorbance and transmittance.

Communication:

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Lcr Meter

Brand/Model: HIOKI 3532-50

It is used in the measurements of inductance, capacitance and resistance of materials.

Communication:

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Photodedectivitity Meter

Make/Model: KEITHLEY 6221

It is used in current-voltage measurements of materials under light.

Communication:

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Atomic Force Microscopy

Make/Model: Park Systems XE-Series

It is used to examine the surface properties of materials.

Communication:

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Admittance Analyzer

Brand/Model: HIOKI IM3536

It is used in the admittance measurements of materials.

Communication:

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