Nr. Crt.	Denumire Explicita	Denumire Catalog	Quant	Domains	Categories	Services	Research equipment	Tehnical specifications	Producer	Country of Origins	Year of aquisition	Part Of:
1	High Performance Liquid Chromatography (HPLC) System with Size Exclusion Column, and Triple Detection (MALS - UV - RI)	Agilent 1260 Infinity II inline with Wyatt Heleos II MALS	1	Materials Synthesis and Analytical Chemistry Equipment	Chemistry and Materials Science	Separation and identification of organic compounds, Determination of molecular weights of macromolecular compounds	Chromatographic separations of mixtures containing small or macromolecular organic compounds, at analytical scale, by size exclusion chromatography (SEC) or liquid chromatography (LC), depending on column type. Determination of the absolute weight-average molecular weight of polymers, molecular weight distribution as well as gyration radius in the range 10 - 500 nm.	The system is equipped with an auto-sampler that allows automatic analysis of up to 132 samples, isocratic pump with variable flow rate and integrated degassing system, column thermostat, light diffusion detector, diode array detector, and differential refractometric detector.	Agilent / Wyatt	USA	2020 / 2009	Smart Organic Materials
2	Mechanical Testing Machine	Shimadzu AGS-X	1	Materials Synthesis and Analytical Chemistry Equipment	Chemistry and Materials Science	Determination of mechanical properties of materials according to standards for various industries	Compression, tensile and adhesion tests to determine the mechanical stability of polymeric, metallic, textile or composite materials.	Double-column system, force range 1 N up to 10 kN, variable travel speed, high-precision load cells, TRAPEZIUM software for automatic data analysis. Ultra-fast camera for visual determination of breaking point.	Shimadzu	Japan	2021	Smart Organic Materials
3	Hand-operated press for sample making	BERG & SCHMID HK 800	1	Materials Synthesis and Analytical Chemistry Equipment	Equipment for Sample Preparation / Mechanical Testing	Cutting and shaping of materials	Cutting of flat materials into standardized dumbbell shapes, for tensile tests, according to ISO and ASTM standards.	Maximum cutting force: 8 kN	BERG & SCHMID	Germany	2021	Smart Organic Materials
4	Simultaneous TGA-DSC Analyzer Coupled with Mass Spectrometer	Netsch STA 449C Jupiter- Aeolos II	1	Analytical Chemistry Equipment	Thermal Analysis	Determination of the thermal stability of materials. Study of polymer crystallization. Identification of components and their quantitative analysis.	It allows the simultaneous determination of the thermal stability of materials, phase transitions and the composition of thermal decomposition gases.	The TGA-DSC Simultaneous Thermal Analysis System (STA) allows measurements to be made between RT and 1500 °C, under vacuum, inert, oxidizing or reducing atmospheres. The heating rate is variable, between 0.1 and 50 K/min. The system is coupled with a quadrupole mass spectrometer with a measuring range of 1 to 300 amu.	Netsch	Germany	2008	Smart Organic Materials
5	Differential calorimeter with power compensation	DSC 131 SETARAM	1	Analytical Chemistry Equipment	Thermal Analysis	Determination of thermal processes such as: melting, crystallization, solid-solid transitions, polymorphism,glass transitions, crosslinking reactions, heat capacity measurements	It allows quantification of energy effects and phase changes by measuring heat flow, identification of excipients and active ingredients in tablets, as well as identification of polymorphism in pharmacologically active ingredients.	DSC 131 enables the precise determination of thermal transitions (exothermic and endothermic) of materials in a temperature range of -170 °C to 700 °C. The analyzes can be performed in an inert or oxidizing atmosphere, with the possibility of controlling the gas flow. The heating rate is variable, between 0.1 and 20 K/min. Equipped with a Julabo FP90-SL thermostat for ultra-low temperature analysis.	Setaram	France	2006	Smart Organic Materials

6	Ultra-low temperature heating and cooling thermostat	FP90-SL	1	General Laboratory Equipment	Cooling and Heating	Cooling or heating a vessel with a circulating liquid	Cooling rotary evaporators, maintaining constant temperature in chemical reactions, or thermal stabilization of analytical equipment such as calorimeters, spectrometers, or sensitive measurement systems.	The working temperature is -90°C to +100°C, with a precision of ±0.05°C. The cooling capacity is 1.8 kW at 20 °C, and the heating capacity reaches up to 3 kW. The tank volume is 22 L, and the flow rate of the circulation pump varies between 22 and 26 L/min. The equipment can be used simultaneously for both external applications and operation in the bath tank.	Julabo	Germany	2021	Smart Organic Materials
7	Gas Chromatograph with Flame Ionization Detector with Hydrogen Generator	Shimadzu Nexis GC-FID 2030 / Precision Hydrogen 100 H2 Generator	1	Analytical Chemistry Equipment	Chemistry and Materials Science	Separation and identification of organic compounds	It allows the separation, detection and quantification of organic compounds that can be vaporized without decomposition.	The system consists of a high-performance gas chromatograph, a high-sensitivity FID detector, autosampler and a hydrogen generator. The chromatograph furnace operates in a temperature range of RT to 450°C, with programmable ramps and the option of rapid cooling. Electronic Pressure Control (EPC) ensures excellent accuracy of gas flows and pressure in the columns. The injection can be done in Split/Splitless mode.	Shimadzu / Peak Scientific	Japan / UK	2021	Smart Organic Materials
8	UV-Vis Spectrophotometer	SPECORD 210 PLUS	1	Analytical Chemistry Equipment	Spectrometry	Qualitative and quantitative analysis of chemicals	Investigation of the concentration, purity and physical properties of solutions by measuring UV absorption.	UV-VIS spectrophotometer (spectral range 190–1100 nm), equipped with automatic cell changer, automatic temperature control and integrated magnetic stirring system. It includes a special position for the analysis of turbid samples.	Analytik Jena	Germany	2021	Smart Organic Materials
9	UV-Vis Modular Spectrophotometer	Ocean Optics HR4000	1	Analytical Chemistry Equipment	Spectrometry	Qualitative and quantitative analysis of chemicals	Investigating the concentration, purity, and physical properties of solutions and films by measuring UV absorption.	Modular UV-VIS spectrophotometer (spectral range 300-1100 nm) with high acquisition speed, connected by optical fiber for in-situ, film or cell measurements	Ocean Optics	USA	2016	Smart Organic Materials
10	UV-Vis Spectrophotometer	Cary Bio 100	1	Analytical Chemistry Equipment	Spectrometry	Qualitative and quantitative analysis of chemicals	Investigation of the concentration, purity and physical properties of solutions by measuring UV absorption.	Dual-beam UV-VIS spectrophotometer (200-800 nm)	Varian	USA	1999	Smart Organic Materials
11	Analytical balance	Explorer Semi-Micro, EX125	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Used to measure the mass of solids, liquids, and other samples	Maximum capacity: 120 g Readability: 0.01 mg Pan size: 80 mm	Ohaus	USA	2021	Smart Organic Materials
12	Analytical balance	ABT120-5dm	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Used to measure the mass of solids, liquids, and other samples	Maximum capacity: 42/120 g Readability: 0.01/0.1 mg Plate size: 80 mm	Kern	Germany	2010	Smart Organic Materials
13	Analytical balance	AEA 220A	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Used to measure the mass of solids, liquids, and other samples	Maximum capacity: 220 g Readability: 0.1 mg Pan size: 80 mm	Adam	China	2006	Smart Organic Materials
14	Analytical balance	TP-214	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Used to measure the mass of solids, liquids, and other samples	Maximum capacity: 210 g Readability: 0.1 mg Pan size: 80 mm	Denver Instruments	Germany	2008	Smart Organic Materials

15	Vacuum Pump	VACUU·PURE 10C	2	General Laboratory Equipment	Pumps & Liquid Transfer Equipment	Vacuum generation for drying compounds in the oven, distillations and chemical handling in a controlled atmosphere	Vacuum drying of temperature-sensitive materials. Vacuum distillation and evaporation of chemical and biological compounds. Vacuum systems for Schlenk lines and chemical handling in controlled atmosphere. Pre-vacuum for turbomolecular pumps used in analytical systems or reaction chambers.	Oil-free, corrosion-resistant, dry screw vacuum pump designed for vacuum range up to 5×10^{-3} mbar, with a maximum pumping speed of 9 m^3/h. It allows the handling of aggressive gases and vapors without contamination.	Vacuubrand	Germany	2021	Smart Organic Materials
16	Vacuum Pump	XDS 5C dry scroll pump	1	General Laboratory Equipment	Pumps & Liquid Transfer Equipment	Vacuum generation for drying compounds in the oven, distillations and chemical handling in a controlled atmosphere	Vacuum drying of temperature-sensitive materials. Vacuum distillation and evaporation of chemical and biological compounds.	Fully sealed, oil-free, scroll dry vacuum pump designed for sensitive and chemically aggressive environments. Pumping speed of up to 5.7 m^3/h and final pressure of approx. 10^{-2} mbar	Edwards	England	2008	Smart Organic Materials
17	Vacuum Oven	BOV-30V	1	General Laboratory Equipment	Chemistry and Materials Science	Advanced drying of solid chemicals	Drying of heat-sensitive samples. Removal of residual solvents from thin films, coatings or porous materials.	The total volume of the oven is 23 L. The working temperature can be adjusted from approx. +10 °C above ambient temperature to a maximum of 200 °C with precise temperature control (± 1 °C). It is equipped with a vacuum pump VACUU· PURE 10C	BIOBASE	China	2018	Smart Organic Materials
18	Oven	BOV-V136F	1	General Laboratory Equipment	Heating and Drying	Heating and/or drying of chemicals and/or laboratory glassware	Thermal drying of solid materials and samples. Controlled heat treatments such as crosslinking, and activation.	The total volume of the oven is 136 L. The working temperature can be adjusted from about +10 °C above ambient temperature to a maximum of 250-300 °C.	BIOBASE	China	2018	Smart Organic Materials
19	Oven	BMT Venticell 55 ECO	1	General Laboratory Equipment	Heating and Drying	Heating and/or drying of chemicals and/or laboratory glassware	Thermal drying of solid materials and samples. Controlled heat treatments such as crosslinking, and activation.	The total volume of the oven is 55 L. The working temperature can be adjusted from approx. +10 °C above ambient temperature to a maximum of 250-300 °C with precise temperature control (± 0.3 °C).	BMT	USA	2015	Smart Organic Materials
20	Freeze-dryer	Alpha 1-2 LD Plus	1	Chemical Synthesis	Sublimation Drying	Freeze-drying of biological and biochemical samples.	Long-term preservation of temperature-sensitive samples. Product formulations in dry solid form. Freeze-drying of biological samples, porous materials, membranes or gels.	The Alpha 1-2 LDplus freeze dryer is equipped with a condenser with a capacity of 2.5 kg of ice and a condensation temperature of approximately −55 °C, ensuring a drying performance of up to 2 kg/24 h. The system allows the use of up to 3 unheated trays, as well as round-bottomed flasks or ampoules, with up to 8 positions available. The equipment includes vacuum control, temperature and time monitoring functions, making it suitable for various applications in research and development.	Marten Christ	Germany	2020	Smart Organic Materials

21	Refrigerated bathroom	Shandon Histobath	2	Cooling Equipment	Cooling	Rapid freezing of biological and biochemical samples, reducing artifacts caused by slow freezing.	Preparation of histological samples by rapid freezing. Testing cryopreservation protocols for biobanks.	The equipment has a stainless steel tank with a usable volume of about 1 L, an inner diameter of 10.2 cm and a depth of 14 cm. It can reach temperatures of up to –55 °C.	Thermo Electron Corporation	China	2000	Smart Organic Materials
22	Magnetic stirring hob	IKA Plate (RCT digital)	4	General Laboratory Equipment	Heated Magnetic Stirrers	Mixing and heating of chemical compounds	Solubilization of pharmaceutical or bioactive compounds. Efficient mixing and heating of varying volumes of chemical compounds.	Heated plate with magnetic stirring, digital interface and precise control over temperature and stirring. 50-1500 RPM, 10 - 310 °C	IKA	Germany	2021	Smart Organic Materials
23	Magnetic stirring hob	RCT basic	4	General Laboratory Equipment	Heated Magnetic Stirrers	Mixing and heating of chemical compounds	Solubilization of pharmaceutical or bioactive compounds. Efficient mixing and heating of varying volumes of chemical compounds.	Heated plate with magnetic stirring, digital interface and precise control over temperature and stirring. 100-1200 RPM, 10 - 310 °C	IKA	Germany	2017	Smart Organic Materials
24	Orbital Shaker	IKA Vibrax VXR basic	2	General Laboratory Equipment	Mixing	Mixing of samples	Rapid mixing and homogenization of biological and chemical samples.	It allows efficient and fast mixing of samples in test tubes, ampoules, microtubes or small vials, through an orbital movement and an adjustable speed between 500 and 2500 rpm.	IKA	Germany	2019	Smart Organic Materials
25	pH meter	Mettler Toledo FiveEasy	1	Analytical Chemistry Equipment	Qualitative and Quantitative Analyses	pH measurements	Determination of acid-base properties of aqueous solutions	pH measurement range: 0.00 – 14.00 pH; automatic calibration with up to five points; ±0.01 pH accuracy and automatic temperature compensation. Equipped with micro-electrode for sample volumes between 0.1-0.5 mL	Mettler Toledo	USA	2019	Smart Organic Materials
26	pH meter	ORION Model 420A	1	Analytical Chemistry Equipment	Qualitative and Quantitative Analyses	pH measurements	Determination of acid-base properties of aqueous solutions	pH measurement range: -2.00 – 20.00 pH; automatic calibration with up to three points; ±0.001 pH accuracy.	Thermo Fisher Scientific	USA	2015	Smart Organic Materials
27	Ultrasonic Bath	Cole-Parmer 08895-10	1	General Laboratory Equipment	Dissolution	Sample preparation	Improved dissolution of compounds with low solubility. Degassing of solutions. Cleaning laboratory glassware.	Ultrasonic bath with a volume of 1 L and a power of 40 W, equipped with dedicated degassing functions, digital timing, adjustable heating between 20 and 70 °C as well as temperature sensor with automatic protection at temperatures ≥70 °C.	Cole-Parmer	USA	2013	Smart Organic Materials
28	Ultrasonic Bath	S 15 H Elmasonic	1	General Laboratory Equipment	Dissolution	Sample preparation	Improved dissolution of compounds with low solubility. Degassing of solutions. Cleaning laboratory glassware.	Ultrasonic bath with a volume of 1 L and a power of 40 W, equipped with dedicated degassing functions, digital timing, adjustable heating between 30 and 80 °C as well as temperature sensor with automatic protection at temperatures ≥80 °C.	Elma	Germany	2007	Smart Organic Materials
29	Distiller	Puridest PD 4 R	1	General Laboratory Equipment	Water Purification	Water purification	Production of pure water.	Distilled water production of 4 L/h.	Lauda	Germany	2021	Smart Organic Materials
30	Distiller	Distilator JP Selecta R-4 Reser	1	General Laboratory Equipment	Water Purification	Water purification	Production of pure water.	Distilled water production of 4 L/h.	JP Selecta	Spain	2019	Smart Organic Materials

31	Rotaevaporator (with cooling system included)	Rotavapor® R-300	1	General Laboratory Equipment	Solvent Evaporation	Solvent removal and purification of chemicals	Purification and/or concentration of samples at low temperatures and low pressure.	Equipped with V-300 pump capable of reaching a vacuum of up to 5 mbar. The integrated solvent database allows efficinet evaporation. It is equipped with vapor temperature and foam sensors. Depending on the coolant, the cooling system can provide a temperature of up to -10 °C	BÜCHI	Switzerland	2021	Smart Organic Materials
32	Rotaevaporator (with cooling system included)	RE-300	1	General Laboratory Equipment	Solvent Evaporation	Solvent removal and purification of chemicals	Purification and/or concentration of samples at low temperatures and low pressure.	Equipped with IKA VACSTAR control pump capable of reaching a vacuum of up to 2 mbar. The integrated solvent database allows efficinet evaporation. Depending on the coolant, the cooling system can provide a temperature of up to -10 °C	Cole-Parmer	USA	2008	Smart Organic Materials
33	Vacuum Pump for Rotaevaporator	IKA VACSTAR control	2	General Laboratory Equipment	Pumps & Liquid Transfer Equipment	Vacuum generation for drying compounds in the oven, distillations and chemical handling in a controlled atmosphere	Vacuum drying of temperature-sensitive materials. Vacuum distillation and evaporation of chemical and biological compounds.	Diaphragm vacuum pump, designed for sensitive and chemically aggressive environments. It offers a pumping speed of up to 1.3 m^3/h and a final pressure of about 2 mbar. It is equipped with an integrated vacuum controller and a detachable display, which allows automatic or manual pressure control. It also has an integrated database with solvents, facilitating the automatic setting of working parameters.	IKA	Germany	2021	Smart Organic Materials
34	Incubator with orbital stirring and temperature control	KS 4000 ic control	1	General Laboratory Equipment	Heating and stirring	Incubation of samples under controlled temperature and agitation conditions.	Incubation of biological or biochemical samples. Shaking-assisted liquid-to-liquid extractions. Testing the stability of pharmaceutical, cosmetic or food products under various specific environmental conditions. Culture of microorganisms or cell lines under controlled conditions of temperature and agitation.	The IKA KS 4000 ic offers an electronically adjustable speed between 10 and 500 rpm, with a load capacity of up to 20 kg and an orbital movement diameter of 20 mm. The internal chamber, with a volume of approximately 50 L, allows the temperature to be maintained in a range of +5 °C above the cooling temperature to up to 80 °C with a precision of ±0.5 °C.Equipped with an IKA Temperature Control RC 2 basic cooler for temperatures below RT.	IKA	Germany	2021	Smart Organic Materials
35	Thermostat, Cooler	IKA Temperature Control RC 2 basic	1	General Laboratory Equipment	Cooling and heating	Cooling or heating a room with a circulating liquid	Cooling rotary evaporators, maintaining constant temperature in chemical reactions, or thermal stabilization of analytical equipment such as calorimeters, spectrometers, or sensitive measurement systems.	Working temperature range of −20 °C to +100 °C with a temperature precision of ±0.05 °C, capable of delivering a flow rate of up to 18 L/min and a pumping pressure of 0.3 bar. The volume of the tank is 3.5 L.	IKA	Germany	2021	Smart Organic Materials

36	Chilled centrifuge	MPW-352R	1	Separation and Analysis Equipment	Centrifugal Separation	Separation of the components of a mixture based on density by centrifugation.	Centrifugation of thermally sensitive samples using the integrated cooling function. Separation and fractionation of compounds from biological samples. Separation of organic samples and polymers from a mixture.	The equipment offers a maximum speed of 18000 rpm and a relative centrifugal force (RCF) of up to 30065 × g, with a temperature range of −20 °C to +40 °C. It allows up to 99 custom methods, as well as adjusting acceleration, deceleration, and selection between RCF and rpm. It is equipped with various rotors, including angular, swing-out, hematocrit, and PCR.	MPW	Poland	2021	Smart Organic Materials
37	Centrifuge	Spectrafuge 6C	1	Separation and Analysis Equipment	Centrifugal Separation	Separation of the components of a mixture based on density by centrifugation.	Separates the components of a mixture (such as blood, cells, or proteins) through high-speed rotation. Deposition of polymer films on various substrates.	The equipment offers a maximum speed of 6200 rpm and a relative centrifugal force (RCF) of up to 4000 × g. It features an adapter that allows it to function as a spin coater for spinning thin films.	Labnet	U.S.	2010	Smart Organic Materials
38	Centrifuge	E8	1	Separation and Analysis Equipment	Centrifugal Separation	Separation of the components of a mixture based on density by centrifugation.	Separates the components of a mixture (such as blood, cells, or proteins) through high speed rotation.	The equipment offers a constant speed of 3300 rpm and a relative centrifugal force (RCF) of up to 1500 × g.	LW Scientific	U.S.	2010	Smart Organic Materials
39	LED photoirradiation system	0k7W270280m	15	General Laboratory Equipment	Photoirradiation	Controlled photoirradiation for activation, testing, and modification of chemical, biological, or physical properties of materials.	Selective photoirradiation for chemical and biological reactions. Testing the photo-stability of materials. UV-C LED decontamination/sterilization.	The high-power LEDs, with powers ranging from 0.7 W to 3 W, are mounted on aluminum heat sinks for efficient heat dissipation. These LED sources can provide an optical power output of 8–20 mW, generally operating at a maximum current of 120 mA and a supply voltage between 5 and 7 V, depending on the type of LED. The range covers both the ultraviolet range (UV-C, UV-A), the visible spectrum (blue, green, red) and near-infrared (IR).	Avonec	Germany	2021	Smart Organic Materials
40	Laser	C11924-201	1	General Laboratory Equipment	Photoirradiation	Controlled photoirradiation for activation, testing, and modification of chemical, biological, or physical properties of materials.	Selective photoirradiation for chemical and biological reactions. Testing the photo-stability of materials.	The UV laser module operates at a wavelength of 365 nm and generates an emitted optical power of 330 mW with an irradiation area of approximately 3 mm.	Hamamatsu	Japan	2012	Smart Organic Materials
41	Schlenk line	-	4	General Laboratory Equipment	Vacuum and Inert Gas Systems	Handling, purification, transfer, and reaction of air-sensitive compounds under an inert atmosphere (argon or nitrogen) or under high vacuum.	Handling of air- and moisture-sensitive compounds. Chemical syntheses under inert atmosphere. Transfer of liquids or gases via cannula.	The system consists of a 6-port vacuum/inert gas line, a trap, and a bubbler. The line is equipped with high-vacuum two-way valves and dedicated connections for the vacuum source and inert gas, allowing operation at high vacuum levels down to 10^{-4} mbar. The inert gas line includes two ports for connecting the gas source and the bubbler.	ICOS	Romania	2013	Smart Organic Materials

42	Ice Machine	ICEM-A60-001	2	General Laboratory Equipment	Cooling	Getting ice	Ice production for storing biological, chemical, or pharmaceutical samples at low temperatures and for cooling reaction mixtures.	Production capacity of about 60 kg of ice per day, tank with a volume of 15 kg, automatic ice production and shutdown system.	Labbox	Spain	2021	Smart Organic Materials
43	Ultra-freezer -80°C	Platinum 340	1	Equipment for preserving biological samples	Metabolomics, biology, biochemistry	Biobanks, preserving sensitive samples	Preservation of sensitive samples at -80°C	Temperature -80°C, 3 compartments, vertical	Angelantoni	Italy	2008	Metabolomics and nature-inspired compounds
44	Ultra-freezer -80°C	ALS Nexus-80	1	Equipment for preserving biological samples	Metabolomics, biology, biochemistry	Biobanks, preserving sensitive samples	Preservation of sensitive samples at -80°C	Temperature -80°C, 4 compartments, vertical	Angelantoni	Italy	2022	Metabolomics and nature-inspired compounds
45	Freezer	Arctic O47+	1	Equipment for preserving biological samples	Metabolomics, biology, biochemistry	Preserving sensitive samples	Preservation of sensitive samples at -20°C	Temperature -20°C, horizontal	Arctic	Romania	2020	Metabolomics and nature-inspired compounds
46	Analytical balance	Mettler Toledo	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Highly accurate weighing of chemicals and samples	Maximum capacity: 220 g Readability: 0.1 mg	Mettler Toledo	Switzerland	2022	Metabolomics and nature-inspired compounds
47	Analytical balance	Phoenix Instrument BTG-303	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Weighing of chemicals and samples	Maximum capacity: 300 g Readability: 1 mg	Phoenix Instrument	China	2022	Metabolomics and nature-inspired compounds
48	Analytical balance	Partner WTC 600	1	Analytical Chemistry Equipment	Quantitative Analyses	Sample Preparation	Weighing of chemicals and samples	Maximum capacity: 600 g Readability: 10 mg	Partner	Poland	2022	Metabolomics and nature-inspired compounds
49	Freeze-dryer	Alpha 2-4 LD Plus	1	Conditioning of vegetal and biological samples	Sublimation Drying	Freeze-drying of biological, vegetal and biochemical samples.	Long-term preservation of temperature-sensitive samples. Product formulations in dry solid form.	Freeze-drier Alpha 2-4 LDplus freeze dryer is equipped with a condenser with a capacity of 2.5 kg of ice and a condensation temperature of approximately −55 °C. Adapters for round bottom flasks and ampoules.	Marten Christ	Germany	2008	Metabolomics and nature-inspired compounds
50	Rota-evaporator (with cooling system included)	Rotavapor R-300	1	General Laboratory Equipment	Solvent Evaporation	Solvent removal and purification of chemicals	Purification and/or concentration of samples at low temperatures and low pressure.	Equipped with V-300 pump capable of reaching a vacuum of up to 5 mbar. The integrated solvent database allows efficient evaporation. It is equipped with vapor temperature and foam sensors. Depending on the coolant, the cooling system can provide a temperature of up to -10 °C	BÜCHI	Switzerland	2022	Metabolomics and nature-inspired compounds

51	Microwave reactor	Microwave reactor, BIOTAGE Initiator	1	General Laboratory Equipment	Microwave synthesis	Organic synthesis method which in some cases proceeds with greater yields and higher speed than conventional synthesis	Microwave-driven organic synthesis facilitates the achievement of high pressures and temperatures, thereby decreasing the reaction duration from hours, as observed at standard temperatures, to only minutes	Temperature range: 40-250 °C, the ability to directly measure the temperature within the reaction vessel using an IR sensor, heating rates of 2-5 °C/sec, microwave generation power: max. 400 W, 2,45 GHz, maximum pressure in the reaction vessel: 20 bar, the capacity to assess the pressure in the lid of the reaction vessel, avoiding the contamination of samples	BIOTAGE LLC	Sweden	2007	Metabolomics and nature-inspired compounds
52	Mobile IR spectrometer	IR Alpha-E analyzer for wines and juices	1	IR equipment for aqueous samples	Infrared spectroscopy	Analysis of wine, vegetal juices and must samples	Characterization of vegetal aqueous samples	Resolution 2 cm-1	Bruker	Germany	2022	Metabolomics and nature-inspired compounds
53	Magnetic stirring hob	IKA Plate (RCT digital)	1	General Laboratory Equipment	Heated Magnetic Stirrer	Mixing and heating of chemical compounds	Solubilization of pharmaceutical or bioactive compounds. Efficient mixing and heating of varying volumes of chemical compounds.	Heated plate with magnetic stirring, digital interface and precise control over temperature and stirring. 50-1500 RPM, 10 - 310 °C	IKA	Germany	2022	Metabolomics and nature-inspired compounds
54	Oven	ILM Labor WS 983	1	General Laboratory Equipment	Heating and Drying	Heating and/or drying of chemicals and/or laboratory glassware	Thermal drying of solid materials and samples.	Working temperature can be adjusted from approx. +10 °C above ambient temperature to a maximum of 200 °C with temperature control of ± 5 °C.	ILM Labor	RDG	1980	Metabolomics and nature-inspired compounds
55	Vacuum Oven	Barnstead Lab-Line 3608-1CE	1	General Laboratory Equipment	Heating and Drying	Advanced drying of solid chemicals	Drying of heat-sensitive samples. Removal of water and other residual solvents.	Working temperature can be adjusted from approx. +10 °C above ambient temperature to a maximum of 200 °C with precise temperature control (± 1 °C). Connection for vacuum.	Barntead Lab-Line	USA	2008	Metabolomics and nature-inspired compounds
56	Vortex sample mixer Orbital	IKA Vortex 2	1	General Laboratory Equipment	Samples mixing Equipment	Mixing samples	High speed mixing ang homogenizing of chemical and biological samples.	Allows high speed and efficient mixing of samples in centrifuge tubes, microtubes and ampules via an orbital movement with adjustable speed between 500 and 2500 rpm.	IKA	Germany	2019	Metabolomics and nature-inspired compounds
57	Microcentrifuge	Minispin Plus	1	Separation and Analysis Equipment	Centrifugal separation for 1.5-2 ml tubes.	Separation of the components of a mixture based on density by centrifugation.	Separates the components of a mixture (such as blood, cells, or proteins) through high speed rotation.	The equipment offers a maximum speed of 14500 rpm and a relative centrifugal force (RCF) of up to 14000 × g.	Eppendorf	USA	2022	Metabolomics and nature-inspired compounds
58	Centrifuge	Hermle Z206A	1	Separation and Analysis Equipment	Centrifugal separation for 15-25 ml tubes.	Separation of the components of a mixture based on density by centrifugation.	Separates the components of a mixture (such as blood, cells, or proteins) through high speed rotation.	The equipment offers a maximum speed of 6000 rpm and a relative centrifugal force (RCF) of up to 4180 × g.	Hermle	Germany	2022	Metabolomics and nature-inspired compounds
59	Multinuclear NMR probehead	Bruker	1	Equipment for NMR spectroscopy analysis	Metabolomics, biology, biochemistry	NMR analysis for biological samples and metabolomics studies	Analysis of vegetable and biological samples by NMR spectroscopy.	Multinuclear NMR probehead with inverse detection, optimized for 1H nuclei and water suppression. Signal to noise ration 1100:1 for 0.1% ethylbenzene in CDCl3.	Bruker	Germany	2025	Metabolomics and nature-inspired compounds

60	High performance liquid chromatography system with chiral exclusion	HPLC Agilent 1200 series with DAD and Refractive Index Detectors	1	Materials Sntheses and Analytical Chemistry Equipment	Chemistry and Materials Science	Separation of organic compounds, Valorisation of biomass renewable resources	Chromatographic separations of mixtures containing chiral compounds at analytical and semi-preparative scale by Chiral LC with micropolarimeter detector. Development of processes for extraction and processing of bio-active or building block molecules starting from natural renewable resources or wastes.	The system is equipped with a quaternary pump that allows the simultaneous use of four solvents, in either isocratic or gradient mode. The apparatus can be fitted with columns suitable for normal-phase or reversed-phase analysis, as well as chiral columns.	Agilent	USA	2010	Bioresources and sustainable organic chemistry
61	Polarimeter	Polarimeter Model 341	1	Analytical Chemistry Equipment	Qualitative analysis	Investigation and analysis of optically active substances	Characterization of newly synthesized compounds and quality control of optical active compounds.	The polarimeter is equipped with both a mercury lamp and a sodium lamp. It enables analysis at various wavelengths (589, 578, 546, 436, and 365 nm).	Perkin Elmer	USA	2008	Bioresources and sustainable organic chemistry
62	Laboratory Oven	Memmert UFE 400 Sterilizer Laboratory Oven	1	General Laboratory Equipment	Heating and drying	Heating and drying of substances and laboratory glassware	-	The total volume of the oven is 53 L, with a maximum loading capacity of 90 kg. The temperature can be set within a range of 20–220 °C.	Memmert	Germany	2000	Bioresources and sustainable organic chemistry
63	Vaccum Oven	LBX OVV Vacuum Drying Oven	1	General Laboratory Equipment	Chemistry and Material Sciences	Advanced drying of chemical solid compounds	-	The oven has a volume of 24 L. The temperature can be set between 10 and 250 °C. It is equipped with a VACU-K10-001 vacuum pump, capable of achieving a vacuum of up to 0.1 torr.	Lbx Instruments	Italy	2022	Bioresources and sustainable organic chemistry
64	UV-Vis Spectrometer	Hitachi U-3010 Spectrophotometer	1	Analytical Chemistry Equipment	Spectrometry	Qualitative and quantitative analysis of various chemical substances	Investigation of solution's concentration, purity, and physical properties by measuring the UV-Vis absorbance.	The UV-Vis spectrophotometer, equipped with a double beam, allows the acquisition of spectra in the range of 190–1100 nm, with a resolution of 0.1 nm. It enables the simultaneous analysis of up to 8 samples at a constant temperature.	Hitachi	Japan	2000	Bioresources and sustainable organic chemistry
65	Water Purification System	Direct-Q® 3 UV Remote Water Purification System	1	General Laboratory Equipment	Lab Water Purification	Purification of water	Production of pure and ultrapure water .	It enables the production of pure and ultrapure water at a flow rate of 3 L/h. It is equipped with an integrated 6 L reservoir.	Millipore	France	2018	Bioresources and sustainable organic chemistry
66	Distiller	Puridest PD 4 R	1	General Laboratory Equipment	Lab Water Purification	Purification of water	Production of pure water	It enables the production of distilled water at a flow rate of 4 L/h.	Lauda	Germany	2019	Bioresources and sustainable organic chemistry
67	Peristaltic Pump	Shenchen Laboratory pump YZ1515x	1	Materials Synthesis	Pumps and Fluid Transfer Devices	Dispensing liquids	Displacement pump used to transport fluids through a flexible tube.	The peristaltic pump is equipped with a head capable of transferring liquids at flow rates ranging from 0.07 to 2280 mL/min. The pump tubing is resistant to corrosive substances.	Shenchen Precision Pump	China	2020	Bioresources and sustainable organic chemistry
68	Boëtius hot plate microscope	Polytherm A Hot Stage Microscope	1	Analytical Chemistry Equipment	Chemistry and Material Sciences	Qualitative identification of compounds through melting point measurements	Widely used for studying melting points, crystallization, polymorphic transitions, eutectic behavior, and thermal degradation of materials like organic compounds.	The maximum heating temperature is 480 °C, with four heating levels.	Wagner & Munz	Germany	2005	Bioresources and sustainable organic chemistry

69	Vortex sample mixer	V-32 mixer for tubes	1	General Laboratory Equipment	Mixing Equipment	Mixing sample in tubes	Used for agitating up to 32 micro-tubes simultaneously with a speed range from 500 to 3000 rpm.		SIA Biosan	Latvia	2014	Bioresources and sustainable organic chemistry
70	Rotary evaporator (Chiller included)	Rotavapor® R-300	2	General Laboratory Equipment	Solvent Evaporation Equipment	Solvent removal and purification	Purification and concentration of chemical compounds at high temperature and reduced pressure.	Equipped with a V-300 pump capable of achieving a vacuum of up to 1 mbar. Thanks to the integrated solvent database, it allows the selection of automated evaporation programs. The system is fitted with vapor temperature sensors and a foam breaker. Depending on the heat transfer fluid used, the cooling system can reach temperatures as low as -10 °C.	BÜCHI	Switzerland	2020	Bioresources and sustainable organic chemistry
71	Magnetic stirring hot plate	IKA C-MAg HS7 magnetic stirrer	3	General Laboratory Equipment	Heated magnetic stirrers	Mixing and heating chemical substances	Digital magnetic hotplate stirrer equipped with a ceramic heating suitable for mixing and heating chemical substances.		IKA	Germany	2018	Bioresources and sustainable organic chemistry
72	Magnetic stirring hot plate	IKA RCT basic magnetic stirrer	1	General Laboratory Equipment	Heated magnetic stirrers	Mixing and heating chemical substances	Digital magnetic hotplate stirrer offering precise control over both stirring speed and heating temperature.		IKA	Germany	2022	Bioresources and sustainable organic chemistry
73	Magnetic stirring hot plate	IKA RCT 5 digital magnetic stirrer	1	General Laboratory Equipment	Heated magnetic stirrers	Mixing and heating chemical substances	Digital magnetic hotplate stirrer offering precise control over both stirring speed and heating temperature.		IKA	Germany	2023	Bioresources and sustainable organic chemistry
74	pH-meter	HI 2213 pH/ORP Meter	1	Analytical Chemistry Equipment	Chemical Basic Analysis	pH Measurement	Microprocessor-based benchtop meter designed for precise measurement of pH, oxidation-reduction potential (ORP), and temperature.		Hanna Instruments	Germany	2014	Bioresources and sustainable organic chemistry
75	Ultrasonic bath	S 15 H Elmasonic	1	General Laboratory Equipment	Mixing Equipment	Sample preparation	Dissolution enhancement of poorly soluble compounds.		Elma	Germany	2007	Bioresources and sustainable organic chemistry
76	UV lamp	Ultraviolet Lamp VL-4.LC	1	General Laboratory Equipment	Chemical Basic Analysis	Qualitative UV measurements	Compounds identification through certain wavelength interaction (254 nm).		Vilber	France	2004	Bioresources and sustainable organic chemistry
77	Lab balances	AFA Analytical Balance 120 LC	1	Analytical Chemistry Equipment	Chemical Basic Analysis	Sample preparation	Used to measure the mass of solids, liquids, and other samples		Adam	China	2004	Bioresources and sustainable organic chemistry

78	Lab balances	Me-T Analytical Balances ME104T/M00	1	Analytical Chemistry Equipment	Chemical Basic Analysis	Sample preparation	Used to measure the mass of solids, liquids, and other samples		Mettler Toled	Switzerland	2021	Bioresources and sustainable organic chemistry
79	Lab balances	Analytical Balance Kern ABJ 120-4N	1	Analytical Chemistry Equipment	Chemical Basic Analysis	Sample preparation	Used to measure the mass of solids, liquids, and other samples		Kern	Germany	2017	Bioresources and sustainable organic chemistry
80	Microscope	Laboratory Microscope H 600 PL-C	1	Analytical Chemistry Equipment	Chemical Basic Analysis	Sample optical analysis	Used to visualise microscopic details of crystals and other solids state samples.	The microscope features an adjustable halogen illumination system (12 V/30 W), ergonomic binocular head, a 4- or 5-position nosepiece, plan-achromatic objectives (4×, 10×, 40×, 100× oil immersion), and widefield eyepieces WF10×/20.	Hund Wetzlar	China	2005	Bioresources and sustainable organic chemistry
81	Ball Mill	Fritsch Pulverisette 6	1	General Laboratory Equipment	X-Ray Samples preparation / mixing Equipment	Mixing substances in powder form / powdering substances	-	High-performance Planetary Ball Mill with a single grinding bowl mount and practical, easily adjustable imbalance compensation.	Fritsch	Germany	2019	Bioresources and sustainable organic chemistry
82	Laboratory Oven	Phoenix Instruments TIN-TF51	1	General Laboratory Equipment	Heating and drying	Heating and drying of substances and laboratory glassware	-	The total volume of the oven is 50 L, with a maximum loading capacity of 30 kg. The temperature can be set within a range of 20–300 °C.	Phoenix Instruments	Germany	2019	Bioresources and sustainable organic chemistry
83	Vibrating Sieve	Fritsch Analysette 3	1	General Laboratory Equipment	Separation of powders according to granulometry	Separation of powders according to granulometry	-	Shaking sieve system with regulated vertical oscillations. Sieving sample quantities up to 2 kg and a measurement range from 20 µm to 63 mm.	Fritsch	Germania	2019	Bioresources and sustainable organic chemistry

84	HPC cluster 140 cores	Parallel computing system	1	High performance computing cluster	Computational chemistry	Semiempirical/ Ab inition calculations	Chemistry/Electrochemistry/Catalysis	High Performance Computing expandable system of 5 nodes, based on dual processor blades. Three nodes are equipped with 2 x 8 core Intel(R) Xeon(R) CPU E5-2650 v2 @ 2.60GHz processors and 4GB RAM/core. The 4th node is equipped with 2 x 10 core Intel(R) Xeon(R) CPU E5-2630 v4 @ 2.20GHz processors and 6GB RAM/core. The 5th node is equipped with 2 x 12 core Intel(R) Xeon(R) CPU Platinum 8260 @ 2.40GHz processors and 5.33GB RAM/core. The 6th node is equiped with 2x24 core Intel Xeon Gold CPU @2.10GHz processors 11.2GT/s, 36M Cache and 32GB RAM/core (32 GB RDIMM, 3200MT/s, Dual Rank 16GB BASEx2) The cluster includes a total of 140 core, 1720 GB RAM and 6.4TB HDD + 1.6 TB SSD storage capacity. Softwares: Centos 7 ; gpaw open source code Ver. 22.8.0/ ase gui graphical interface 3.22.1	HP/Dell	USA	2014/2015/2019/2023	Theoretical Chemistry: Structure and Reactivity
85	HPC 40 cores workstation (refurbished)	Dell precision T7820 Computing system	1	High performance computing system	Computational chemistry	Semiempirical/ Ab inition calculations	Chemistry/Electrochemistry/Catalysis	Workstation DELL Precision T7820/2xIntel Xeon 20 core Gold 6148 2.4 GHz/384 DDR4 ECC(12x32GB 21300R) - storrage capacity of 1TB SSD+2TB HDD Softwares: Windows 10 Pro; Gaussian 16W Rev. A.03 WIN64; GausView 6.0.16	Dell	USA	2023	Theoretical Chemistry: Structure and Reactivity
86	HPC 28 cores workstations (refurbished)	Dell computing system	2	High performance computing systems	Computational chemistry	Semiempirical/ Ab inition calculations	Chemistry/Electrochemistry/Catalysis	DELL 2xIntel R Xeon 10 core CPU E5-2680 v4@2.4 GHz RAM memory 384 GB/256 GB Windows 10 Pro; Gaussian 16W Rev. A.03 WIN64; GausView 6.0.16	Dell	USA	2021/2022	Theoretical Chemistry: Structure and Reactivity
87	HPC 96 core workstation	AMD computing system	1	High performance computing systems	Computational chemistry	Semiemprical/Ab initio calculations	Chemistry/Electrochemistry/Catalysis	High Performance Computing system PQS with 4 AMD quantum cube types computing nodes - code QS96-2600c-AD12. The cluster has one external head node for administration and I/O (see the 20 core workstation) . Each computing node is equipped with 2 x 12 core AMD Opteron 6234 @ 2.6 GHz, with 10.67 GB RAM/core (DDR3), storage capacity of 500GB SSD & 2TB HDD (on SATA 2.0) and Ethernet Gigabit interconnect. The cluster has a total of 96 core, 1 TB RAM, 2 TB SSD and 8 TB HDD storage capacity. Softwares: CentOS 7 and latest GAMESS Open Source for Linux from Gordon Group	AMD	USA	2013	Theoretical Chemistry: Structure and Reactivity

88	HPC 20 core workstation	Dell Precision Tower 7810 computing system	1	High performance computing systems	Computational chemistry	Semiemprical/Ab initio calculations	Chemistry/Electrochemistry/Catalysis	Workstation DELL Precision Tower 7810 Procesor with 2 IntelXeon(R) CPU E5-2630 V4 , 10 cores and 20 threads each 128 GB RAM and storage capacityof 2T HDD. Iit works as external head node for the HPC AMD 96 core workstation	Dell	USA	2015	Theoretical Chemistry: Structure and Reactivity
89	HPC 16 core workstation	PQS computing system	1	High performance	Computaional chemistry	Semiempirical/ Ab inition calculations	Chemistry/Electrochemistry/Catalysis	PQS 2 node Intel Quantum Cube based on 4 core Intel Xeon processors@3.2 GHz, total of 16 cores in 2 nodes, 2GB/core of RAM (total of 32 GB) and a storage capacity of 2 TB	PQS	USA	2010	Theoretical Chemistry: Structure and Reactivity
90	Microwave reactor	Microwave reactor, BIOTAGE Initiator	1	Laboratory equipment for general purposes	Microwave synthesis	An organic synthesis method that achieves greater yields compared to conventional synthesis	Microwave-driven organic synthesis facilitates the achievement of high pressures and temperatures, thereby decreasing the reaction duration from hours, as observed at standard temperatures, to only minutes	Temperature range: 40-250 °C, the ability to directly measure the temperature within the reaction vessel using an IR sensor, heating rates of 2-5 °C/sec, microwave generation power: max. 400 W, 2,45 GHz, maximum pressure in the reaction vessel: 20 bar, the capacity to assess the pressure in the lid of the reaction vessel, avoiding the contamination of samples	BIOTAGE LLC	Sweden	2007	Metallo-supramolecular assemblies and crystal engineering
91	Photoreactor	Photoreactor system Peschl type MPDS®EVO photonCABINET	1	Laboratory equipment for general purposes	Photochemistry	Photochemistry for organic synthesis	Photocyclization and photoisomerization reactions conducted at laboratory scale	The PhotonCABINET (safety cabinet) incorporates a medium pressure mercury lamp (novaLIGHT TQ 1000 lamp) encased in a quartz tube, along with a recirculating thermoCONTROL cooling system	Peschl Ultraviolet Gmbh	Germany	2024	Metallo-supramolecular assemblies and crystal engineering
92	Rotary evaporator	Buchi Rotavapor R 210	1	Laboratory equipment for general purposes	Controlled solvent evaporation	Solvent evaporation and purification of substances	Solvent evaporation; the vacuum controller provides the capability to adjust pressure at a specified reference point, along with a collection of 43 commonly utilized solvents and an autodistillation feature.	It is compact and user-friendly, featuring a BUCHI B491 heating bath with a 4L capacity and a temperature range of 20 to 180 °C, BUCHI V-700, along with a vacuum pump and a V-750 vacuum controller.	Buchi	Switzerland	2008	Metallo-supramolecular assemblies and crystal engineering
93	MAX-303 Photoreactor	Asahi Spectra MAX-303 Compact Xenon Light Source	1	Laboratory equipment for general purposes	Photochemistry	Photochemical synthesis	Photoiradiation experiments conducted at wavelengths such as 365, 380, 405, 550 si 570 nm.	Different wavelengths irradiation, mirroring module (UV-VIS), light guide adaptor (UV), Quartz light guide de 1000 mm, quartz collimator lens (x 1.0), high transmission bandpass	Asahi Spectra	Japan	2022	Metallo-supramolecular assemblies and crystal engineering
94	Portable EPR Spectrometer	EPR Spectrometer CIQTEK EPR 200M	1	Laboratory equipment for general purposes	Electron Paramagnetic Resonance Spectroscopy	EPR spectra	Paramagnetic compounds characterization	9,2 - 9,9 GHz frequencies and magnetic field range: -100 - 6500 G	CIQTEK Co., Ltd.	China	2024	Metallo-supramolecular assemblies and crystal engineering

95	Laboratory oven	Forced convection oven UF30	2? Sau 3??	Laboratory equipment for general purposes	Solvothermal /Hydrotherm al synthesis	Solvothermal/Hydrother mal synthesis	Solvothermal/Hydrothermal synthesis utilizing a temperature-controlled program	Adjustable temperature between +5°C and +300°C, constructed from stainless steel on both the inside and outside, a digital controller equipped with a touch screen, forced convection, the ability to regulate the intake of preheated fresh air through an air trap with a step control of 10%, PT 100 A Class temperature sensor, a program storage system to safeguard against power outages.	Memmert	Germany	2021	Metallo-supramolecul ar assemblies and crystal engineering
96	Cryostream cooling system	Oxford Cryostream 1000	1	Laboratory equipment for general purposes	Cooling/cryog enic system	Open flow sample cooler	Cooling system for XRD in crystallography and spectroscopy	Temperature range between 80 - 400 K, cryogenics with liquid nitrogen, stability of +/- 0,1, fast cooling in ~20 minutes.	Rigaku, Oxford		2024	Metallo-supramolecul ar assemblies and crystal engineering
97	LabTech rotary evaporator	Rotary evaporator	1	Laboratory equipment for general purposes	Controlled solvent evaporation	Solvent removal and concentration	Allows for rotation in both clockwise and anti-clockwise directions over the entire range of rotation speeds from 20 rpm to 300 rpm, with or without a specified time (for unlimited time), supporting gradient distillation	Displaying the distillation curve, which provides informations about the evaporation(rotation speed, vaccum pressure, vapors temperature); an integrated vacuum controller, a digital rotation speed controller, and the simultaneously display of both the established and actual rotation rates.	LabTech	Italy	2024	Metallo-supramolecul ar assemblies and crystal engineering
98	Potentiostat/galvanost at	Autolab VIONIC 3500001080	1	Laboratory equipment for general purposes	Electrochemis try	Cyclic voltammetry, Electrochemical Impedance Spectroscopy (EIS)	Electrochemical measurements, especially cyclic voltammetry	Voltage ± 50 V, standard current ± 6 A, electrochemical impedance frequency up to 10 MHz or amplitudes up to 10V/6 A.	Metrohm Autolab	Netherlands	2022	Metallo-supramolecul ar assemblies and crystal engineering
99	300 MHz NMR	Varian Mercury Plus 300 FT-RMN	1	Essential Analitic Equipment	Assessement of the structure and composition of soluble organic compounds	Determination of the structure and composition of the organic compounds by short and long range bi-nuclear (H/F; C/P) correlations	Allows NMR spectral experiments by direct and inverse detection, mono- and bi-dimensional	Fourier NMR instrument, 7.5T magnet (300 MHz for proton) cu 2 channels + lock, ASW (autoswichable) probe, "Z" axis pulse field gradients, variable temperature module from -60 to +80°C.	Varian Inc.	SUA	2004	Structural analysis / ICOS
100	GC-MS	Agilent 6890N GC cuplat cu Agilent 5975B MS	1	Essential Analitic Equipment	Determinatio n of the structure, composition and purity of volatile organic compounds	Structure assessement by standard electron ionisation against spectral lybraries and of the composition by chromatographic separation and dosage against standards	Aparatul GC-MS 5975B inert XL MSD permite scanarea rapida (cca 0.1 sec) pana la 1050 Da 1050. Spectrometrul MS permite atat ionizarea prin impact electronic (EI) cat si ionizarea chimica (CI), astfel putand extinde domeniul de mase molare cu pastrarea acuratetii. de determinare.	Gas Chromatograph coupled to Quadrupol Mass Spectrometer	Agilent	SUA	2010	Structural analysis / ICOS

101	HPLC-MS-MS	Varian system 310 MS	1	Essential Analitic Equipment	Determination of the structure, composition and purity of liquid or soluble organic compounds	Allows either library identification by standard simple ionisation, or advancd stepped MS-MS fragmentationfor un-listed compounds	Can perform multiple fragmentation pathways for recording ion filiation of unknown compounds. Direct injection is possible and molecular ion can be selected, using API	HPLC dual pump analytic and preparative system with diode-array detector hyphenated with triple quadrupole MS-MS system. Can perform separations at analytical to preparative level and high performance identification of organic compounds either by simple MS with catalog "finger-print" search or by structural MS-MS using multiple steps fragmentation pathway.	Varian Inc.	SUA	2012	Structural analysis / ICOS
102	Sistem complex FT-IR	Brucker Vertex V70 equped with PMA50 module	1	Essential Analitic Equipment	Determination of the structure and composition of the organic compounds	Assessement of the structure (and composition) of the organic compounds by identifying the functonal groups, measuring the absolute rotatory sense of the polarised light and of the molecular orientation at interface	Evaluation of the structure, composition, absolute chiral configuration and molecular orientation at interfece of the of the organic compound in liquid, solid and thin film form. allows complex experiments od Vibrational Circular Dichroism and linear dicroism as Photoelastic Modulated Infrared Absorbtion Attenuated Reflexion Spectroscopy (PM-IRRAS)	FT-IR spectro-photometer with "corner-cube" interferometer, equipped with thermostated CaF2 windowed liquid cell, diamond ATR device, extension for angle-modulated polarised light experiments by means of a ZnSe-crystal photoelastic modulator integrated with a real-time, synchronous electronic acquisition system	Brucker Optics	Germany	2009	Structural analysis / Bioresources and sustainable organic chemistry / ICOS
103	Analizor elemental automat	Costech	1	Echipament analitic esential		Structure validation for combustible organic compounds	Elemental composition (HCNOS) by complete oxidation and integral dosage of combustion by-products	Automated combustion oven coupled to chromatography separation and dosage system integrated with electronic controller and data processor	Costech	Italy	2008	Structural analysis / ICOS
104	400 MHz NMR	Varian Mercury Plus 400 FT-RMN	1	Essential Analitic Equipment	Assessement of the structure and composition of soluble organic compounds	Determination of the structure and composition of the organic compounds by short and long range bi-nuclear (H/F; C/P) correlations	Allows NMR spectral experiments by direct and inverse detection, mono- and bi-dimensional	Fourier NMR instrument, 9T magnet (400 MHz for proton) cu 2 channels + lock, ASW (autoswichable) probe, "Z" axis pulse field gradients, variable temperature module from -60 to +80°C.	Varian Inc.	SUA	2004	Structural analysis / ICOS
105	Safety cabinet for flamable solvents	Chemisafe	14	Support Equipment		Enable safe storage of flamable liquids	Enhance collective fire protection	Safety cabinets certified according to UNI EN 14470-1:2004 (TYPE 90) Part 1 technical standard	Chemisafe	Italy	2022	ICOS
106	Centralised vacuum pumps	BushVacuum	3	Support Equipment		Provide centralised - 1 torr - vacuuum for labs at 1, 2 and 3 floors	Enhance drying/purification/separation operations	Water ring rotary vane pumps with power ranging from 3 to 5 kW, according to requirements of each floorPompe cu inel de apa cu puteri de 3-5 kW, adaptate nevoilor maxime pe fiecare etal	BushVacuum	Germany	2022	ICOS
107	Air compressor	AlMig	1	Support Equipment		Produces compressed air @ 12 bar for all the equipments using this supply	Essential equipment mandatory for most important equipments as: NMR, FTIR LC-MS-MS, TGA-MS, N2 generator and so on	AlMig scroll compressor, 15 kW, 500 mc/h, equipped with dryer and filters, producing compressed air with less than -20°C dew point and less than 2 ug/mc suspended particles	AlMig	Germany	2022	ICOS
108	Nitrogen generator	Terra Universal	1	Support Equipment		Produces nitrogen-gas with 4.5 purity	Enables functionning of sensitive equipments as: FTIR, DSC, NMR, LC-MS-MS	Split-type membrane separator, capacity 200 L/min nitrogen @ 9 bar with less than -45°C dew point	Terra Universal	USA	2008	ICOS