














## Department of Wood Science and Technology

N	Device	Room	Resp. person	Description	Photo
1	Automatic Tissue Processor	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	The Leica TP1020 is an automatic tissue processor designed for laboratory applications. It is used for the fixation, dehydration and infiltration of histological tissue samples with fixatives, alcohol, solvents and paraffin wax.	
2	Leica HI1210 Water Bath	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	The Leica HI1210 is a water bath with a surface that provides high thermal conductivity rates and outstanding scratch resistance due to its special plastic coating. Temperatures can be selected between ambient and 75°C. The broad, oversized rim of the water bath allows convenient storage for microscope slides, and the rounded inner corners of the instrument allow it to be cleaned easily and efficiently.	
3	Leica EG1120	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	Embedding of micro-cores. The Leica EG1120 offers a built-in solid paraffin separator, to prevent the dispenser nozzle from becoming clogged by solid or semi-solid paraffin. Paraffin is dispensed through heated dispenser nozzles and the flow rate can be easily regulated as required to ensure trouble-free paraffin dispensing in every type of working situation. The digital display supports precise temperature regulation unequalled by other instruments.	
4	Sliding Microtome Leica SM 2010 R	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	Designed for LARGE specimens, ideal for brain sections. Specification: Maximum specimen size 80 x 60 mm. Section thickness adjustable from 1 to 60 µm. Automatic advance between 0 and 30 µm.	
5	Rotary Microtome Leica RM 2235	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	Setting Values: 1–10 µm in 1 µm 10–20 µm in 2 µm 20–60 µm in 5 µm  Trim Settings: 10, 30 µm Total Horizontal Specimen Feed: 30 mm Section Thickness Setting Range: 1 – 60 µm	
6	Sledge Microtome GSL 1	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	Lightweight microtome operated with disposable blades.	
7	INCUCELL 55	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	Volume: 55 l Special-purpose drying ovens with highly resistant EPOLON-coating, protecting the internal chamber of aggressive substances like acids or alkaline liquids. This device ensures an optimum goods temperature equalisation. It is ideal for acid and basic hydrolysis, extraction of non inflammable materials and decomposition of substances in solid phase.	

8	Light microscopes	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.	Leica DMLS etc.	
9	Laboratory scales	BA04N6035	prof. Ing. Vladimír Gryc, Ph.D.		
10	Laboratory stereomicroscope Euromex StereoBlue SB.1903-P	BA04N6013	Ing. Radim Rousek	Working distance 100 mm Magnification 7x - 45x Field of view 30 - 4.6 mm Max. field of view 40 mm with the additional lens 0.75x	
11	Drop test machine DPFest 400	VCJR - XV04N1006	Ing. Martin Brabec, Ph.D.	Technical parameters: - type of loads: bending - max. potential energy: 400 J - loading rate: low-speed dynamic (cca 1 - 4 m/s) - type of hammer: ČSN 49 0117, ASTM E23, ISO 179, ISO 6603 - recorded data: force, displacement - capturing of deformation: crosshead position	
12	Universal testing machine Tinius Olsen 10ST	VCJR - XV04N2006	Ing. Martin Brabec, Ph.D.	Technical parameters: - type of loads: uniaxial tension, uniaxial compression, three-point bending, four- point bending - force capacity: 0 - 0.5 kN, 0 - 10 kN - loading rate: quasi-static (0 - 500 mm/min) - capturing of deformation: crosshead position (bending loads), extensometers (tension and compression loads) - engine type: servo-electric	
13	Universal testing machine LabTest 6.500H	VCJR - XV04N1006	Ing. Martin Brabec, Ph.D.	Technical parameters: - type of loads: uniaxial tension, uniaxial compression, three-point bending, four- point bending - force capacity: 0 - 500 kN - loading rate: quasi-static (0 - 520 mm/min) - capturing of deformation: crosshead position (all loads), extensometers (tension and compression loads) - engine type: hydraulic	
14	Universal testing machine Zwick Z050/TH 3A	VCJR - XV04N2009	Ing. Martin Brabec, Ph.D.	Technical parameters: - type of loads: uniaxial tension, uniaxial compression, three-point bending, shear - force capacity: 0 - 50 kN - loading rate: quasi-static (0 - 500 mm/min) - capturing of deformation: crosshead position (all loads), extensometers (tension, compression, bending loads) - engine type: servo-electric	
15	Acquisition set for optical measurement of deformation (based on Digital Image Correlation - DIC technique)	VCJR - XV04N2009	Ing. Martin Brabec, Ph.D.	Technical parameters: - number of cameras: 4x2 - image resolution: 2x1.3 MPx, 6x5 MPx - max. acquisition frequency: 2x9 Hz, 2x13 Hz, 2x30 Hz, 2x100 Hz - measurement configuration: 2D, 3D - measurement mode: marker tracking, full- field - field of view: macro, wide-range	

16	Device for abrasion measurement: Taber 5131		prof. Dr. Ing. Pavel Král	The Rotary Abraser Taber 5131 is a test instrument designed to evaluate the resistance of surfaces to rubbing abrasion. Characteristic rub-wear action of Abraser is produced by the contact of a test sample turning on vertical axis, against sliding station of two abrading Wheel. The abrasion is evaluated accordingly to standards in force (ASTM F510-93).	
17	Resistograph Rinntech 4452	BA04N6086	Ing. Jan Baar, Ph.D.	Mechanical resistance measurement device, where thin drill is inserted into a wood log or structural wood beam in order to gain an idea of its density, often to identify areas of substandard structural integrity such as decay.	
18	Climatic Test Cabin (QUV) - CTS Clima Temperature system – CL-30-600 TGS	VCJR - XV04N1005	Ing. Jan Baar, Ph.D.		
19	Q-SUN Xe-1 Xenon Test Chamber	VCJR - XV04N1005	Ing. Jan Baar, Ph.D.	reproduces the damage caused by full-spectrum sunlight and rain. In a few days or weeks, the Q-SUN tester can reproduce the damage that occurs over months or years outdoors. The Q-SUN Xe-1 tester is a tabletop lightfastness, colorfastness, and photostability chamber. It has a single xenon arc lamp and is available with optional water spray and chiller	
20	Climate chamber Memmert	VCJR - XV02N1015	Ing. Jan Baar, Ph.D.	Temperature Ranges: -40°C to 190°C (without humidity) 10°C to 95°C (with humidity)	
21	Temperature & Humidity Chamber JeioTech TH-TG-408	VCJR - XV02N1015	Ing. Jan Baar, Ph.D.	Temperature range from -5 to 100°C Humidity range from 10 to 95% RH	
22	Spectrophotometer Conica Minolta CM-2600d	VCJR - XV04N2005	Ing. Jan Baar, Ph.D.	Handheld, portable measurement instrument designed to evaluate the color, relative gloss, and UV characteristics of samples particularly with flat surfaces. Illumination system: d/8 Wavelength range: 360 nm - 740 nm Observer: 2° or 10° Standard Observer	
23	Glossmeter KSJ MG268-F2	VCJR - XV04N2005	Ing. Jan Baar, Ph.D.	Gloss meter that simultaneously displays measured values at 20°, 60° and 85° angles allowing the user to quickly view optimized measurements for low and high gloss applications. Measuring Angle: 20/60/85° Measuring Range: 0-2000 GU Memory for 1000 measurements	
24	3D Optical Profilometer VR-6000 Series	VCJR - XV04N2011	Ing. Jan Baar, Ph.D.	The optical profilometer performs non-contact measurement. It captures full surface data across the target with a resolution of 0.1 µm.	

25	Temperature data logger Dostmann electronic LOG 100	BA04N6086	Ing. Jan Baar, Ph.D.	Measuring range: -30...+70°C (internal) -50...+125°C (external) Accuracy: $\pm 0,5^{\circ}\text{C}$ (-20...+50°C) Memory: 60000 measurings Interval from 1 second to 24 hours	
26	Portable Vibrometer Polytec PDV-100	VCJR - XV04N2006	Ing. Jan Tippner, Ph.D.	Non-contact velocity measurement from 0 to 22 kHz Variable working distance from 0.2 m up to 30 m	
27	Heat Flow Meter HFM 436/6/1E Lambda	VCJR - XV04N2011	Ing. Richard Slávik, Ph.D.	Cooling System: External Chiller Specimen Size: 600x600x200 mm Dimensions: 800x950x800 mm Repeatability: 0.25 % Accuracy: $\pm 1$ to 3 % Programmable Data Points: 10 Plate Temp. Ranges : -20°C to 70°C Therm. Resist. Range: 0.1 to 8.0 m <sup>2</sup> K/W Thermal Conductivity Range: 0.002 to 1.0 W/(m·K)	
28	RT-lab device	VCJR - XV04N2011	Ing. Richard Slávik, Ph.D.	Temperature Ranges: -50 to 100°C Specimen Size: 40x40; 50x50; 100x100 Thermal conductivity, Thermal Difusivity, Specific Heat Capacity	
29	AP Isomet 2114	VCJR - XV04N2011	Ing. Richard Slávik, Ph.D.	Hand-held measuring instrument for direct measurement of heat transfer properties	
30	Densitometer	VCJR - XV04N2011	Ing. David Decký, Ph.D.	X – ray dense – lab measures the density profile vertically to the sample surface. After inserting samples of 50 x 50 mm into holder and closing safety cover, the x – ray beam is sent through slit diaphragm in to generate a narrow line. A motor moves the holder with samples by steps of 0,01 mm and the thorough x – ray beam intensity is recorded into komputer, thus creating desired density profile diagram. In order to obtain accurate results, the calibration test is recommended efore each series of measurement.	
31	Dynamic set	VCJR - XV04N2006	Ing. Jan Tippner, Ph.D.		
32	Generator BM 269	VCJR - XV04N2006	Ing. Jan Tippner, Ph.D.		
33	BIOHAZARD BOX VBH Compact	Steril VCJR - XV04 N2012	Ing. Jan Baar, Ph.D.	VBH Compact cabinets are vertical laminar flow biohazard cabinets, Class II A/B3. They are designed for all the situations where is requested to protect the product from dangerous effects due to uncontrolled diffusion of air-transported contaminants during its handling and, at the same time, to avoid any biological interference from the surroundings.	

34	Laboratory autoclave TUTTNAUER 3150EL	VCJR - XV04N2012	Ing. Jan Baar, Ph.D.	Autoclave with a horizontal loading for steam sterilization of liquid, glass, and biohazard stuff. Chamber Volume: 40 l	
35	Incubator: Sanyo MIR 253	VCJR - XV04N2012	Ing. Jan Baar, Ph.D.		
36	Germicid Lamp NBVE 60 PL	VCJR - XV04N2012	Ing. Jan Baar, Ph.D.		
37	Plant Growth Chamber MLR 352H	VCJR - XV04N2012	Ing. Jan Baar, Ph.D.	Climate chamber with programming of temperature, light, and humidity. Volume: 294 l Temperature Control Range: 0 ~ +50 (lamp off) +10 ~ +50 (lamp on) Humidity Level: 60~90 %RH / LS:0 (15~45°C) 55~85 %RH / Lamp On (15~45°C)	
38	Thermal Modification Chamber (Katres)	VCJR - XV04 N1009	doc. Ing. Petr Čermák, Ph.D.	Internal dimensions: 800x800x500 mm Max. temperature:250°C	
39	Equipment for continuous surface charring	VCJR - XV04 N1004	doc. Ing. Petr Čermák, Ph.D.	Temperature range: 50 - 500 °C Conveyer speed: 0,05 - 1 m/min	
40	Microwave Equipment (Romill)	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	Conveyer length: 3400 mm Conveyer width: 450 mm Max. thickness of material: 45 mm Mod. chamber: 600x600x600 mm Power: 0.6 – 6 kW Frequency of magnetron: 2.45 GHz	
41	Microwave oven	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	Power: 0.9 kW	
42	Laboratory vacuum – pressure impregnation plant: JHP 1-0072	VCJR - XV04 N1008	Ing. Petr Pařil, Ph.D	Maximum Overpressure: +9 bar Maximum Vacuum: -0,95 bar Capacity of Impregnation Tank: 50 l Capacity of the Storage Tank: 75 l Maximum Temperature:160°C	
43	Laboratory fume hood	VCJR - XV04 N1008	Ing. Petr Pařil, Ph.D		

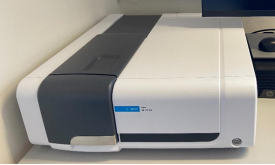






44	Steam autoclave	VCJR - XV04 N1015	Ing. Radim Rousek	For steaming of wood and other materials. Length 150 cm. Max. operating pressure 20 kPa (0.2 bar), max. temperature 105 °C	
45	Steam generator for steam autoclave - NEKL BM 25	VCJR - XV04 N1015	Ing. Radim Rousek	Dimensions: 700 x 530 x 550 mm Volume of boiler generator: 25 l Max. operating pressure: 6 bar	
46	Compressor - Orlik SKS 4-2/100	VCJR - XV04 N1014	Ing. Radim Rousek		
47	Fiber optic temperature monitoring system OPTOCON - FOTEMP1-4	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	Measuring of temperature during microwave treatments of wood. 4 optical fibres	
48	Thermocouples	VCJR - XV04 N1009	doc. Ing. Petr Čermák, Ph.D.	8/16-Channel Thermocouple/Voltage Input USB Data Acquisition Module Ready-Made Insulated Thermocouple 5TC- TT	
49	QuantumX data acquisition system (DAQ) with inductive displacement transducer (plunger) 10-20mm (HBM)	VCJR - XV04 N1009	doc. Ing. Petr Čermák, Ph.D.	Swelling/shrinking measurements	
50	Hendi Vacuum Packaging Machine	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D		
51	Conventional kiln: BEFI	VCJR - XV04 N1015	Ing. Jakub Dömény, Ph.D	Wood drying kiln Electric heating with a maximum temperature of 90°C temperature and humidity control	
52	Vacuum drying chamber - Vacuocell standard 22	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	Working temperature of from +5°C over ambient temperature up to 200°C.  Volume: 22l Power: 800W Dim. of shelf: 280x236 mm	








53	Laboratory oven: Sanyo MOV 112	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	effective capacity: 97 l temperature range: 40° – 250° C	
54	Convection oven: Siemens	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	combination of steam and hot air: 120° – 230° C hot air: 30° – 230° C steam: 40° – 100° C oven capacity: 32 l water tank: 1,3 l	
55	Moisture meters	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	(dielectric, electrical resistance)	
56	Infrarot-Thermometer Votcraft IR 380	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	Measuring Range: -50 to +800 ° C	
57	Knife ring flaker MAIER MSF 1400 Dieffenbacher	VCJR - XV05 N1001	Ing. et Ing. Tomáš Pipiška, Ph.D.	Knife ring flaker fully equipped with two rotors and knife rings for manufacturing particles (for particleboard production) and strands (for OSB production).	
58	Hydraulic press HL 400	VCJR - XV04 N1014	Ing. et Ing. Tomáš Pipiška, Ph.D.	pressing force: 4020 kN max. specific pressure 3,35 MPa (on area 1200x1000mm) max. temperature: 220° C width of platten: 1000 mm length of platten: 1200 mm	
59	Hydraulic press ZHS40	VCJR - XV04 N1015	Ing. et Ing. Tomáš Pipiška, Ph.D.	pressing force: 40-400 kN max. specific pressure 3,35 MPa (on area 410x350mm) max. temperature: 220° C width of platten: 450 mm length of platten: 650 mm	
60	Semi-automatic press device	VCJR - XV04 N1004	Ing. Jakub Dömény, Ph.D	max. specific pressure 10 MPa (on area 300x60mm)	




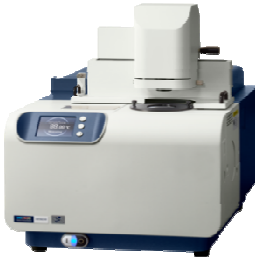

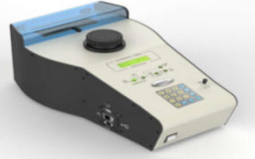

61	Small hydraulic press	VCJR - XV04 N1004	Ing. Radim Rousek	Max force 58 kN	
62	Cutting Mill Retsch SM 300	VCJR - XV04 N1014	Ing. et Ing. Tomáš Pipiška, Ph.D.		
63	Cutting mill FRITSCH	VCJR - XV05 N1001	Ing. et Ing. Tomáš Pipiška, Ph.D.		
64	Laboratory mill M20	VCJR - XV05 N1001	prof. Dr. Ing. Pavel Král		
65	Vibratory Sieve Shaker Fritsch-Analysette 3 pro	VCJR - XV05 N1001	Ing. et Ing. Tomáš Pipiška, Ph.D.	Analysis of wood particles PC connection Timer	
66	Small blender for resin application	VCJR - XV05 N1001	Ing. et Ing. Tomáš Pipiška, Ph.D.	Blender for application of the resin to the particles for wood-based panel production	
67	Rotary blender for resin application	VCJR - XV04 N1014	Ing. et Ing. Tomáš Pipiška, Ph.D.	Rotary blender for application of the resin to the particles/strands and other materials for composite panel production	
68	Spraying noozles	VCJR - XV04 N1014	Ing. et Ing. Tomáš Pipiška, Ph.D.	Industrial spraying system of the resin for particleboard production	
69	Disc spinning atomizer	VCJR - XV04 N1014	Ing. et Ing. Tomáš Pipiška, Ph.D.	Industrial spraying system of the resin for OSB production	



70	Acoustic tomograph ArborSonic 3D		Ing. Luděk Praus, Ph.D	The ArborSonic 3D uses ultrasound to detect and evaluate internal decay within trees. Because the signal travels fastest in the solid part of the wood structure, any areas of decay or defects will cause the speed of the signal to go slower. The time taken is measured and displayed. It can then be compared to ideal transit times for this tree species/stem diameter. Set consists from 16 active sonds +12 Ludwigs "sensors"	
71	Stereozoom Microscope S6D Leica	BA04N6034	doc. Michal Rybníček, Ph.D.	Stereozoom Microscope with the TimeTable and Software: PAST4 and Windendro - Measuring of tree-ring width and the proportion of earlywood and latewood.	
72	Microtome WSL	BA04N6034	doc. Michal Rybníček, Ph.D.	A microtome designed for the surface preparation of entire increment cores allows cutting plane surfaces on cores up to a length of 40 cm. Compared to the common sanding procedure, the wood cells of the annual rings remain open, not filled with swarf, and the cell walls are smooth and hence clearly visible.	
73	Pressler borer	BA04N6034	doc. Michal Rybníček, Ph.D.	Pressler borer - sampling living trees, historical timber constructions and archaeological wood	
74	Gas chromatography (GC-FID Agilent 7890B)	BA04N6026	Mgr.Zuzana Paschová, Ph.D.	Analysis of volatile and semivolatile compounds	
75	Liquid chromatography (HPLC Agilent 1260 DA - detector)	BA04N6026	Mgr.Zuzana Paschová, Ph.D.	Analysis of non-volatile and semivolatile compounds	
76	Spektrofotometr UV-5100 UV-VIS Shangai Methash Instruments	BA04N6027	Mgr.Zuzana Paschová, Ph.D.	190-1000nm	
77	Universal automatic extraction system feXKA vario control	BA04N6027	Mgr.Zuzana Paschová, Ph.D.	Number of extraction points: 4 Basic container volume: 200 ml Working volume: 100 ml Heat output: 600 W Material coupling PTFE + stainless steel (1.4571) Material O-ring FEP coated Coupling temperature resistance max. 200°C Dimensions (W x H x D): 200 x 810 x 500mm	

78	Spectrophotometer Cary 60 UV-Vis Agilent,.	BA04N6026	Mgr.Zuzana Paschová, Ph.D.	Wavelength range (190-1100 nm), extremely fast data collection, flash Xe lamp technology, the possibility of measuring outside the cuvette space, the possibility of measuring extremely small sample volumes. The device provides excellent repeatability and stability of results, the possibility of measuring with an open cuvette space without affecting the results, easy-to-use software.	
79	Freeze dryer SCANVAC CoolSafe 55-4	BA04N6027	Mgr.Zuzana Paschová, Ph.D.	Laboratory lyophilizer for lyophilization in the chamber and in flasks, table-top design, working temperature of the condenser -55 °C, capacity 4 l / 3 kg of ice.	
80	Dionex ASE 350 automatic extractor from Thermo Fisher	BA04N6027	Mgr.Zuzana Paschová, Ph.D.	Equipment for solid phase extraction with liquid (accelerated solvent extraction) under increased pressure of up to 100 bar and temperature of up to 200°C. Extraction of up to 24 samples with solvents (mixing or selection of three solvents) takes place in an extraction cartridge with a volume of 1 - 100 ml. The ASE 350 is suitable for all types of solid samples from pharmaceuticals to environmental sample.	
81	Comsol Multiphysics		Ing.Jan Tippner,Ph.D.		
82	ANSYS		Ing.Jan Tippner,Ph.D.		
83	MATLAB		Ing.Jan Tippner,Ph.D		
84	WinCELL		doc.Vladimír Gryc,Ph.D.	software for measuring of anatomical parameters	
85	WinDENDRO		doc. Michal Rybníček, Ph.D.	software for dendrochronology measuring	
86	Sliding table saw SCM SC2 classic	VCJR - XV04 N1014	Ing. Radim Rousek	Max sawblade diameter 315 mm Max. squaring stroke of sliding table saw 1660 mm	
87	Table saw IGM Laguna Fusion 3	VCJR - XV04 N1014	Ing. Radim Rousek	Max sawblade diameter 250 mm Max. cutting height 79 mm	
88	Planer/Thicknesser SCM FS 41 ES	VCJR - XV04 N1014	Ing. Radim Rousek		
89	Spindle moulder ROJEK FSN 300CE	VCJR - XV04 N1014	Ing. Radim Rousek		

90	Band Saw - Vertical BERNARDO - HBS 500 N	VCJR - XV04 N1014	Ing. Radim Rousek	Power: 3.5kW Cutting width: 500mm Cutting height: 350mm Blade length: 4100mm Cutting speed: 1320m/min Table size: 500x640mm	
91	Belt sander Holzmann KOS 2260	VCJR - XV04 N1014	Ing. Radim Rousek		
92	Horizontal sawmill Pilous Forester CTR 520	VCJR - XV05 N1001	Ing. Radim Rousek	max. Ø of trunk: 520mm power: 4kW	
93	Digital oscilloscope Siglent SDS1204X-E	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel', PhD.	4 channel oscilloscope with 200 MHz bandwidth, 1 GSa/s	
94	High voltage probe Testec TT-HVP 2739	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel', PhD.	Attenuation1000 : 1 Bandwidth50 MHz Max. Input39 kV	
95	Pearson Current monitor Model 2877	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel', PhD.	Sensitivity 1 Volt/Ampere Output resistance 50 Ohms Useable rise time 2 nanoseconds Low frequency 3dB point 300 Hz (approximate) High frequency 3dB point 200 MHz (approximate)	
96	Mass flowmeters Vögtlin RED-y compact 2pcs	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel', PhD.	N2, O2, Ar; 0.4 - 20 l/min and 0 - 2000 mln/min	
97	Overhead stirrer HT-120DX	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel', PhD.	50-1000 rpm, max viscosity 150 000 mPas	
98	HV generator LIFETECH VF700	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel', PhD.	up to 20kV, 5-50kHz, 700 Watt	
99	Cutting plotter SILHOUETTE CAMEO 4	BA04N6036	doc. RNDr. Jozef Ráhel', PhD.	max cutting width 30.5 cm	

100	Variable Transformer Metrel MA-4804	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, PhD.	0 - 245 V/ 3.1A, galvanically insulated from the mains	
101	DC power supply DIAMETRAL L240R51D	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, PhD.	2x0-40V/3A; 5V/3A	
102	Function generator GW Instek AFG-2105	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, PhD.	1 channel; bandwidth 0.1 Hz - 5 MHz	
103	DSC 600	VCJR - XV02N1005	Ing. Richard Slávik, Ph.D.	DSC is used to measure heat flow for material characterization by providing thermal properties such as melting point, glass transition and crystallization. DSC instruments are used both in quality control and R&D across a wide range of industries including polymers, pharma, electronics, chemical, academia, oil and gas, food, and metals.	
104	STA200RV	VCJR - XV02N1004	Ing. Richard Slávik, Ph.D.	STA (simultaneous thermogravimetric analysis) measures DSC and TGA simultaneously in a single unit. STA is used to evaluate thermal resistance, decomposition temperature, quantitative analysis of components by TGA data, and heat capacity Cp testing with DSC. STA instruments are used in polymer, pharmaceutical, food, electronics, ceramics and metals materials development and quality control.	
105	Quantachrome Ultrapyc 1200e	VCJR - XV02N1004	Ing. Richard Slávik, Ph.D.	Single station automatic gas pycnometers for volume and density measurement of porous solids and powders. UltraPyc 1200e accommodates samples with 1 up to 135 cm <sup>3</sup> of volume. Additional vacuum purge option reduces consumption of analysis gas.	
106	Quantachrome Poremaster 33GT	VCJR - XV02N1004	Ing. Richard Slávik, Ph.D.	Mercury Intrusion Porosimetry is a pore size measurement technique. POREMASTER® Series, pores between 6.4 nanometers and 1100 microns may be measured.	

107	DVS Resolution Dual Vapor Gravimetric Sorption Analyzer	VCJR - XV02N1004	Ing. Richard Slávik, Ph.D.	The instrument has the combined ability to precisely control and measure temperature and relative humidity while recording the highest resolution changes in mass. Organic vapor, Water vapor and Gas sorption kinetics, Water vapor sorption isotherms from 5 to 85°C	
108	Ahlbrandt 3D treatment	VCJR - XV02N1015	doc. RNDr. Jozef Ráheľ, Ph.D.	Gliding arc plasma treater for the treatment of plastic moulded parts, profiles, stripes, or wood profiles. Working width 60mm, distance of the jet head to the material 20 - 30 mm.	
109	Multicomponent Dynamometer Kistler Type 9257B + DAQ bus 5697A + amplifier 5070A + software DynoWare	P1003 T-lab	doc. Ing. Zdeněk Kopecký, CSc.	Quartz three-component dynamometer for measuring the three orthogonal components of a force.	
110	CNC Numco KX3 Armote	P1003 T-lab	Ing. Luďka Hanincová, Ph.D.	Three-axis CNC milling machine. Engine torque 5.5 Nm; Spindle power 1kW; Speeds 100 – 5000 rpm	
111	CNC SCM n100	N1003 P-dilna	Bc. Pavel Sršeň, DiS.	Four-axis CNC machining center for nesting. Engine power 15kW; Rotation speed max. 24000rpm;	
112	CNC SCM m100	N1003 P-dilna	Bc. Pavel Sršeň, DiS.	Five-axis CNC machining center. Engine power 15kW; Rotation speed max. 24000rpm;	
113	Fluke 8845A	VCJR - XV04N2010	Ing. Richard Slávik, Ph.D.	6.5 digit precision multimeter	
114	BK9201B	VCJR - XV04N2010	Ing. Richard Slávik, Ph.D.	200W Multi-Range 60V/10A DC Power Supply	
115	WEL.WXD2020	VCJR - XV04N2010	Ing. Richard Slávik, Ph.D.	Soldering and desoldering station	
116	DSO4104C	VCJR - XV04N2010	Ing. Richard Slávik, Ph.D.	4CH oscilloscope, with 1CH Arbitrary/function waveform generator, 80-250MHz bandwidth, minimum measurement range 500µV/div. 1GS/s sample rate	

117	OptiMill MB 4	VCJR - XV02N1004	Ing. Richard Slávik, Ph.D.	Universal precision drilling-milling machine with two-stage drive motor with manual transmission. Large speed range of 95 – 3,200 rpm through 12 switchable speeds, Forward/reverse, Gear head $\pm 60^\circ$ swiveling.	
118	Metal workshop with basic machinery and equipment	VCJR - XV04N2014	Ing. Radim Rousek	Metal lathe QUANTUM D 250 x 550 Bandsaw for metals OPTI S 130 GH Benchtop drill press OPTI B 23 Pro Welding machine TELMIG 183/2 Turbo Benchtop grinder Angle grinder Straight grinder and other equipment	
119	Wanptek WPS3010H	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, Ph.D.	Programmable DC Power Supply, max 30V, 10A.	
120	Voltcraft LCR-300	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, Ph.D.	LCR measuring device LCR-300 Up to 100kHz sampling rate Inductance up to 2000 H Capacitance readings up to 20mF Resistance up to 200 MOhm Basic accuracy: 0.3% with a resolution of 0.01% Automated component recognition	
121	Hikmicro POCKET2	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, Ph.D.	Pocket thermal camera Infrared and visible spectrum 25 Hz Resolution 256 x 192 points Range -20 °C to 400 °C Field of view 50 °x 37.2 ° Accuracy $\pm 2^\circ\text{C}$ or $\pm 2\%$ WiFi, USB, Li-ion battery	
122	3D Creality Ender 3Pro	VCJR - XV02N1015	doc. RNDr. Jozef Ráhel, Ph.D.	3D Printer, featuring a build volume of 220 x 220 x 250mm, can print with a variety of 3D filaments, including PLA, ABS, PETG, and TPU.	
123	IML Fractometer II	BA04N6010	prof. Ing. Vladimír Gryc, Ph.D.	The Fractometer II is a mechanical measurement instrument to determine characteristic values of bending and compression strength of wood.	

124	Brüel & Kjær set for room and buildir	VCJR - XV04N2006	Ing. Patrik Nop	The Brüel & Kjær acoustic measurement set for building and room acoustics includes tools for assessing reverberation time, sound insulation, and impact sound insulation following ISO standards.	
125	Picus TreeQinetic	BA04N6037	Ing. Luděk Praus, Ph.D	Set for pulling test on trees, with two inclination sensor and one extension sensor for measurement of tree stability.	
126	Picus Treetroniq	BA04N6037	Ing. Luděk Praus, Ph.D	Electric resistivity tomograph for cavities detection in living trees	
127	Picus Sonic Tomograph	BA04N6078	Ing. Valentino Cristini, Ph.D.	The PiCUS Sonic Tomograph analyses sonic waves in order to draw conclusions of the wood's inner structure. In solid wood, sonic waves propagate fast. Defects within the wood interfere with the propagation of the waves and lead to lower calculated velocities. The different recorded velocities are displayed in varying colors in the tomogram.	
128	LTT i.LASER 3000		Ing. Ing. Ing. David Průša, Ph.D.	Professional high performance CO <sup>2</sup> laser	