










KATALOG ZNANSTVENO-ISTRAŽIVAČKE OPREME I PROGRAMA


NAZIV UREĐAJA / PROGRAMA	MODEL I GODINA PROIZVODNJE	SVRHA I MOGUĆNOSTI	VLASNIK	KONTAKTI ODGOVORNE OSOBE	PHOTO (JPEG)	IZVOR SREDSTAVA
<p>Uređaj za tekućinsku kromatografiju visoke djelotvornosti (HPLC)</p>	<p>Sustav za HPLC Series200 (binarna pumpa, grijač kolone, UV/VIS i fluorescentni detektor, autosampler) (Perkin Elmer) 2003-2005.</p>	<p>Odjeljivanje, identifikacija i kvantifikacija različitih nehlapivih komponenti (aminokiseline, peptidi, sekundarni metaboliti)</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Ivica Ljubenkov tel: 385133 email: ivica.ljubenkov@pmfst.hr</p>		<p>MZOŠ</p>
<p>Spektrofotometar</p>	<p>UV/VIS Spectrometer Lambda Bio 40 (Perkin Elmer) 1997.</p>	<p>Snimanje spektra i određivanje apsorbancije u UV/VIS području</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		<p>MZOŠ</p>



Spektrofotometar	UV/VIS spektrofotometar XTD5 (Secomam) 2006.	Snimanje spektra i određivanje apsorbancije u UV/VIS području	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr		MZOŠ
Spektrofluorimetar	LS 55 Luminescence Spectrometer (Perkin Elmer) 2003.	Mjerenje fosfo/fluorescencije i bioluminescencije (analiza proteina, fluorescentno obilježenih molekula, određivanje antioksidativne aktivnosti)	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr		MZOŠ

<p>Uređaj za brzu tekućinsku kromatografiju (FPLC)</p>	<p>ÅKTA FPLC sa sakupljačem frakcija i kromatografskim kolonama (<i>Amersham Pharmacia</i>) 2001.</p>	<p>Odjeljivanje i pročišćavanje proteina (gel-filtracija, afinitetna, ionsko-izmjenjivačka kromatografija)</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		<p>MZOŠ</p>
<p>Čitač mikrotitarskih pločica</p>	<p>EI808 Ultra MicroPlate Reader (<i>Bio-Tek Instruments</i>) 2004.</p>	<p>Kvantifikacija različitih komponenti na temelju apsorpcije svjetla, kinetička mjerenja (određivanje enzimске aktivnosti)</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>


Rotavapor	Rotavapor R-200 s vakuum kontrolerom V800 i vakuum pumpom V500 (<i>Büchi</i>) 2004.	Uparavanje tekućih uzoraka, destilacija otapala	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc.dr.sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr		MZOŠ
Uređaj za izoelektrično fokusiranje	Protean IEF Cell (<i>BioRad</i>) 2006.	Uređaj za izoelektrično fokusiranje se koristi u analizi proteina, u 2D-elektroforezi	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr		MZOŠ

<p>Centrifuga s hlađenjem</p>	<p>Avanti J-25 Centrifuge (<i>Beckman Coulter</i>) 2003.</p>	<p>Centrifugiranje uz mogućnost hlađenja, do maksimalne centrifugalne sile od 53300 g</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>
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Autoklav	Astell Scientific 2005.	Sterilizacija laboratorijskog posuđa, pribora i hranidbenih podloga autoklavanjem	Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr				MZOŠ
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Autoklav	Ibromatic (Pbi) 1997.	Sterilizacija laboratorijskog posuđa, pribora i hranidbenih podloga autoklaviranjem	Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr		MZOŠ
Kabinet s protokom sterilnog zraka	Miniflo 120 (Pbi) 1997.	Rad s mikrobiološkim kulturama u sterilnim uvjetima	Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr		MZOŠ


<p>Inkubatorska tresilica</p>	<p>Orbital incubator (<i>Sanyo Gallenkamp</i>) 1997.</p>	<p>Inkubacija uzoraka pri željenoj temperaturi uz miješanje potresanjem (pri uzgoju bakterijskih kultura)</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>
<p>Inkubator</p>	<p>Economy Incubator (<i>Gallenkamp</i>) 1997.</p>	<p>Inkubacija uzoraka pri željenoj temperaturi (npr. kod uzgoja bakterija na čvrstoj podlozi)</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>

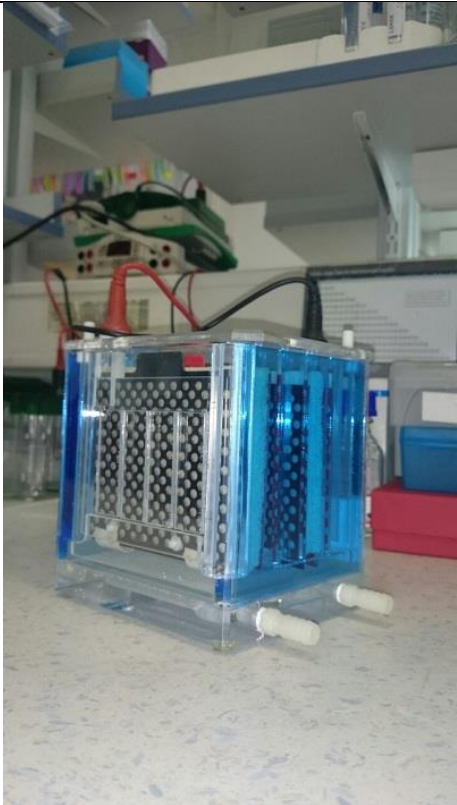
Vakuum-centrifuga	Vakuum-centrifuga RC10 22 s hladilom za otapalo RCT90 (Jouan) 2003.	Uparavanje uzoraka uz centrifugiranje, koncentriranje uzoraka	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr		MZOŠ
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<p>Sustav za ekstrakciju na čvrstoj fazi pod vakuumom</p>	<p>Vac Elut 20 (Varian) 2000. Air Cadet Vacuum/Pressure Station (Barnant Company) 2000.</p>	<p>Ekstrahiranje uzoraka na čvrstoj</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>
<p>Sustav za uparavanje u struji dušika</p>	<p>Turbo Vap LV (Zymark) 2004.</p>	<p>Uparavanje otapala u struji dušika</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		
<p>Sustav za 'cross-flow' filtraciju</p>	<p>MidJet Benchtop System 2006.</p>	<p>Koncentriranje i diafiltracija bioloških uzoraka</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		


<p>Rashladni ormar s hlađenjem do -80 °C</p>	<p>HFU-486 basic (Heraeus) 2002.</p>	<p>Pohrana uzoraka na niskoj temperaturi</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>
<p>Stolna centrifuga s hlađenjem</p>	<p>Biofuge PrimoR (Heraeus) 2001.</p>	<p>Centrifugiranje, uz mogućnost hlađenja do maksimalne centrifugalne sile od 23000 g</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>



Mikrocentrifuga	Centrifuga 5415C (Eppendorf) 1997.	Centrifugiranje do maksimalne centrifugalne sile od 13000 g	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr		MZOŠ
Sustav za vertikalnu elektroforezu	Mini-Protean Tetra Cell (Biorad) s ispravljačem Power Pack Basic (Biorad) 2009.	Analiza bioloških makromolekula elektroforezom na poliakrilamidnom gelu	Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr		MZOŠ

<p>Sustav za horizontalnu elektroforezu</p>	<p>Mini-sub-Cell GT s ispravljačem Power Pack 300 (Biorad) 2004.</p>	<p>Analiza bioloških makromolekula (DNA) elektroforezom na agaroznom gelu</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>
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<p>Sustav za blotting</p>	<p>Electroblotter Mini-Wet (Sigma-Aldrich) 1997.</p>	<p>Analiza proteina Western-blotting-om</p>	<p>Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr</p>		<p>MZOŠ</p>
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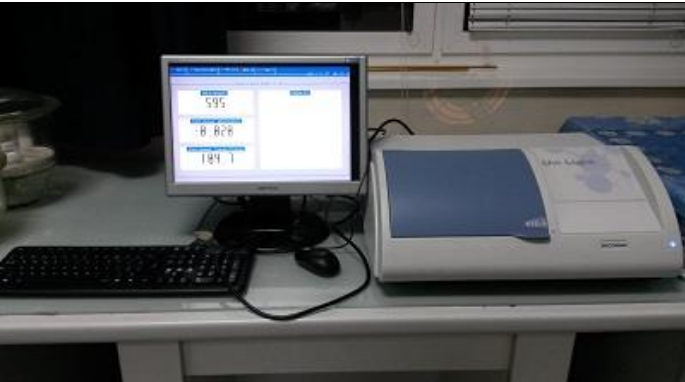

<p>Uređaj za dokumentaciju i digitalnu analizu slike</p>	<p>Gel-Doc XR s računalnim paketom Quantity One 1-D (<i>Biorad</i>) 2006.</p>	<p>Dokumentiranje rezultata elektroforeze na poliakrilamidnom i agaroznom gelu i digitalna analiza slike</p>	<p>Prirodoslovno-matematički fakultet u Splitu, Odjel za kemiju</p>	<p>Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		<p>MZOŠ</p>
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Sonikator	Sonoplus HD2200 (<i>Bandelin</i>) 2002.	Ultrazvučna obrada uzoraka (razaranje staničnih membrana, homogenizacija uzorka)	Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr		MZOŠ
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Homogenizator	Polytron PT1600E (<i>Kinematica</i>) 2006.	Homogenizacija uzoraka (pri analizi bioloških uzoraka životinjskog i biljnog porijekla)	Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr		MZOŠ
Računalni paket Grafit	Grafit v. 6.0.6. (<i>Erithacus Software Limited</i>) 2009.	Grafički prikaz i analiza različitih eksperimentalnih podataka	Prirodoslovno- matematički fakultet u Splitu, Odjel za kemiju	Doc. dr. sc. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr		MZOŠ


CATALOGUE OF SCIENTIFIC & RESEARCH EQUIPMENT AND SOFTWARE


INSTRUMENT / SOFTWARE	MODEL AND YEAR OF PRODUCTION	APPLICATION	OWNER	CONTACT OF RESPONSIBLE PERSON	PHOTO (JPEG)
High-performance liquid chromatography (HPLC)	HPLC Series200 System (analytical pump, column oven, UV/VIS and fluorescent detector, autosampler) (Perkin Elmer) 2003-2005	Separation, identification and quantification of various nonvolatile components (amino acids, peptides, secondary metabolites)	Faculty of Science, Department of Chemistry	Dr. Ivica Ljubenkov tel: 385133 email: ivica.ljubenkov@pmfst.hr	
Spectrophotometer	UV/VIS Spectrometer Lambda Bio 40 (Perkin Elmer) 1997	Recording of UV/VIS spectra, absorbance measurement	Faculty of Science, Department of Chemistry	Dr Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr	



Spectrophotometer	UV/VIS Spectrophotometer XTD5 (Secomam) 2006	Recording of UV/VIS spectra, absorbance measurement	Faculty of Science, Department of Chemistry	Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr	
Fluorescence spectrometer	LS 55 Luminescence Spectrometer (Perkin Elmer) 2003	Recording of phospho/fluorescence and bioluminescence (protein analysis, determination of fluorescently labeled molecules and antioxidant capacity)	Faculty of Science, Department of Chemistry	Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr	



<p>Fast performance liquid chromatography (FPLC)</p>	<p>ÅKTA FPLC including fraction collector and chromatography columns (Amersham Pharmacia) 2001</p>	<p>Separation and purification of proteins (gel-filtration, affinity, anion or cation-exchange chromatography)</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>	 <p>The image shows an ÅKTA FPLC system, a multi-module liquid chromatography instrument. It consists of a pump, injector, and fraction collector, all housed in a black metal frame. Two clear plastic bottles are connected to the system via white tubing, serving as reservoirs for the mobile phase.</p>	
<p>Microplate reader</p>	<p>E1808 Ultra MicroPlate Reader (Bio-Tek Instruments) 2004</p>	<p>Quantification of the various components on the basis of light absorption, kinetic measurements (determination of the enzyme activity)</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>	 <p>The image shows a Bio-Tek E1808 Ultra MicroPlate Reader, a benchtop instrument used for measuring light absorption in microplates. It has a white and black design with a control panel on top featuring a small screen and several buttons. The front panel is open, revealing the sample compartment where microplates are placed for reading.</p>	


<p>Rotavapor</p>	<p>Rotavapor R-200 with vacuum controller V800 and vacuum pump V500 (Büchi) 2004</p>	<p>Evaporation of liquid samples and solvent distillation</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		
<p>Isoelectric focusing system</p>	<p>Protean IEF Cell (BioRad) 2004</p>	<p>Instrument is used in protein analysis by 2D-electrophoresis</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		




<p>Refrigerated centrifuge</p>	<p>Avanti J-25 Centrifuge (<i>Beckman Coulter</i>) 2003</p>	<p>Centrifugation with cooling, up to the maximum centrifugal force of 53300 g</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>	 A photograph of a Beckman Coulter Avanti J-25 refrigerated centrifuge. The machine is white with a control panel on top featuring a digital display and several buttons. The front panel has the 'BECKMAN COULTER' logo and 'Avanti J-25' printed on it. It is situated in a laboratory environment with a window and other equipment visible in the background.
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<p>Autoclave</p>	<p>Astell Scientific 2005</p>	<p>Sterilization of laboratory glassware, accessories and culture media</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr</p>		 A photograph of a white laboratory autoclave. The machine is rectangular with a white top lid and a stainless steel front panel. On top of the lid, there is a control panel with a small digital display and several buttons. The autoclave is situated in a laboratory setting with a tiled floor and a white wall in the background.		
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Autoclave	Ibromatic (Pbi) 1997	Sterilization of laboratory glassware, accessories and culture media	Faculty of Science, Department of Chemistry	Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr		
Laminar flow hood	Miniflo 120 (Pbi) 1997	Handling of bacterial cultures in sterile conditions	Faculty of Science, Department of Chemistry	Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr		


<p>Incubator with orbital shaking</p>	<p>Orbital incubator (<i>Sanyo Gallenkamp</i>) 1997</p>	<p>Sample incubation at the desired temperature with stirring by shaking (bacterial growth in liquid cultures)</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>		
<p>Incubator</p>	<p>Economy Incubator (<i>Gallenkamp</i>) 1997</p>	<p>Incubation of the samples at the desired temperature (bacterial growth on solid culture media)</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović Tel:385133 email: viljemka@pmfst.hr</p>		

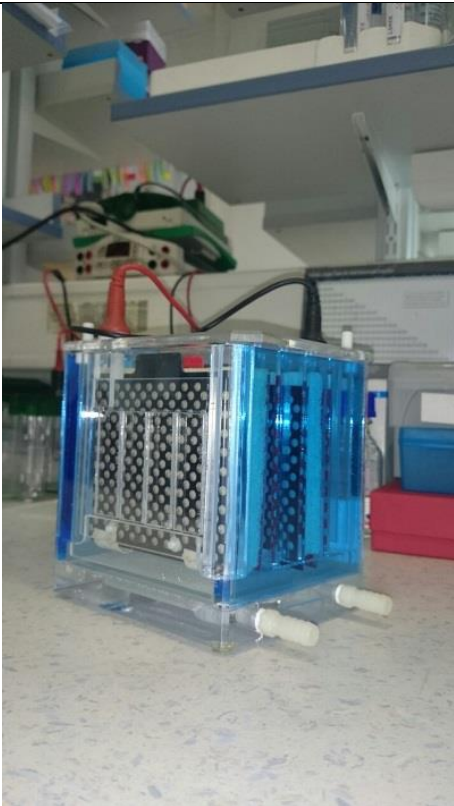
<p>Centrifugal evaporator</p>	<p>Centrifugal evaporator RC10 22 with cold trap RCT90 (Jouan) 2003</p>	<p>Concentration of samples, evaporation of samples</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>	
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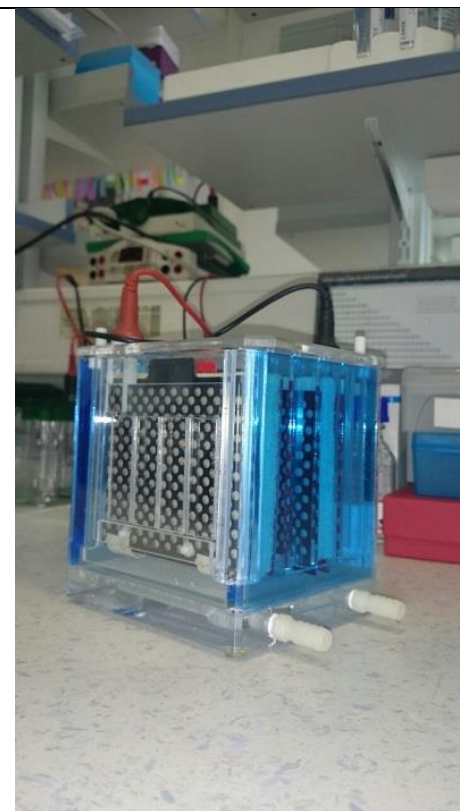
<p>Solid phase extraction (SPE) vacuum manifold</p>	<p>Vac Elut 20 (Varian) 2000 Air Cadet Vacuum/Pressure Station (Barnant Company) 2000</p>	<p>Solid phase extraction of samples</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		
<p>Nitrogen gas based evaporation workstation</p>	<p>Turbo Vap LV (Caliper) 2004</p>	<p>System for evaporation of solvents under nitrogen gas flow</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		
<p>Cross-flow filtration system</p>	<p>MidJet Benchtop System 2006</p>	<p>Concentration and diafiltration of biological samples</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr</p>		


<p>Laboratory freezer, -80 °C</p>	<p>HFU-486 basic (<i>Heraeus</i>) 2002</p>	<p>Storing samples at low temperatures (-80 °C)</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel:385133 email: viljemka@pmfst. hr</p>		
<p>Refrigerated benchtop centrifuge</p>	<p>Biofuge PrimoR (<i>Heraeus</i>) 2001</p>	<p>Centrifugation with cooling, up to the maximum centrifugal force of 23 000 g</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr</p>		


Microcentrifuge	Centrifuge 5415C (Eppendorf) 1997	Centrifugation up to the maximal centrifugal force of 13 000 g	Faculty of Science, Department of Chemistry	Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr		
System for vertical gel electrophoresis	Mini-Protean Tetra Cell (Biorad) with power supply Power Pack Basic (Biorad) 2009	Analysis of biological macromolecules by polyacrylamide gel electrophoresis	Faculty of Science, Department of Chemistry	Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr		




<p>System for horizontal gel electrophoresis</p>	<p>Mini-sub-Cell GT with power supply Power Pack 300 (<i>Biorad</i>) 2004</p>	<p>Analysis of biological macromolecules (DNA) on agarose gels</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>	
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<p>Blotting system</p>	<p>Electroblotter Mini-Wet (<i>Sigma- Aldrich</i>) 1997</p>	<p>Western-blot protein analysis</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr</p>		
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<p>System for imaging, documentation and digital photo analysis</p>	<p>Gel-Doc XR with Quantity One 1-D software (Biorad) 2006</p>	<p>Documenting the results of electrophoresis on polyacrylamide and agarose gel and digital image analysis</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst.hr</p>			
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<p>Sonicator</p>	<p>Sonoplus HD2200 (<i>Bandelin</i>) 2002</p>	<p>Ultrasonic homogenizer (disruption of cell membranes, homogenization of biological samples)</p>	<p>Faculty of Science, Department of Chemistry</p>	<p>Dr. Viljemka Bučević Popović tel: 385133 email: viljemka@pmfst. hr</p>		
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Homogenizer	Polytron PT1600E (<i>Kinematica</i>) 2006	Sample homogenization (for analysis of biological samples of animal and vegetable origin)	Faculty of Science, Department of Chemistry	Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr		
Grafit analysis software	Grafit v. 6.0.6. (<i>Erithacus Software Limited</i>) 2009	Data analysis, curve fitting and scientific graphing	Faculty of Science, Department of Chemistry	Dr. Stjepan Orhanović tel: 385133 email: stipe@pmfst.hr	 GraFit Data Analysis Software for Windows  Erithacus Software	