

Model:	VM30XP	Friction stir Welding of different metal plates (e.g. copper, aluminium)
Manufacture:	I-Stir A Par System Technology	
Supplier:	Jezreel	Location
	Euclid Building Mechanical Engineering Laboratory Block J J-G 061	
	Contact Person	
	Name: Tshepo Phone: 011 471 2526 Email: gaonnt@unisa.ac.za	
	Estimated costs and availability	
	Internal: R350 per sample External: R500 per sample Private Sector: R750 per sample Time Spend Researching: Time Spend Teaching: Time Spend Other:	
	Funding Information	
Equipment Price: Year of Acquisition: 2018		

Model:	Duravision 30	Vickers, Brinel, Rockwell, and Knoop hardness tests of different material
Manufacture:	Emcotest	
Supplier:	IMP/SPS	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Tshepo Phone: 011 471 2526 Email: gaonnt@unisa.ac.za
		Estimated costs and availability
		Internal: R200 External: R250 Private Sector: R400 Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price (X2): R 1263602,56 Year of Acquisition: 2015

Model:	Biodiesel engine test bed	Test biodiesel produced from biodiesel reactor
Manufacture:	JDD Systems	
Supplier:	Jezreel	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Shumani Ramuhahile Phone: 011 471 2078 Email: ramuhs@unisa.ac.za
		Estimated costs and availability
		Internal: R250 External: R350 Private Sector: R450 Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R2407024,50 Year of Acquisition: 2015

Model:	Pignat	<ul style="list-style-type: none"> • Synthesis of biodiesel through the process of transesterification of vegetable oil and animal fats
Manufacture:	Biodiesel reactor 216 01 033	<ul style="list-style-type: none"> • Study of the transesterification process • Influence of temperature on reaction • Thermal and material balance
Supplier:	Jezreel	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Shumani Ramuhahile Phone: 011 471 2078 Email: ramuhs@unisa.ac.za
		Estimated costs and availability
		Internal: R250 per sample External: R350 per sample Private Sector: R450 per sample Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R779500.00 Year of Acquisition: 2015

Model:	Biogas/Biomass process unit [With Automated Methane Potential test system & Bioprocess Control Bioreactor]	<ul style="list-style-type: none"> • Enables users to conduct anaerobic toxicity assays • Determine the true biochemical methane potential • Determine dynamic degradation profile of any biomass substrate
Manufacture:	Bioprocess control	
Supplier:	Jezreel	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Enweremadu Christopher Phone: 011 471 2057 Email: enwercc@unisa.ac.za
		Estimated costs and availability
		Internal: R450 External: R550 Private Sector: Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R1842462.30 Year of Acquisition: 2015

Model:	LSM 900	<ul style="list-style-type: none"> • Characterize topographic structures and evaluate surface roughness with non-contact confocal imaging • Determine the thickness of coatings and thin films non-destructively
Manufacture:	Carl Zeiss X-ray Microscopy, Inc	<ul style="list-style-type: none"> • Use a range of imaging techniques including polarization and fluorescence in optical contrast or in confocal mode • Characterize metallographic specimens in reflected light or thin section of rock or polymer in transmitted light
Supplier:	ZIESS	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Rabelani Phone: 011 471 3188 Email: murward@unisa.ac.za
		Estimated costs and availability
		Internal: R500 per specimen External: R800 per specimen Private Sector: R1200 specimen Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R3559819.48 Year of Acquisition: 2020

Model:	AG-X PLUS,250KN-300KN	Tensile and bending tests
Manufacture:	SHIMADZU	
Supplier:	WIRSAM SCIENTIFIC	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Tshepo Phone: 011 471 2526 Email: gaonnt@unisa.ac.za
		Estimated costs and availability
		Internal:100 per specimen External:200 per specimen Private Sector:350 per specimen Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R1995617,74 Year of Acquisition: 2015

Model:	8801/MTB18649	Tests that can be performed are: Tensile, fatigue and compression
Manufacture:	INSTRON	
Supplier:	ADVANCE LAB SOLUTIONS	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Sibusiso Phone: 011 471 3293 Email: nginds@unisa.ac.za
		Estimated costs and availability
		Internal: R170 per specimen External: R300 per specimen Private Sector: R550 per specimen Time Spend Researching: Time Spend Teaching:
		Funding Information
		Equipment Price: Year of Acquisition: 2019

Model:	Crossbeam 340	• For more info on cross beam 340 visit: https://mikroskopiadlaprzemyslu.pl/images/doc/microscope-zeiss-crossbeam-eng.pdf
Manufacture:	Carl Zeiss X-ray Microscopy, Inc	
Supplier:	Carl Zeiss	Location
	Euclid Building Mechanical Engineering Laboratory Block J J-G 061	
	Contact Person	
	Name: Rabelani Phone: 0114713188 Email: murward@unisa.ac.za	
	Estimated costs and availability	
	Internal: R100 per hr. External: R200 per hr. Private Sector: R440 per hr. Time Spend Researching: Time Spend Teaching: Time Spend Other:	
	Funding Information	
Equipment Price: R5894655.00 Year of Acquisition :2018		

Model:	DY1838/EMPYREAN	•For more info about PANalytical Empyrean X-Ray diffractometer visit: https://www.malvernpanalytical.com/en/products/product-range/empyrean-range/empyrean
Manufacture:	PANalytical	
Supplier:		Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Rao Phone: 011 670 9420 Email: vasudvr@unisa.ac.za
		Estimated costs and availability
		Internal: R350 per hour External: R 500 per hour Private Sector: R 750 per hour Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: Year of Acquisition:

Model:	Xradia 510 Versa	Perform 3D Imaging for soft or low-Z materials. For more information visit: https://www.zeiss.com/microscopy/int/products/x-ray-microscopy/zeiss-xradia-510-versa.html
Manufacture:	Carl Zeiss X-ray Microscopy, Inc	
Supplier:	Carl Zeiss X-ray	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Rabelani Phone: 011 471 3188 Email: murward@unisa.ac.za
		Estimated costs and availability
		Internal: R120 per hr External: R350 per hr Private Sector: R700 per hr Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R10674504.00 Year of Acquisition: 2018

Model:	Cell Scale bi-axial	Biaxial testing is critical for understanding the mechanical properties of biomaterials due to their directionally oriented microstructures. For more information visit : https://www.cellscale.com/products/biotester/?gclid=EAlaIQobChMli_yTniQ9wIvJ7rtCh1w4AvBEAAYASAAEgLX_vD_BwE
Manufacture:	CellScale Biomaterials Testing	
Supplier:	IMP/SPS	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: Mabuda Email: mabudi@unisa.ac.za
		Estimated costs and availability
		Internal: R350 per hr External: R420 per hr Private Sector: R470 per hr Time Spend Researching: Time Spend Teaching: Time Spend Other:
		Funding Information
		Equipment Price: R149777.00 Year of Acquisition: 2015

Model:	Cell Scale bio-uniaxial	A versatile uniaxial benchtop mechanical tester for biomaterials
Manufacture:	CellScale Biomaterials Testing	
Supplier:	IMP/SPS	Location
		Euclid Building Mechanical Engineering Laboratory Block J J-G 061
		Contact Person
		Name: mabudi Email:mabudi@unisa.ac.za
		Estimated costs and availability
		Internal: R250 per hr External: R315 per hr Private Sector: R460 per hrTime Spend Researching: Time Spend Teaching : Time Spend Other:
		Funding Information
		Equipment Price: Year of Acquisition :2015