

BioComposites Centre Analytical Equipment



Physical Testing		Chemical Analysis	
Surface Characterisation		Spectroscopy	
Light Microscope	DM 6000M with Digital microscope camera (<i>Leica</i>)	FTIR/FT-NIR	Nicolet 8700 Research FT-IR spectrometer, (<i>Thermo Scientific</i>) With GladiATR Vision unit, (<i>Pike Technologies</i>)
Scanning Electron Microscope (SEM)	Phenom (<i>FEI</i>)	Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)	Varian 720 ICP-OES using argon plasma
Surface Area Analyser (BET)	Micromeritics Gemini Series Surface Area Analyser	Chromatography	
Helium Pycnometer	Micromeritics AccuPyc 1330	Gas Chromatograph (GC)	Clarus 480 GC Auto system XL GC with FID detection Clarus 680 GC-MS (EI and CL) (<i>Perkin Elmer</i>)
Goniometer	Tendring Pacific PG-X Pocket Goniometer	High-pressure liquid chromatography (HPLC)	Varian Prostar analytical HPLC with DAD Varian Prepstar preparative HPLC with UV detector
Cross Hatch Coatings Tester	Elcometer 1542 Cross Hatch Cutter	High Pressure anionic exchange chromatography HPAEC –PAD	Dionex Ion Chromatograph
Portable Spectrophotometer	Data Color Check II	Flash Chromatography System	The Reveleris X2 Flash Chromatography System
Particle Size		Extraction	
Fibre Length Analyser	Kaajani FS-200	Total Extractable Formaldehyde (TEF)	Custom made glassware with paired extraction capability
Permeability		Thermal Analysis	
Gas Permeability Tester (multigas)	Lyssy L100-5000 Manometric gas permeation analyser	Differential Scanning Calorimetry (DSC)	DSC Q20 (<i>TA Instruments</i>)
Oxygen Permeability Tester	Ox-tran model 2/21 (<i>Mocon</i>)	Thermogravimetric Analysis/ Differential Scanning Calorimetry (TGA/DSC 1)	TGA/DSCI STARE system (<i>Mettler Toledo</i>) CC415 cooling system (<i>Huber</i>)
Water Vapor Permeability Tester	Permatran-W model 1/50 G (<i>Mocon</i>)	Triton Technology Dynamic Mechanical Analyser (TTDMA)	TTDMA T101422G (<i>Triton Technology</i>)
Dynamic Vapor Sorption (DVS)	Dynamic Vapour Sorption (<i>Surface Measurement Systems</i>)	Thermal conductivity/heat flow meter	Fox 314 (<i>Lasercomp</i>)
Mechanical Testing		Viscosity	
Universal Materials Testing Machine	Instron 3345, 4301 and 5500	Melt Flow Tester	Melt Flow Tester (<i>Ray-Ran</i>)
Pendulum Impact Tester	Zwick B5102.201	Brookfield Viscometer	Brookfield Synchro-Lectric Viscometer LVF Brookfield Viscometer DV-II +
Lap Shear Tester	Automated Bonding Evaluation System (ABES) (<i>Humphrey; US-patent 5176028</i>)	Chemical Reactions	
Polymer Processing		Microwave Digester	Anton Paar Multiwave 3000 microwave sample preparation platform reaction system
Brabender Plastograph EC	Brabender Plastograph EC PLUS with measuring mixer W30	Oxygen bomb calorimeter	Parr 6100 Calorimeter Parr Pellet press
Accelerated Aging		Refrigerated Centrifuge	Heraeus Megafuge 16R Centrifuge (<i>Thermoscientific</i>)
Weathering equipment	Atlas Suntest XLS+ XenoCal BB 300-400 BST SunFlood SunSpray	Ultra Sound Equipment	Rapidis A180G free standing probe (<i>Ultrasonics Ltd</i>) Custom designed 37 litre capacity ultrasound bath L500/3-20 (<i>Sonic Systems</i>).