



Polymer Synthesis and Characterisation Research Technology Platform

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@polymer_RTP

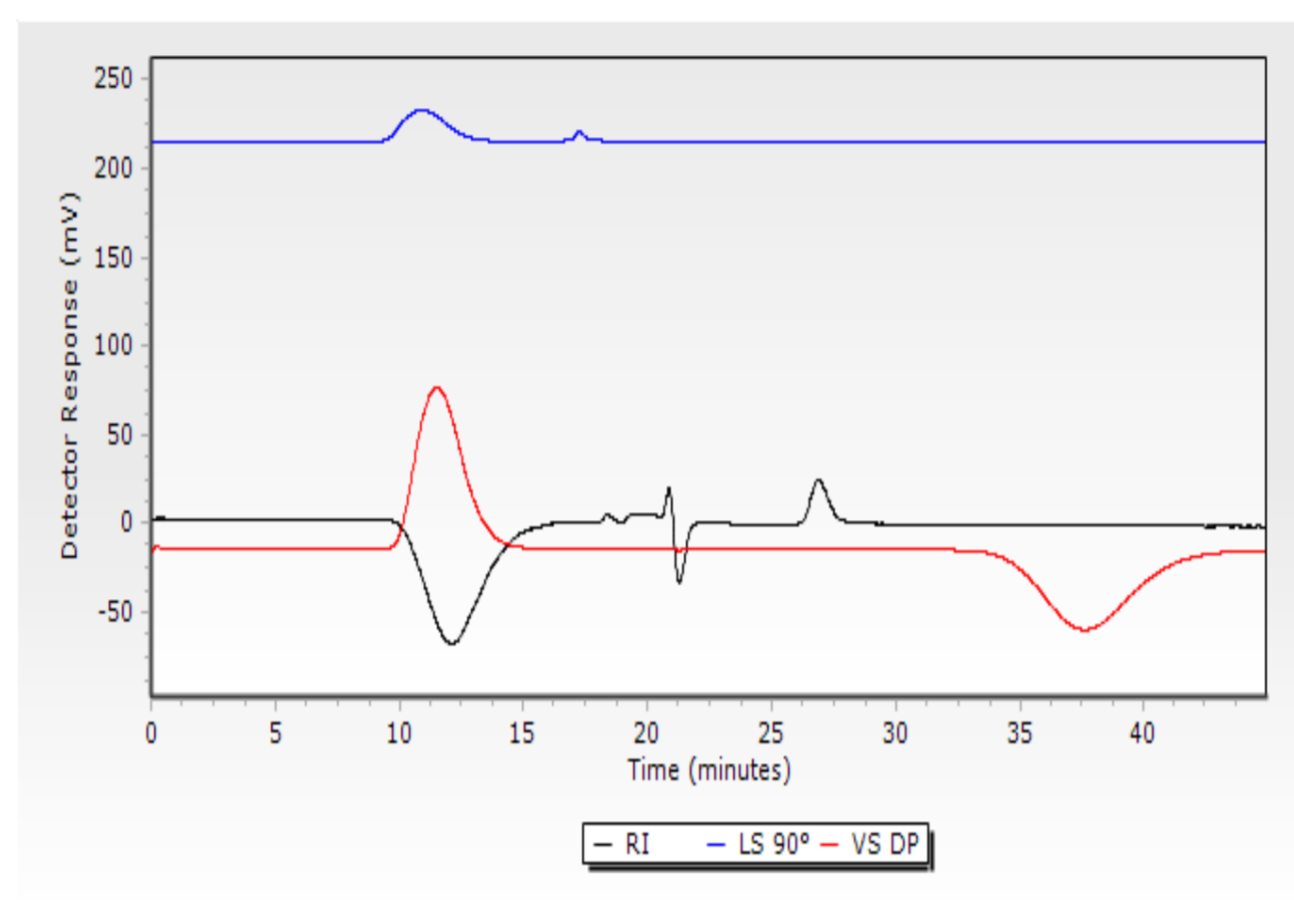


Do you have the need to further characterise your materials or have a problem you would like help solving? We offer years of expertise and top of the line analytical equipment to provide high quality service and training, both internally and externally, for polymer and material analysis and synthesis. This ranges from single samples to bespoke analysis requiring multiple instruments.

SEC



Agilent Infinity II High Temperature SEC

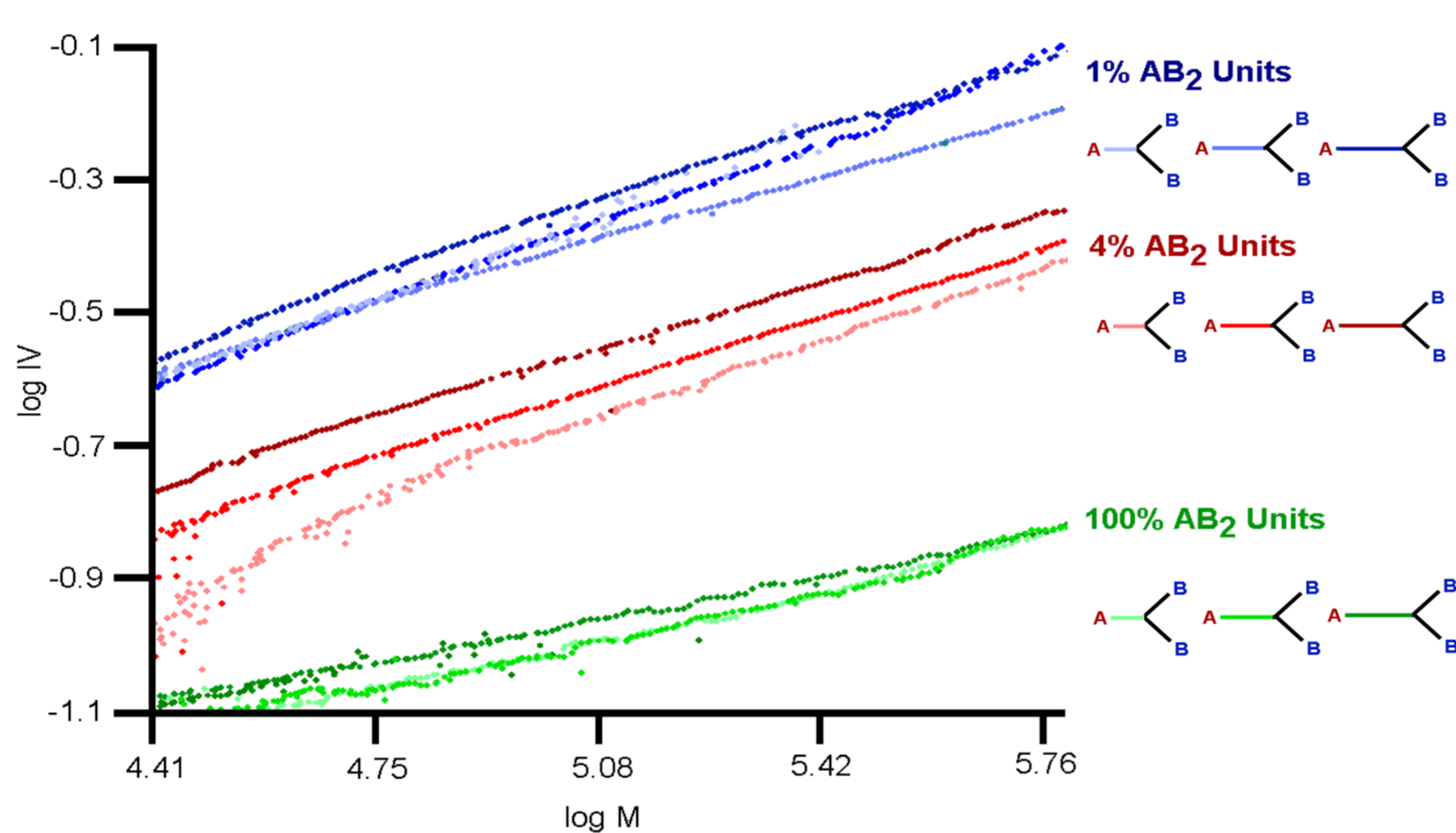


Chromatogram of HDPE on HT SEC

- Specialised in SEC with 8 systems in a variety of solvents and conditions
- Dedicated aqueous and high temperature systems
- BioSEC for biomaterial molecular weight and sizing
- Multiple detectors
- This includes accurate mwt. measurements and branching



Agilent Infinity II stack with MDS



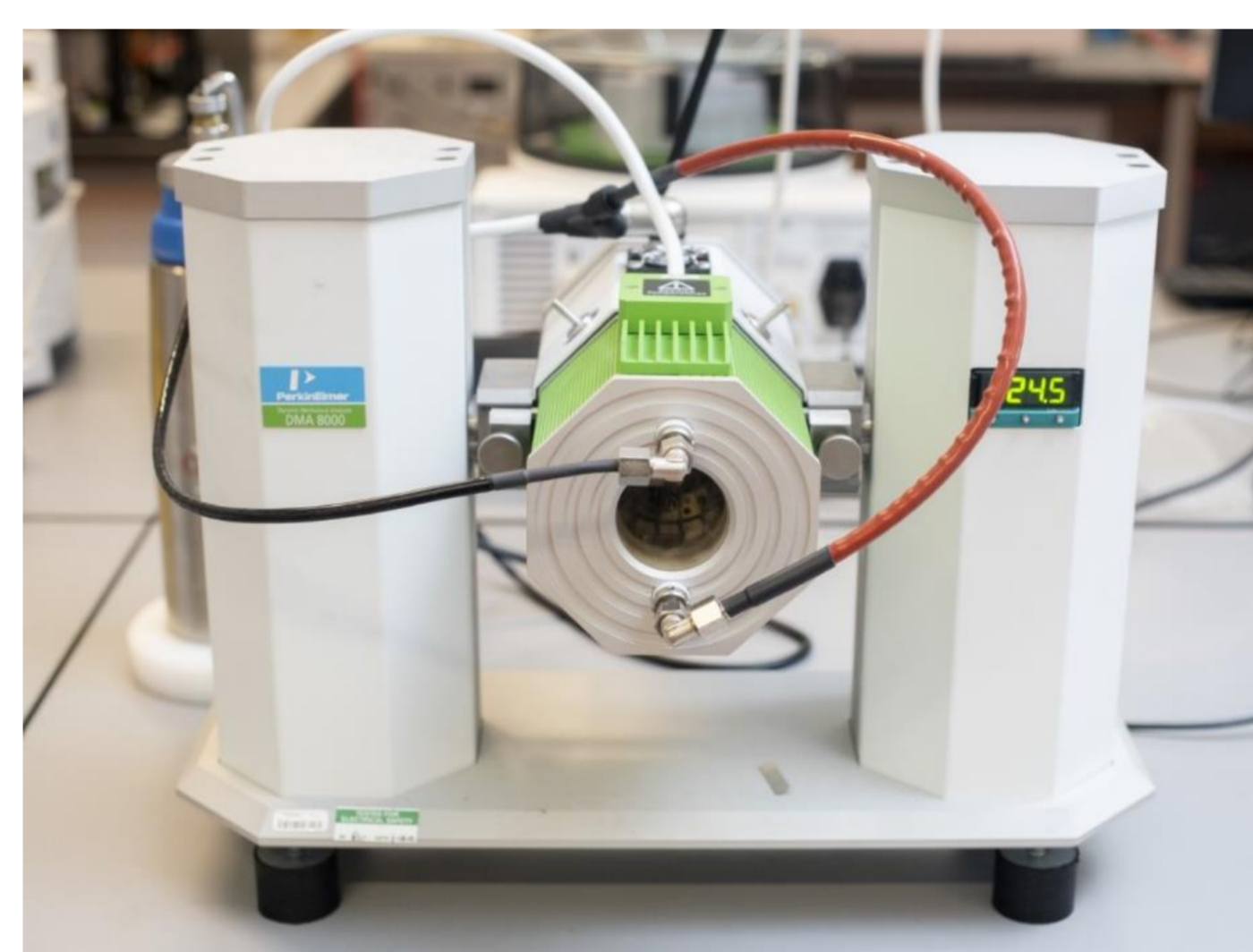
Branching analysis (MH plots) by VS-SEC

Thermal Analysis

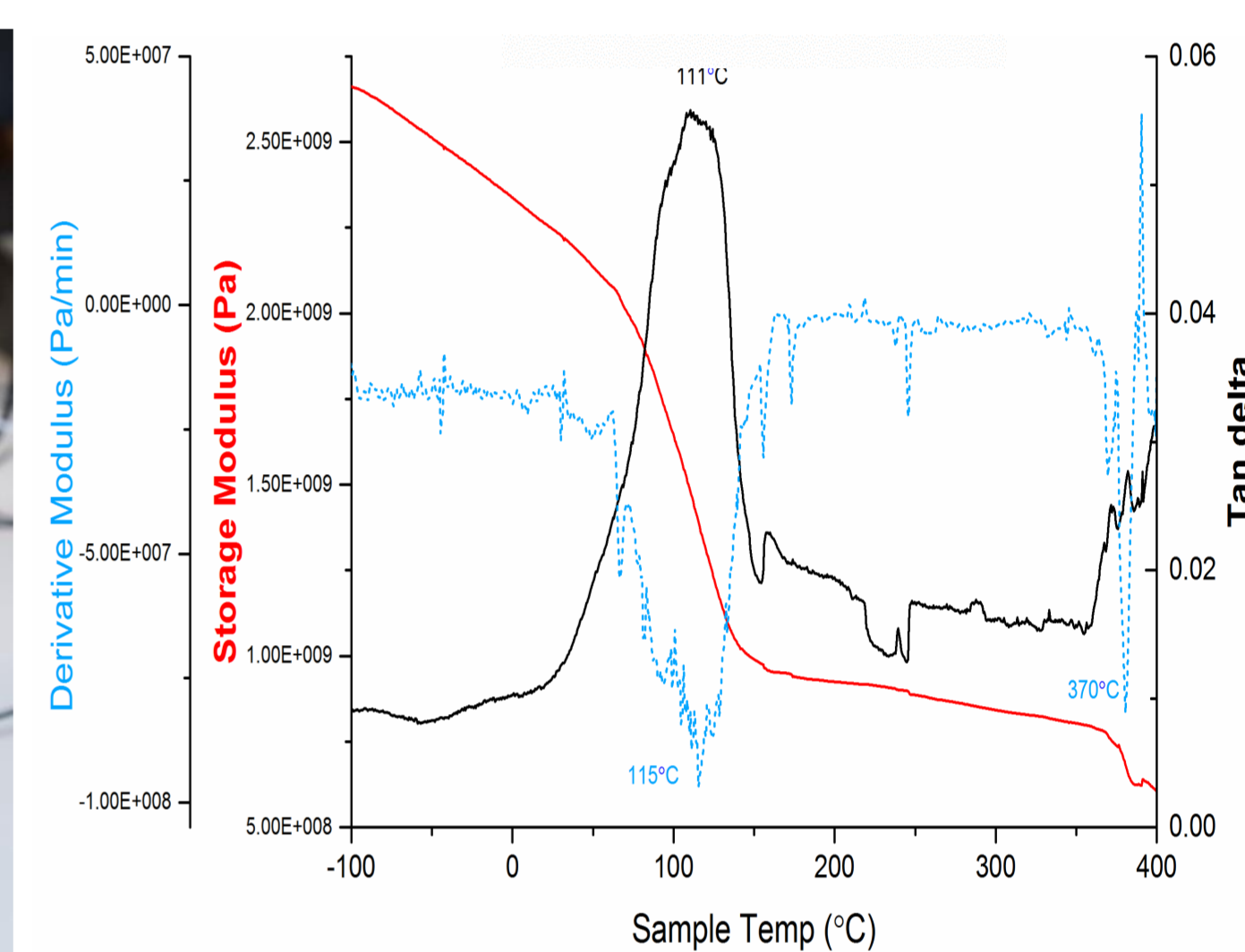
- 3 DSC with liquid nitrogen cooler capable of -150°C to high temperature
- 3 TGA/TGA-MS
- 2 DMA
- T_{deg} , T_m , T_g
- Solid or liquid samples
- Mechanical properties



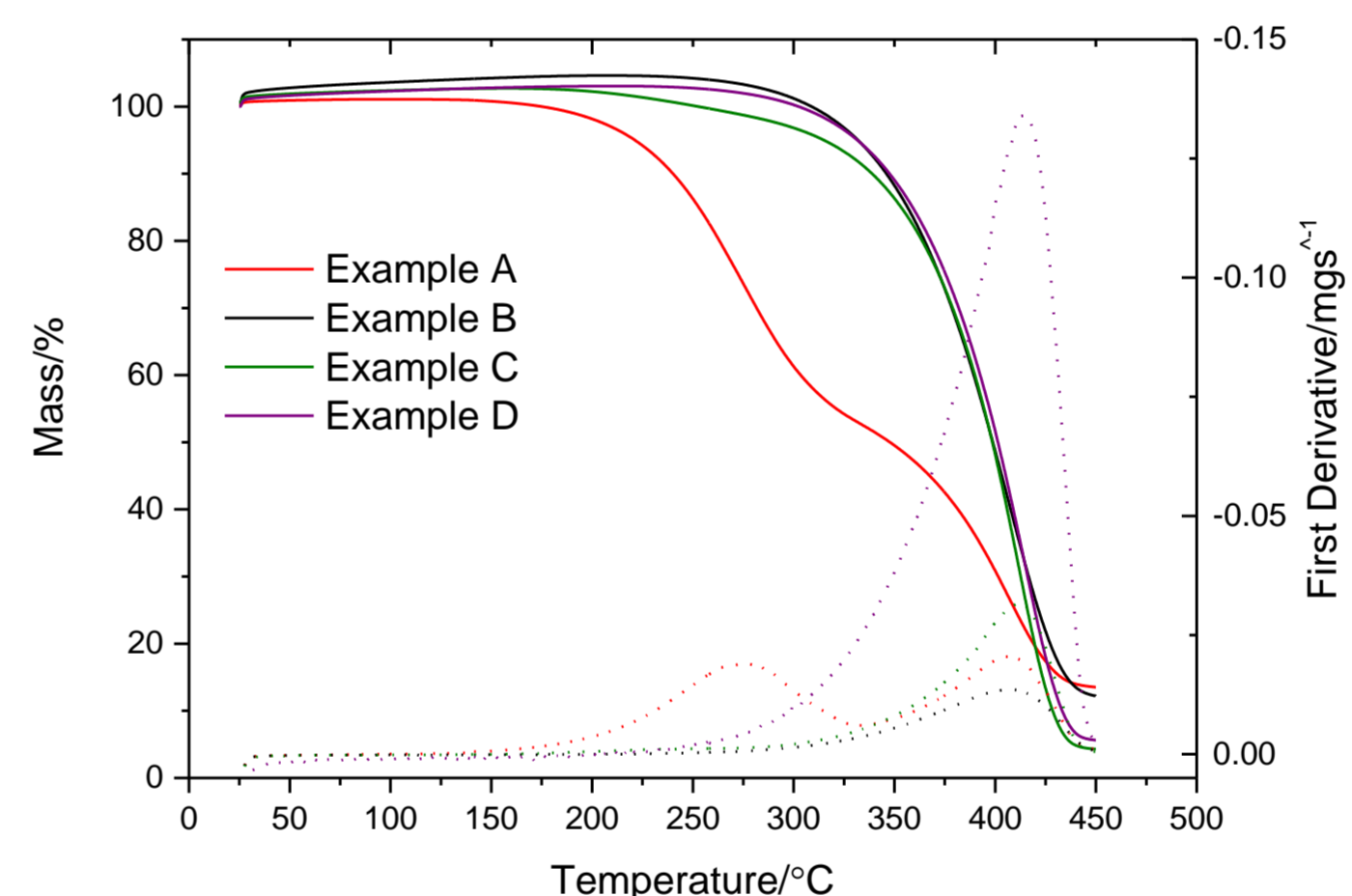
TA Instruments Discovery 2500 DSC



Perkin Elmer DMA8000



DMA curves after a temperature scan



TGA thermogram of contaminated oils



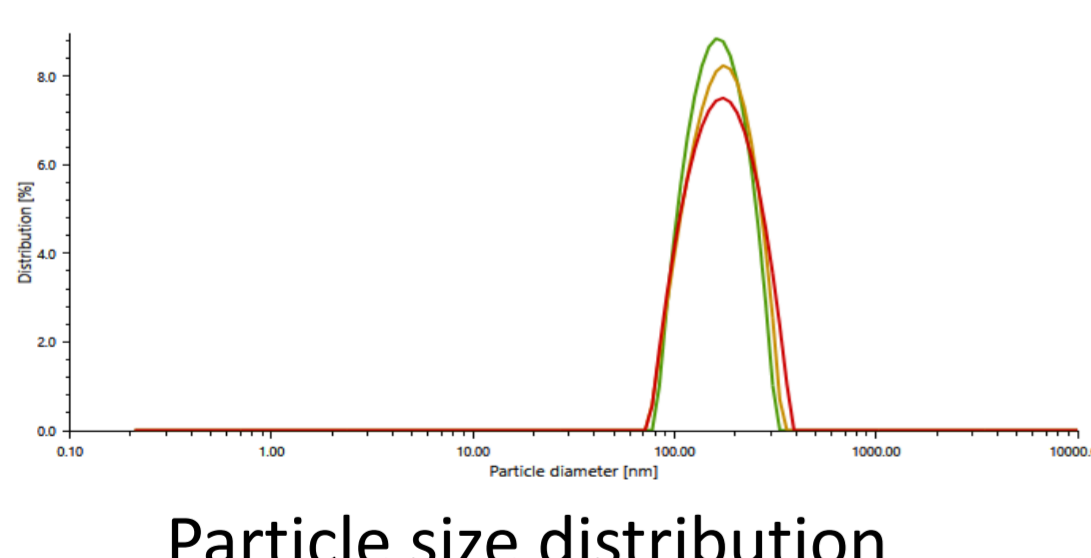
Mettler Toledo STArE TGA

Other capabilities

- GC-MS/FID
- FTIR
- UV-Vis
- Particle sizing by DLS and laser diffraction
- Mechanical Testing
- Drop shape analyser
- HPLC
- Fluorescence spectroscopy
- Rheology
- Tribology



Anton Paar Litesizer (DLS)



Particle size distribution



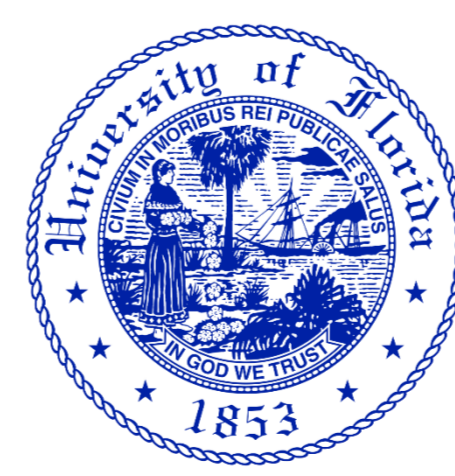
Magritek Spinsolve 80MHz Benchtop NMR



Anton Paar Rheometer

Example clients and projects

Molecular weights of polyolefins, polysaccharides, impurities in oil, determination of problems with batch samples, branching analysis, chemical analysis, determination of fundamental properties optimisations, synthesis and much more!



Contact us for:

- Analysis tailored to your needs
- Advice/method development
- On-site/off-site training courses
- Seminars/guest presentations
- Collaborations
- Academic discount available
- "The Polymer Club" event
- MSc or PhD projects

- Contact us: d.lester@warwick.ac.uk and follow @polymer_RTP
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