

NEWSLETTER

LPD Lab Services

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One-Stop Shop for Industrial Process Problem Solving, Consulting and Routine Analysis

The laboratory has had a successful year in 2015 and now is exclusively owned by its technical staff independent of external investor involvement. The company's turnover and profitability has grown from the commitment of its staff and consultants with the continued loyalty of its valued customers who number more than 1500 companies since it began offering its services in 2003. To continue to offer its valued services to industry and other clients, LPD Lab Services is in the process of expanding its technical capacity on an instrumentation and senior staff level.

This has involved recruiting an additional director Simon Romani and an Inorganic Chemist, Sean Glynn, resulting in a current staff count of 11 plus partner consultants.

GC-FID

LPD now has a GC-FID (HP6890) with a multi-position auto-sampler that complements the existing GC-MS capability. The GC-FID system has a better sensitivity than the GC-MS system and it is also easier and quicker to generate quantified data for samples, for example, if the quantification of mixed waste solvent samples is required. The GC-FID can also be fitted with an HTA H200h headspace sampling system similar to that used on the lab's current GC-MS instrument and is capable of achieving temperatures up to 190degC.



As part of the acquisition of the equipment, LPD also obtained a large array of analytical columns that are interchangeable between the MS and FID systems.

Ion Chromatography

The ion chromatograph (IC) has been replaced with a more modern system that is capable of both cationic and anionic analysis. The lab now has UKAS accreditation for measuring the anion composition in water including chlorides, fluorides, bromides, sulphates, phosphates, nitrates and nitrites.



IC is frequently used in corrosion studies alongside SEM/EDX and pH tests to look for signs of exposure to aggressive species for specific metals and materials and investigate leaching and degradation products and processes, including those in polymers and insulation foams.

LPD Expands With New Director and Consultant

The company welcomes Dr Simon Romani who joins as a technical director from the University of Liverpool, where he managed the electron microscopy unit for over 9 years, including the recent design, construction and subsequent operational management of the Nano-Investigation Centre at Liverpool (NiCaL), with state-of-the-art SEM, TEM and dual beam FIB (Focused Ion beam) facilities.

As Technical and Industrial Liaison Manager, he successfully managed an EU-funded project to completion, providing analytical assistance to SMEs throughout the North West of England. He has actively applied and developed electron and ion beam techniques (SEM, TEM & SIMS) in both commercial and academic environments for nearly 30 years, having been previously employed at MATS (UK), before it was bought out by the former CSMA. Prior to this he worked at Tyndall National Institute in Ireland (formerly NMRC) and the Atomic Energy's Harwell Laboratory (now AEA Technology), where he also originally completed his PhD in Ion Implantation.

New GC, IC, Karl Fisher, Polorimeter & Support Instrumentation

LPD has recently acquired a series of instruments and equipment that upgrade and extend the analytical techniques it can offer. This enhances the array of activities it can bring to bear in its technical problem solving activities as well as growing routine measurement work. Below are a few examples of the new equipment LPD can now utilise in solving your problems.

Polorimeter

Many optically active chemicals are stereoisomers and a polorimeter can be used to identify which isomer is present in a sample. Measurement of the specific rotation can aid in the identification of unknown species or determine the concentration or purity of the sample if its identity is known. Steam Distillation Unit

LPD now has a Distillation Unit that allows determination of the total nitrogen content of organic and inorganic substances using the Kjeldahl method. The method is the official worldwide standard for the assessment of the nitrogen in a wide range of samples including foods, beverages, soil and other environmental samples.

Viscosity

LPD has now acquired a Brookfield viscometer and a wide range of spindles to allow the viscosities across a wide range of fluid samples to be measured. A small sample adaptor is also available that allows samples with a small volume to be measured. In addition it is possible to measure viscosities at different temperatures between 10°C and 80°C.

Auto Titrator, Ion Selective Electrodes and Karl Fisher Capability

An auto titrator is now available that allows for automated titration measurements. Applications include total hardness of water, acid content and Karl Fisher analysis for water content.



His role at LPD Lab Services is mainly customer facing dealing with technical enquiries from quotation, through project management to delivery and technical interpretation. This extends the capacity of the analytical and consultancy services already offered by Steve Jenkins, Wyndham Johnstone and Mike Ellicott. This expansion is driven by customer demand and will allow delivery of a faster and more efficient service.

With Simon's involvement on the company's board, the additional experience and leadership marks a milestone in LPD's drive to grow the company's size and further improve the quality of service. He will immediately add his SEM experience to make a team of 4 with 2 instruments at LPD and will also increase the company's surface analysis knowledge particularly in SIMS and XPS, as well as augmenting the current access to advanced EM techniques, including TEM and FIB.