



LABQUIP Newsletter

Winter 2023 - 2nd Edition

MERRY CHRISTMAS



LABQUIP - No 1 for Metallography in Ireland

Labquip rules as number 1 for metallography in Ireland! We don't only supply metallographic equipment. **Our own Metallographic Demonstration Laboratory is up and running equipped with Zeiss, Metkon and Akasel equipment.** We invite you to come over for a visit and check the equipment with your own eyes. Feel free to inquire for any equipment quotations and to inquire about your samples' examination.



Colin McGuane and Sara Usai execute metallurgy services in our own demo lab at Labquip

Here we service metallography inquiries, and we give training. The second successful Sample Preparation Course, given in May 2023, in our demo lab, had 14 participants from aerospace, medical device, automotive, academic and electronics sector. The course involved hands on training in cutting, mounting, grinding & polishing as well as looking at microscopic techniques. Our attendees gave great feedback, with huge knowledge gathered during the course from our Akasel trainers and our own Labquip engineers.

Train with us - don't miss the chance to meet the best expertise in metallographic sample preparation in our next course

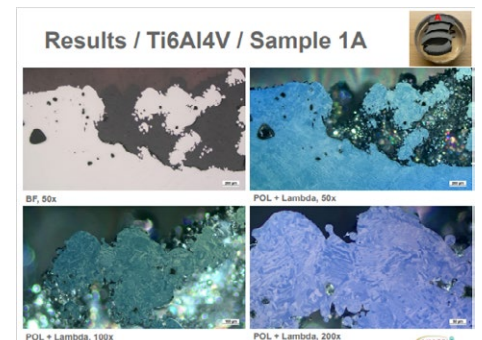
Sara Usai, our technical applications specialist, and Colin McGuane, our technical sales engineer, in conjunction with Akasel, are planning another course in Q1 2024. Please contact Colin at colin@labquip.ie to have more details about the next course.



Colin McGuane (Labquip) during our training course on Zeiss Microscopy demo



Carsten (Akasel) on sample preparation session at Labquip



Cross section pictures of an examination of additive manufacturing metallographic samples from medical devices.

Training in Ultrasonic inspection with the new Waygate USM 100

Labquip Ireland are happy to announce that they will be offering a Waygate introduction and user training course to conventional Ultrasonic (UT) inspection with the USM100.

The course will be split into 2 separate modules:

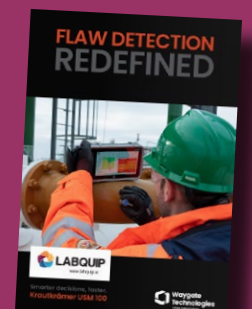
Module 1: Plate inspection

- Introduction to UT
- Thickness measurements and data recording
- Standard flaw detection
- Corrosion Analysis

Module 2: Composite inspection

- Introduction to UT
- Thickness measurements and data recording
- Standard flaw detection

Contact Aidan aidan@labquip.ie for more information about UT inspection equipment demonstration, and training.

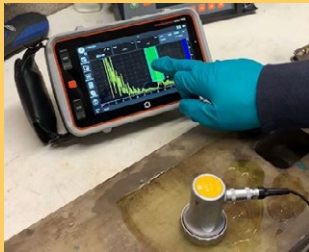


Ensure peace of mind with our equipment calibration and service

Labquip's laboratory equipment service is in high demand: the company continues to resource its products with trained factory engineers and with continual re-training and updating of technology in the field.

Examples include: ultrasonic flaw detection, radiography product lines, metallography, material analysis, positive material identification, film processing and many other technologies.

Ultrasonic Flaw detectors



UV Lights



PMI / Handheld XRF

CFX (Industry & Academics):



TRACER 5 (Industrial Research):



S1 TITAN (Industry & Regulatory):



Labino Calibration: perfection in UV and Whitelight meters

Labquip also ensures that service and calibration is at the highest level for its key suppliers. For example, Labquip's Swedish friends at Labino have been pushing boundaries in UV inspection for some time now.

A current favourite with customers in Ireland is the MB 3.0 ZEUS. This Labino portable UV light meter has become a very important working tool, enabling quick and easy inspections where the light intensity needs to be verified in situ.

Labquip now provides a Fully Certified Calibration Centre and service for all Labino products, including the popular UV light and Whitelight meters.

LabquipNDT, based out of Leicestershire, is the only calibration lab in the UK authorized by Labino and the only one in the UK using Labino's designated equipment and process, meaning your meter will be calibrated with the highest accuracy. Short turn around service on all these calibrations is guaranteed.

Please contact labquip@labquip.ie for your calibration requests.

ISO 9001 - Labquip quality - always assured

A commitment to quality is part of our culture at Labquip and is actively promoted, guiding our actions in supplying equipment and products safely, compliantly, and in meeting our customers' expectations.

Labquip (Ireland) Limited was awarded the ISO 9001 quality certification in September 2021, and the renewal audits were August 2022 and November 2023, and will be externally audited annually. The ISO 9001:2015 further extends our commitment in aligning quality with business strategy.

The ISO 9001:2015 not only supports Labquip's growing reputation as a trusted supplier in high-end research centres and in leading Irish

manufacturing exporters, but also further enables us to provide comprehensive local representation to our suppliers.

Full credit should be extended to Conor Cusack, Erika Murray, and David McCallum of NoviQA (ISO consultant) and to the entire Labquip workforce.



At Labquip, Dublin, are Erika Murray and Conor Cusack (Labquip), and David McCallum (NoviQA).

Labquip can focus even more on increasing our customer service and our supplier brand representation. We are now set to confirm our position as a leading supplier of:

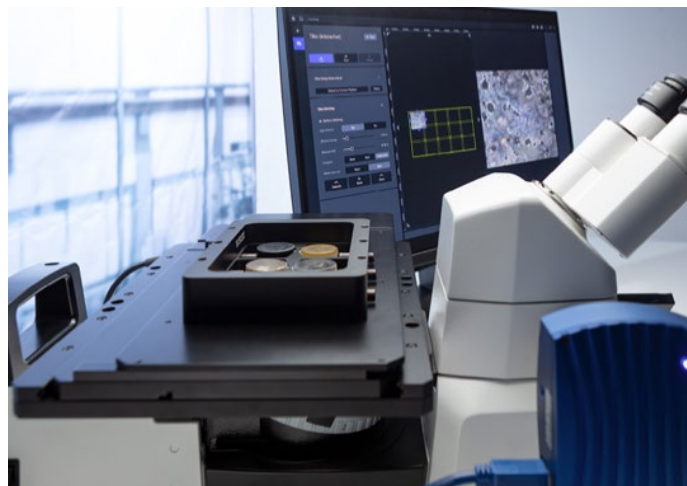
- Metallography
- Material Inspection & Analysis
- Chromatography
- Non-Destructive Testing (NDT) equipment and products.
- General Laboratory Supplies
- Engineering Teaching Equipment

For more information call our team on +353 (0)1 6434586 or email on labquip@labquip.ie. We'll be more than happy to discuss our quality with you.

ZEISS introduces AXIOVERT for advancing Material Science Microscopy

The new Axiovert, Zeiss's state-of-the-art system tailored for material science, redefines microscopy through its advanced technology and precision. This versatile platform seamlessly integrates with ZEN Core software and the Materials Apps package, offering a spectrum of specialized functionalities. Researchers and material scientists can conduct precise layer thickness measurements, grain size analyses, and assessments of multi-phase materials such as cast iron.

The system simplifies the comparison of diagrams with standard charts, providing AI-compatible results for further analysis. Moreover, the integration of the AI Toolkit enables optional post-analysis tasks like image segmentation and object classification. With its ergonomic design and intuitive controls, the new Axiovert paired with ZEN Core and the Materials Apps package sets a new standard in material science microscopy, empowering professionals to delve deeper into the exploration and comprehension of various materials and their properties.



ZEISS Axiovert 7 with mounting frame for 6 specimens



Introducing Bruker's D6 Phaser

Not a simple benchtop system but a benchtop platform: the new Bruker D6 PHASER

The new Bruker D6 PHASER combine the advantages of a benchtop system and the versatility of the bigger instruments. The D6 PHASER is a fundamentally extensible platform: changing the X-ray tube, integrating a new stage, or optimizing the beam path are all user tasks which can be performed in a matter of minutes. In comparison with its predecessor the D2 PHASER, the D6 can perform transmission measurements and it can be equipped with non-ambient, capillary, and universal stage (for thin films and bulk materials analysis), while the multiple position stage can now hold a total of 12 samples. In addition, a 1.2 kW generator and motorised primary optics and air scatter screen can be selected without losing the possibility of an internal cooling system. The D6 PHASER is the new addition to the XRD family: the D8 ENDEAVOR, the D8 ADVANCE, and the D8 DISCOVER. Contact sara@labquip.ie for information or questions.

Labquip Sales Team Ireland and Northern Ireland

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Diana Pais

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Labquip frontline sales team along with colleagues in Service, Administration, Supply Chain & Warehousing are at your side to assist with support & service.

Engineering for youth - Labquip supplies TecQuipment

Labquip goes with the flow at Trinity

We are glad to have supplied and installed at the Civil Engineering Department of Trinity College Dublin, a fantastic TecQuipment 5-metre-long Flow & Sediment Transport Channel.

This Flow & Sediment Transport Channel, with a starter kit of models and instruments, will teach over 300 students the practical side of hydraulics. It provides students with the ability to study the mechanics of sediment transport, bedform dynamics and fluid flow around weirs and other objects in an open channel.



Robert Fitzpatrick and Colin McGuane at Trinity College on the installation of the TQ Sediment Transport Channel

Try before you buy - Labquip demonstrates

We were delighted to be exhibiting at Technological University of the Shannon Moylish demonstrating the Engineering Science Kits range from TecQuipment.

The engineering science range from TQ is a modular system of experimental kits that address the fundamental principles of mechanical engineering including forces and moments; materials testing; vibration, friction, and energy; simple machines; and mechanisms.

The high quality, robust kits are suitable for teaching STEM (Science, Technology, Engineering, and Math) principles both at a beginner level and while remaining relevant for familiarisation at a post-graduate level.



Colin McGuane at TUS with TQ Science Kits

Stay tuned to follow our TQ demo-tour in Q1 2024.

Colin McGuane (Labquip) and Anders Hill (TQ) will be showcasing a range of our TQ systems. These sessions at your site. will allow you to see with your own eyes the engineering concepts illustrated. From aerodynamics to fluid mechanics, materials testing and properties, thermodynamics, electrical power systems, structures, theory of machines, alternative energies & statics fundamentals.

New teaching apparatus from TecQuipment

Thermal Power Plant with Steam Turbine

We're excited to introduce you to an innovative piece of thermodynamics lab equipment, the Thermal Power Plant with Steam Turbine, that demonstrates:

- Thermodynamic laws of energy conservation and mechanical power measurement
- Steady flow energy equation
- Thermal efficiency
- Rankine cycle analysis

Teach your students how steam can be used to generate electricity, using a close loop system (Rankine cycle).

Engineers who understand steam turbine technology for power generation will be in high demand in the future because coal, gas, biomass, nuclear, solar focusing power stations now all use steam turbines as the technology is greener, more sustainable, and more economical to operate.



Hydro-Electric Turbine System

Develop your students with essential skills for the hydropower industry by exploring the lab's first complete Hydro-Electric Turbine.

A lab-scale mobile marvel of science and education, this system mimics a real-world scenario of how electricity is generated using moving flow of water, covering:

- The concept of hydroelectricity and power curves determination
- Thermal, electrical, hydraulic, and overall system efficiencies
- Effect of the number and angle of blades on best efficiency point (BEP)
- Effect of domestic load acting as power consumption and system energy audit using Sankey diagram

The product is supplied with five different 3D-printed propellers but offers students the flexibility to design and 3D print their own propellers for further experimentation.



Please contact colin@labquip.ie to see the brochures, videos, arrange a visit to the manufacturer, and ask for quotations.