

Every Contact Leaves a Trace

Forensic Science from Scotland



Always Up-to-Date in Terms of Microscopy

For almost 25 years biologists, chemists and weapons experts from the Lothian and Borders Police Forensic Science Laboratory in Dundee, Scotland have been tracking criminals. They work according to the basic principles of forensic science as formulated by the Frenchman Locard at the beginning of the 20th century: "Every contact leaves a trace."

In the mid 80s we then purchased two Dialux high power microscopes, one for use as the optical part of our microspectrophotometer, the other for the optical part of our glass refractive index measurement system – both are running as efficiently as ever.

In the early 90s we added to our "Leica collection" with a polarising microscope and two Laborlux S laboratory microscopes for routine high power work.

Our most recent acquisitions are a Leica DMLB from the new range of microscopes for our histological analyses and an MZ6 stereozoom. The drawing tube makes it much easier for us to take accurate notes.

Whether fingerprints or shoeprints, traces of blood, fibers, paint, glass fragments or fire-accelerating chemicals, a forensic search at the scene of a crime, or of items of clothing belonging to (suspected) perpetrators or victims often result in key findings for the evidence used by the police and prosecutors.

What many people probably do not know is that Scotland, the picturesque northern part of the British Isles, is today the (illegal) drug-import capital of Europe. The long coast with fjords and bays that reach far inland is hard to monitor and makes it easier for drug dealers to ply their evil trade. Combating drug crime is one of the current tasks of the Scottish police, which is why the laboratory in Dundee needs to be as up to date with its microscope equipment as it is.

Splashes of Blood and Claw-Hammers in the Stereo Lens

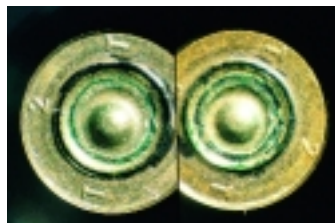
These traces of evidence are often minute in size and shape and can only be detected by use of a microscope. The laboratory in Dundee has for the past 25 years used the Leica range of these instruments. The Kombi-stereo M3Z with its 7x to 40x low power magnification enables us to inspect the exact shape and size of, for example, splashes of blood.

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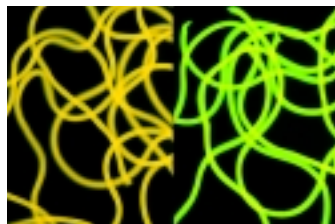
Attached to long arm stand, the microscope can be moved around the side of the sample, i.e. around a DocMarten boot (size 10!) or the tines of a claw-hammer (as a potential murder weapon) to find the traces of blood.

The attachment for enhancing the optics on the M3Z has also proved to be invaluable. From a close distance it can distinguish between wool sample and synthetics – without the laborious recovery, mounting and subsequent high-power comparison of dissimilar fibers that used to be necessary.

A Comparison Microscope, made up of a pair of Ortholux II high-power



Split-image comparison of firing pin imprints in cartridge cases with the Comparison Microscope Leica DMC



Textile fibres; Fluorescence

Leica MZ6 Stereomicroscope



Lothian and Borders Police

