

June 2018

Dear Colleague,

We have been liaising and conducting several preliminary experiments using equipment facilitated by CopperTree Forensics Limited (formerly Tech-Long Industry Ltd) based in the UK; this work has been conducted in collaboration with Stephen Murphy from the company.

Since last year, we have been considering researching the functionality and the use of the Class 4 laser systems namely the 'DBL8' operating at wavelengths of 445 and 532nm and the 'TBL mini' operating at wavelengths of 405, 445 and 532nm respectively.

We have used the 'trauma facility' at Staffordshire University's Science Centre in Stoke-on-Trent to create reproducible experimental forensic scenarios involving body fluids (saliva, blood, semen of varying volumes). Preliminary data, currently being evaluated and published in peer reviewed journals, clearly demonstrate the efficiency of the laser systems to identify body fluids on a variety of differently coloured and differently textured surfaces down to volumes of less than 25 microliters of any body-fluid examined.

As the research project continues, examining the use of this equipment on other materials and trace evidence (firearms discharge residue, fingerprints etc.) we have identified a number of unique aspects of the equipment.

It is becoming evident that the size, lightweight portability of this equipment and the radiant power outputs of the two lasers coupled with the flexibility of various wavelengths offered, make them incredibly useful tools; we have not found any need to have a variable beam-zoom facility for this work.

The use of this equipment is daily becoming more apparent in the forensic examiners armoury, both in the Laboratory and crime scene when searching for latent evidence.



Professor John P. Cassella
Department of Criminal Justice and Forensics
School of Law, Policing and Forensics
Science Centre, Staffordshire University
Leek Road, Stoke on Trent, ST4 2DF
J.P.Cassella@Staffs.ac.uk