Fibers and Forensic Science — New Ideas, Developments, and Techniques

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ABSTRACT: The techniques used for present day recovery, examination, and comparison of textile fibers in forensic science are outlined. The author has not concentrated on the already well established theories of transfer and persistence and the basic methodology, as these topics have been repeatedly reported in detail relatively recently. Instead he has given his attention primarily to developments that have occurred within the last five years, to new areas of research, and to new instrumental methods that may become integrated into the standard operating procedures of the future. The final sections are devoted to looking at some new types of fibers and at the changing views on how best to express the evidential value of fibers evidence.

KEY WORDS: Chromatography, dyes, fibers (natural and man-made), FTIR, HPLC, instrumental analysis, microscopy (brightfield, polarized light, interference), microspectrofluorimetry, microspectroscopy, TLC, UV-VIS microspectrophotometry.