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Technical Laboratory

~~THE DEPARTMENT OF JUSTICE TECHNICAL LABORATORY
IN CHARGE OF INVESTIGATION~~

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In the latter part of the year 1932 the Division of Investigation, United States Department of Justice, established a Technical Laboratory to perform work of a scientific character, which might prove of assistance in its investigative cases. Previously, it had been customary in instances considered desirable for the Division to have technical experts outside its organization to make scientific analyses. The importance and growth of this phase of the Division's investigative activity and the desirability of having the work under its close supervision led to the conclusion that the establishment of a Technical Laboratory was essential.

The development of the Laboratory has been carefully planned by the Division with the assistance and advice of Dr. Wilmer Souder, a well-known and recognized authority in the field of scientific endeavor. Dr. Souder, who is at present acting in an advisory capacity in the further development of the Laboratory, has been engaged as a scientist by the Bureau of Standards for a period of eighteen years and has devoted the principal portion of his time to handwriting, typewriting and ballistics identification. His advice and experience have rendered invaluable service to the Division in the training of the laboratory personnel and in obtaining equipment which is considered the most desirable and essential for the performance of its work.

Some of the instruments used in the technical work include the comparison microscope, in which the images of two separate bullets are brought within a single eyepiece for comparison; the binocular microscope which uses low magnification for the examination of handwriting, typewriting and other specimens with which it is an advantage to utilize the stereoscopic principle; the research microscope which enables magnification up to 1400 times to be obtained; the ultra-violet lamp for the examination of the fluorescent and phosphorescent appearances of objects and substances through which they may be identified; special cameras for photographing specimens; chemical apparatus for the examination of blood stains, qualitative and quantitative analyses; delicate balances, and similar instruments.

At the present, examinations are made in the Laboratory of documents or letters to determine the identity of the typewriting or the handwriting appearing thereon, the existence of watermarks and any other information which may prove helpful in the investigation of the case. In addition, ballistics is considered an important phase of the scientific work and comparisons are made whenever the occasion demands of bullets and exploded shells. Moulage is another feature which the Laboratory is equipped to

undertake. This consists of the making of casts of parts of the human body and these casts are frequently of value in the trial of a case to show the exact location of the wound or for identification purposes. Micro-analyses of hairs and fibres are likewise considered as an essential and important part of the technical duties, and chemical analyses of stains including blood tests are performed from time to time.

At this time considerable Laboratory research is being conducted. Further there are being obtained complete collections of watermarks, tire tread patterns, bullets, cartridges and powders and typewriting specimens to assist in the performance of the Laboratory examinations as outlined above. These standard specimens will be located in the Laboratory and will be made available to all law enforcement officials desiring to utilize them.