



FTP 10.11 OBTAINING TEST IMPRESSIONS OF KNOWN FOOTWEAR

A. Purpose

This procedure is to describe the methods used in the recording of the outsole of a shoe used for comparison.

B. Scope

Various methods are employed to obtain known impressions of footwear for comparison; such as through the use of transparencies, lifts, or casts. This may not cover all aspects of taking test impressions of known footwear. The type of known footwear impression will be dependent on the examination needs of each specific case situation. CBI personnel may also respond outside of the laboratory if requested by the customer to aid in this process.

C. Definitions

None

D. Equipment

1. High resolution photographic equipment and photography scales
2. Test impression materials (ink/powders and backing material like paper or lifts)
3. BIO-FOAM and casting materials

E. Chemicals, Reagents, Solvents, Standards

None.

F. Safety/Personal Protective Equipment

1. It is the responsibility of the examiner to wear the proper PPE.

G. Procedure

1. Collection of known (test) footwear standards

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- I. Footwear and Tire Track examiners may respond outside the laboratory to obtain known footwear test impressions and/or for documentation purposes by request of a customer. The Footwear and Tire Track Impression Examiner's actions in obtaining any documentation and/or known test impressions of an outsole must be documented in one of the following methods: a crime scene report, a memo that is placed into the Lab Record Object Repository, or notations made in the Footwear and Tire Track Impression Worksheet.
 - a. Known footwear test impressions and/or documentation obtained outside the laboratory will be transferred to the requesting customer.
- II. Known footwear test impressions taken in the laboratory will be treated as evidence and marked as such.
- III. Test impressions of a known shoe should record the full outsole design of the shoe as well as any fine detail or three-dimensional features with accurate contrast, size, shape, and clarity.
- IV. It is important to take into consideration other disciplines' need to process the known footwear for biological evidence, hair, fibers, glass, soil, etc. Coordinate with any other required disciplines prior to taking any test impressions.
 - a. Prior to making known test impressions, the examiner should recognize and preserve other relevant physical evidence as well as document and photograph the original condition of the shoes and outsoles.
- V. The examiner should select the method of making test impressions based on the known footwear condition, case circumstances, and products available. Multiple test impression methods may be used if needed. All known test impressions created must be marked and retained in a packet for return to the submitting agency. In order to obtain known footwear test impressions and/or documentation, the following may be used:
 - a. Photography of a known shoe may be used in lieu of other methods listed for elimination purposes only. Photography of an outsole should always include a photographic scale on the same plane as the outsole.
 - b. Photography of a known shoe may be used in conjunction with the other methods as follows:
 - c. An inkless system, such as an Identicator® kit.
 - d. Fingerprint powder or ink may be used as a recording medium followed by recording the outsole on a lift or paper.
 - e. Silicone spray may be used as a recording medium followed by the development of any impression with fingerprint powder.

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- f. BIO-FOAM may be used and photographed, or used and then filled with dental stone creating a cast of the footwear test impression.
 - g. It is best to collect the known exemplars under similar conditions as the questioned impressions were deposited, if possible. (i.e., dry vs wet origin, 3-dimensional vs 2-dimensional, under weight, with suspected twisting or sliding motions, etc.)
 - h. In some cases excess dirt, debris, or stone-holds may be present. It is up to the analysts discretion to determine whether impressions should be made prior to and/or after removing such debris. Any removed debris should be preserved with the evidence.
 - i. Once a footwear test impression has been obtained, the following information should be included either on the impression or within the worksheet where applicable:
 - i. Name, date and initials of the person taking the known test impression.
 - ii. Information from the footwear (tag) such as size, model, date of manufacture etc, as well as the condition of the footwear (amount of wear, etc.)
 - iii. Care should be taken to note the dates of the crime, dates the shoes were collected, and dates the standards are collected.
- VI. If known footwear outsoles are needed for elimination purposes (i.e.- footwear belonging to individuals who accessed the scene, such as police officers, fire department personnel, rescue personnel, etc), the footwear outsole may be photographed with a scale or may be documented using any of the methods listed above.

H. Limitations

1. Footwear evidence may have limitations that may interfere with this procedure due to substrate features, method of collection, and the inability of an examiner to reproduce the same conditions that the questioned impression was made.
2. Should limiting factors exist and/or become apparent they should be documented in the Footwear and Tire Track Impression worksheet.
3. Having limiting factors does not necessarily interfere with the Footwear and Tire Track Impression examiner's ability to conduct a meaningful comparison.

J. References



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1. <https://www.nist.gov/topics/organization-scientific-area-committees-forensic-science/footwear-tire-subcommittee>
2. Bodziak, W. J. Footwear Impression Evidence, 2nd ed.; CRC Press: Boca Raton, FL, 2000.