

Best Practice Recommendation for Casting Footwear and Tire Impression Evidence at the Crime Scene



WHAT IS AN AAFS STANDARD FACTSHEET?

The AAFS produces clear, concise, and easy-to-understand factsheets to summarize the contents of technical and professional forensic science standards on the OSAC Registry. They are not intended to provide an interpretation for any portion of a published standard.

WHAT IS THE PURPOSE OF THIS STANDARD?

This Best Practice Recommendation (BPR) provides guidance to forensic science practitioners who are responsible for casting footwear and tire impression evidence at the crime scene. Following the recommendations in this BPR should result in the optimal preservation of details in these impressions.

This BPR is to be used in conjunction with and after, ANSI/ASB 050, 1st Ed., 2021, a BPR on the photographic documentation of footwear and tire impression evidence.

WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

Footwear and tire impressions are commonly encountered at crime scenes. These impressions can contain information from the shoe or tire that made them, such as class characteristics (the overall pattern and outsole size), and randomly acquired characteristics (RACs), such as nicks, scratches, or tears.

Casting these impressions to optimize the preservation of class characteristics and RACs is very important. The details in a casted impression are used during the comparison process to known shoes or tires. The results of footwear and tire comparisons can be helpful in criminal and civil cases.



HOW IS THIS STANDARD USED, AND WHAT ARE THE KEY ELEMENTS?

This standard can be used by any forensic science practitioner who has completed a relevant training program and has experience in the essential skills required to understand and apply the principles outlined in this BPR. It does not replace a formalized training program for detecting footwear and tire track evidence. These best practices can provide guidance when creating standard operating procedures (SOPs), supplement existing SOPs, or replace existing SOPs as deemed appropriate by a forensic science service provider.

This BPR document is easy to follow and outlines the equipment and materials needed to cast footwear and tire impressions encountered on a wide variety of surfaces at crime scenes.

The BPR identifies the best methods to cast footwear and tire evidence depending on the substrate the impression is in (e.g., snow, sand or soil, standing water). How to best collect, clean, preserve, and package the casted impressions is also explained.

The procedures included in this standard may not cover all aspects of unusual or uncommon conditions.