

Forensic Examination of Fabrics and Cordage



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 standard guide describes forensic examination procedures for the analysis, comparison, and damage assessment of fabrics and cordage.

Handling and tracking of samples, documentation, and analysis are addressed. This standard also provides in-depth examination tasks prior to conducting an initial analysis of the fibers comprising the fabric or cordage.

Guidance is given on examining multiple samples and how comparisons and interpretations should be conducted.

WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

Because of their general availability, forensic science practitioners (FSPs) often encounter fabrics and cordage as evidence. Structural details, such as design, construction, and composition, as well as the vast array of colors offered in the marketplace, provide information that can assist in reaching an opinion as to the possible end use or source of an item.

A critical component of a comprehensive forensic fabric or cordage examination includes a complete characterization of the fabrics and other materials used in the assemblage of a textile.



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

This guide is intended to assist forensic science service providers (FSSPs) and FSPs who conduct examinations of fabrics and cordage for the purposes of analyzing and comparing types of fabric, cordage, and damage.

Recommendations in the Sample Handling section include documenting the original condition (i.e., shape, position, layers, etc.), physical damage, and the presence of other evidence on the item in both written notes and photographs.

Prior to conducting an initial analysis of the fibers comprising the fabric or cordage, the standard recommends that FSPs examine the fabric or cordage for physical fits, pattern evidence, and damage. Adhesives or other materials used in bonding fabrics should also be noted. Once this is completed, the fabric or cordage is deconstructed to allow for characterization of all elements and sub-elements using the appropriate microscopical, chemical, and instrumental techniques in referenced ASTM standards (e.g., [ANSI/ASTM E2227-23e1](#) and [ANSI/ASTM E2228-23a](#)).

This standard also provides guidance on assessing the differences between observed features or data in a comparison and on the level of detail to include in examination documentation.



American level of detail to record in examination documentation.

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