

Establishing an Examination Scheme for Intact Explosives



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?

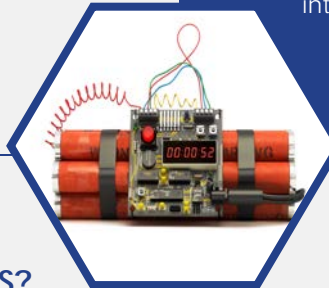
Intact explosive materials, such as black powder, smokeless powder, dynamite, and pyrotechnic mixtures, are often recovered during the investigation of events involving bomb threats and explosions.

The purpose of this standard is to provide guidance for the evaluation, selection, and application of analytical techniques that form the basis of an examination scheme for the identification of intact explosives. It also covers the analytical requirements for the identification of a variety of explosive materials, as well as basic guidance related to quality assurance, documentation of case notes, and reporting of results.

WHY IS THIS STANDARD IMPORTANT? WHAT ARE ITS BENEFITS?

This standard provides a foundation for the consistent application of analytical techniques for the identification of intact explosives. It describes methods for the development of identifying information that follows an efficient order of testing. Adherence to the standard ensures that the analytical methods and instrumental techniques used in the identification of intact explosives are fit-for-purpose.

Forensic science service providers that test intact explosives are encouraged to meet this standard.



HOW IS THIS STANDARD USED AND WHAT ARE ITS KEY ELEMENTS?

This standard is designed to aid in the development of an analytical scheme for the examination and identification of intact explosives that are submitted to forensic science service providers as evidence.

It establishes requirements for the appropriate selection and use of visual, physical, analytical, and instrumental techniques that provide structural and chemical information for identifying explosive materials. It also describes the composition of a variety of explosive materials and the minimum requirements for their identification.

A flowchart illustrating a general analytical scheme for the examination of intact explosives and flowcharts detailing analytical schemes for the examination of low- and high-explosive materials are included. The standard highlights other ASTM standards and references that provide greater depth of coverage and guidance on specific analytical techniques and concepts related to the identification of explosive materials.

This standard also presents basic guidance for the documentation of case notes and reporting of results.

This is a standard of practice. Additional tests beyond those required in the standard may be necessary.