

	EXP-PM 2.6 Low Explosives Reporting Results	
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	Revision #: 1	Issued Date: 12/28/2017
	Document Manager: Cheryl Lozen	Approved By: Jeffrey Nye

2.6.1 Various Possible Inclusions

2.6.1.1 Description of the device and/or reconstructed device:

Include measurements, the initiating mechanism if possible, any labeling or markings, the container's composition, any apparent/suspected anti-personnel material, and a description of any other material attached or associated with the device.

Examples:

- "The Item 1 (apparent or reconstructed) device consisted of a metal pipe approximately 10 inches in length with an outer diameter of approximately 1inch. Black electrical tape was wrapped around the pipe's attached endcaps. An approximately 1/8 inch hole in the center of one of the endcaps contained an approximately 3 inch piece of green pyrotechnic safety fuse."
- "The Item 1 an apparent expended device contained an approximately 1/8 inch hole in the side of the length of the pipe which may have served _____."

If there is evidence of a fuse, complete the sentence with: "may have served as a fuse hole."

If there is no indication of a fuse, complete the sentence with: may have served to accommodate the source of ignition.

2.6.1.2 Other device measurement examples:

- "The approximate measurements of the pipe were 3 inches in length and ½ inch in diameter."
- "The expended device was constructed of a 3/4 inch pipe approximately 12 inches in length."

2.6.1.3 A list of the tests used in the analysis:

- "Solid material powder/residue contained in Item was examined using stereomicroscopy, solubility tests, micro-chemical tests, Fourier Transform Infrared Spectrophotometry (FTIR), Ion Chromatography (IC), Scanning Electron Microscopy-Energy Dispersive X-Ray Spectrometry (SEM-EDS) and X-Ray Fluorescence (XRF)."
- "An extract of Item ___ was examined using stereomicroscopy, solubility tests, micro-chemical tests, Fourier Transform Infrared Spectrophotometry (FTIR), Ion Chromatography (IC), Scanning Electron Microscopy-Energy Dispersive X-Ray Spectrometry (SEM-EDS) and X-Ray Fluorescence (XRF)."
- "Item ___ was examined using stereomicroscopy, solubility tests, microchemical tests, Fourier Transform Infrared Spectrophotometry (FTIR), Ion Chromatography (IC), Scanning Electron Microscopy-Energy Dispersive X-Ray Spectrometry (SEM-EDS) and X-Ray Fluorescence (XRF)."
- "The Items 1 and 2 bottles were examined visually."

2.6.1.4 A description of the explosive filler:

- "The Item _____ silver-grey powder was identified as flash powder."

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- "Particles recovered from Item _____ were identified as a black powder substitute physically and chemically consistent with Pyrodex®."

- "Particles recovered from Item _____ were identified as smokeless powder."

- "Powder recovered from Item _____ was physically and chemically consistent with a pyrotechnic powder (a pyrotechnic mixture)."

- "An extract of the Item _____ pipe was chemically consistent with that expected from deflagrated black powder."

2.6.1.5 Extract – Inconclusive/Indicative:

- "An extract of Item _____ was chemically indicative of (black powder, black powder substitute, flash powder, smokeless powder, etc.). Indicative means that some of the data corresponds to and explosive or explosive residue but, due to low concentration, sample condition or other factors, a more definitive conclusion could not be reached."

2.6.1.6 A description of how the explosive filler would react if properly confined and/or ignited:

This statement is not necessary when the device has functioned. (This wording not normally utilized)

- "Properly confined and ignited _____ (black powder, black powder substitute, flash powder, smokeless powder, etc.) will explode."

2.6.1.7 When no explosives are identified, the following statement should be used:

- "No explosives or explosives residues were identified in the Item _____ extracts."

2.6.1.8 Safety fuse:

Typically encountered safety fuses are 1/16 inch, 3/32 inch or 1/8 inch in diameter and typically green, red or yellow in color (other colors may be encountered). Fuse material will be referred to as pyrotechnic safety fuse.

For unexpended fuse:

- "Item _____ consisted of green pyrotechnic safety fuse, approximately 4 ½ inches in length."

For expended fuse:

- "Item _____ was consistent in physical properties with an expended (insert color) pyrotechnic safety fuse and was approximately ¾ inch in length."

For a fuse that does not function:

- "Item _____ was physically consistent with pyrotechnic safety fuse but did not function."

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2.6.1.9 Commercial labeling:

When specifying commercial labeling, include at a minimum the product name and size of container, when possible.

If specifying a brand of black powder substitute in a report, the following superscripts should be used:

Pyrodex®
 Clean Shot Powder™
 Black Canyon Powder™
 Clear Shot Powder™
 Golden Powder™
 Black Mag Powder™
 Triple Se7en®

2.6.2 Full Report Wording Examples

2.6.2.1 Intact Powder:

“The powder in Item 1 was examined visually and examined using stereomicroscopy, solubility tests, micro-chemical tests, Fourier Transform Infrared Spectrophotometry (FTIR), Ion Chromatography (IC), Scanning Electron Microscopy-Energy Dispersive X-Ray Spectrometry (SEM-EDS) and X-Ray Fluorescence (XRF). - (use only those that apply) - The powder was identified as smokeless gun powder.”

2.6.2.2 Burnt Powder:

“Item 5 (swab taken from inside of mailbox) was examined using stereomicroscopy, solubility tests, microchemical tests, Fourier Transform Infrared Spectrophotometry (FTIR), Ion Chromatography (IC), and Scanning Electron Microscopy-Energy Dispersive X-Ray Spectrometry (SEM-EDS).

An extract of the Item 5 swab was chemically consistent with that expected from a deflagrated black powder substitute such as Pyrodex®.”