



Guidelines for the Documentation of the Examination of Ammunition and Ammunition Components

1.0 Objective

The purpose of this document is to set forth guidelines to examiners conducting forensic examinations of ammunition and ammunition components.

2.0 Introduction

- 2.1 The examination of any cartridge, cartridge case, shotshell or projectile will be documented. This documentation may include the condition and physical characteristics of the cartridge, cartridge case, shotshell or projectile as received and will include information related to tests conducted with the item.
- 2.2 Generally accepted forms of documentation include, but are not limited to, worksheets, laboratory notes, sketches, photographs, video, and reference material.

3.0 Safety Considerations

- 3.1 It is the responsibility of the user of this guideline to establish appropriate health and safety practices and determine the applicability of regulatory limitations prior to use.
- 3.2 Ammunition evidence in the laboratory environment is not dangerous if handled correctly.

4.0 Documentation of Physical Characteristics

- 4.1 Documentation of an unfired cartridge/shotshell should include the following (when applicable):
 - 4.1.1 Caliber/Gauge
 - 4.1.2 Brand
 - 4.1.3 Headstamp
 - 4.1.4 Case/Body material (i.e. metal type, plastic, paper)
 - 4.1.5 Primer material
 - 4.1.6 Shell Length
 - 4.1.7 Bullet/Projectile type and composition
 - 4.1.8 Action marks, type and relative position, single/multiple
 - 4.1.9 Evidence of any attempt to fire (partial firing pin impression)
 - 4.1.10 Trace evidence
- 4.2 Documentation of a fired cartridge case/shotshell should include the following (when applicable):

- 4.2.1 Caliber/Gauge
 - 4.2.2 Brand
 - 4.2.3 Headstamp
 - 4.2.4 Case/Body material (i.e. metal type, plastic, paper)
 - 4.2.5 Primer material
 - 4.2.6 Shell Length
 - 4.2.7 Firing Pin Impression, Breech Face Mark, Extractor Mark, Ejector Mark type and relative position
 - 4.2.8 Additional toolmarks
 - 4.2.9 Trace evidence
 - 4.2.10 Condition, suitability for comparison
- 4.3 Documentation of a fired projectile should include the following (when applicable):
- 4.3.1 Type
 - 4.3.2 Weight
 - 4.3.3 Diameter
 - 4.3.4 Caliber/Size/Gauge
 - 4.3.5 General Rifling Characteristics
 - 4.3.6 Trace evidence
 - 4.3.7 Condition, suitability for comparison

5.0 Documentation of Examination

- 5.1 Documentation of the examination of ammunition may include the following:
- 5.1.1 Possible firearm type
 - 5.1.2 Results of comparison
- 5.2 Documentation of the examination of a cartridge case/shotshell may include the following:
- 5.2.1 Possible firearm type
 - 5.2.2 Results of comparison
 - 5.2.3 National Integrated Ballistic Information Network (NIBIN) entry and result
- 5.3 Documentation of the examination of a projectile may include the following:
- 5.3.1 Possible firearm type
 - 5.3.2 Results of comparison
 - 5.3.3 NIBIN entry and result

Appendix 1 – References

1. Standardization of Comparison Documentation. AFTE Journal. 2006 Jan;38 (1):72-73.
2. Haag L, Garrett M. Bullet Length to Diameter Ratios and Caliber Determination of Bullets in Surviving Gunshot Victims. AFTE Journal 2007 Jan;39(1):31-43.
3. Crumley R. Bullet Core Weights. AFTE Journal. 1998 Jan;30(1):125.
4. Haag M, DaVia K, Foster J, Ross C. The Reconstructive Aspects of Bullet Jacket and Core Weights. AFTE Journal 2002 Apr;34(2):161-164.

Appendix 2 – Document History

Date	Section	Changes
04/15/2013		Draft Approved
07/30/2013		Posted for Review
12/04/2013		Adopted