A. Purpose:

1. To determine the caliber and type of firearm from which a bullet has been fired. Caliber, or base diameter, is one of the class characteristics of a fired bullet. The determination of caliber will aid the examiner during the identification or elimination of a suspect firearm. If no firearm is submitted, the bullet's caliber may be used in determining the General Rifling Characteristics of the firearm involved.

B. Responsibility:

1. It is the examiner's responsibility to determine the caliber of a submitted bullet, and based on the condition of the bullet, determine which steps in this procedure can be used.

C. Safety:

1. To avoid exposure to any potential bio-hazards, the use of personal protective devices must be considered by the examiner.

D. Procedure:

1. Compare the base diameter of the evidence bullet directly with known fired test standards.
2. Measure the base diameter of the evidence bullet using a measuring device and compare this measurement with known measurements published in the reference literature.
3. Determine the number and widths of the land impressions and the groove impressions and compare them to Appendix G, Table 6, of the AFTE Glossary (3rd edition).
4. Take note of the physical characteristics of the evidence bullet, such as weight, bullet shape, composition, nose configuration, and number and placement of cannelures, to aid in caliber determination.

E. Interpretation of Results:

1. Caliber is written as a numerical term and may be depicted with or without the decimal point. If the base of the bullet is mutilated, the examiner may only be able to determine it is consistent with a range of calibers. In some cases it will not be possible to determine the caliber of a submitted bullet.

F. References:

1. AFTE Glossary
2. Laboratory Safety Manual

G. Appropriate Appendices:

1. Appendix 4 – Work sheets