



Guidelines: Criteria for Identification

1.0 Objective

The laboratory shall adopt a Criteria for Identification as it pertains to the firearm/toolmark discipline.

2.0 Procedures

- 2.1 The laboratory shall include in their protocol a Criteria for Identification that is generally accepted by members of the forensic firearms community.
- 2.2 SWGGUN endorses the Association of Firearms and Tool Mark Examiners (AFTE) "Theory of Identification" definition as set forth in the AFTE Journals (July 1992 Volume 24, Number 3 and Fall 2011 Vol. 43, No. 4) to be the generally accepted Criteria for Identification:
 - 2.2.1 The theory of identification as it pertains to the comparison of toolmarks enables opinions of common origin to be made when the unique surface contours of two toolmarks are in "sufficient agreement."
 - 2.2.2 This "sufficient agreement" is related to the significant duplication of random toolmarks as evidenced by the correspondence of a pattern or combination of patterns of surface contours. Significance is determined by the comparative examination of two or more sets of surface contour patterns comprised of individual peaks, ridges and furrows. Specifically, the relative height or depth, width, curvature and spatial relationship of the individual peaks, ridges and furrows within one set of surface contours are defined and compared to the corresponding features in the second set of surface contours. Agreement is significant when the agreement in individual characteristics exceeds the best agreement demonstrated between toolmarks known to have been produced by different tools and is consistent with agreement demonstrated by toolmarks known to have been produced by the same tool. The statement that "sufficient agreement" exists between two toolmarks means that the agreement of individual characteristics is of a quantity and quality that the likelihood another tool could have made the mark is so remote as to be considered a practical impossibility.

2.2.3 Currently the interpretation of individualization/identification is subjective in nature, founded on scientific principles and based on the examiner's training and experience.