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Nota di contenuto	FrontMatter -- Acknowledgment of Reviewers -- Preface -- Contents -- Executive Summary -- 1 Introduction -- 2 Compositional Analysis -- 3 Statistical Analysis of Bullet Lead Data -- 4 Interpretation -- 5 Major Findings and Recommendations -- APPENDIXES -- A Statement of Task -- B Committee Membership -- C Committee Meeting Agendas -- D Glossary -- E Basic Principles of Statistics -- F Simulating False Match Probabilities Based on Normal Theory -- G Data Analysis of Table 1, Randich et al. -- H Principal Components Analysis: How Many Elements Should Be Measured? -- I Birthday Problem Analogy -- J Understanding the Significance of the Results of Compositional Analysis of Bullet Lead -- K Statistical Analysis of Bullet Lead Data.

Sommario/riassunto

Since the 1960s, testimony by representatives of the Federal Bureau of Investigation in thousands of criminal cases has relied on evidence from Compositional Analysis of Bullet Lead (CABL), a forensic technique that compares the elemental composition of bullets found at a crime scene to the elemental composition of bullets found in a suspect (TM)s possession. Different from ballistics techniques that compare striations on the barrel of a gun to those on a recovered bullet, CABL is used when no gun is recovered or when bullets are too small or mangled to observe striations. Forensic Analysis: Weighing Bullet Lead Evidence assesses the scientific validity of CABL, finding that the FBI should use a different statistical analysis for the technique and that, given variations in bullet manufacturing processes, expert witnesses should make clear the very limited conclusions that CABL results can support. The report also recommends that the FBI take additional measures to ensure the validity of CABL results, which include improving documentation, publishing details, and improving on training and oversight.