

**PRESCRIPTIVE PACKAGE**

**CRIME SCENE SEARCH  
AND  
PHYSICAL EVIDENCE HANDBOOK**



U.S. DEPARTMENT OF JUSTICE  
LAW ENFORCEMENT ASSISTANCE ADMINISTRATION  
NATIONAL INSTITUTE OF LAW ENFORCEMENT  
AND CRIMINAL JUSTICE

# **CRIME SCENE SEARCH AND PHYSICAL EVIDENCE HANDBOOK**

**RICHARD H. FOX**

**AND**

**CARL L. CUNNINGHAM**

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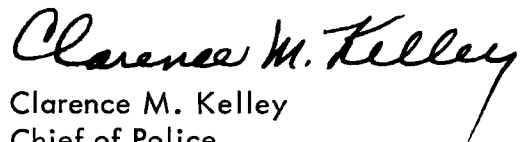
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## FOREWORD

Law enforcement is a profession that is unusual in the variety and combination of demands it now places on those who pursue it. The society which the law enforcement community serves is characterized by marked and rapid change and a strong dependence on technological developments. Modern law enforcement practice, therefore, has an ever-expanding need for the support of science and technology.

The crime laboratory is one part of the scientific and technological organization that supports the police and the courts in the furtherance of criminal justice. Just as important, the laboratory is often able to produce evidence that clears the innocent person from suspicion. One result of the process of social change that has occurred in the United States in recent years has been legal decisions that greatly increase the value of physical evidence in the solution of crime and the conviction of offenders. The crime laboratory therefore represents an important potential extension of the investigating officer's abilities. However, the potential can only be realized if physical evidence is properly collected and transmitted to the laboratory for analysis.

Although the crime laboratory examiners can often generate information from physical evidence that would otherwise not be available, the successful clearance of cases and the solution of crimes are always functions of the experience and judgment of the responsible officers. The objective in preparing this handbook was, therefore, to provide investigating officers a practical guide to techniques that will help them to fully realize the value of physical evidence, and the support that a criminalistics laboratory can provide.



Clarence M. Kelley  
Chief of Police  
Kansas City, Missouri

## PREFACE

The preparation of this handbook was made possible through a discretionary grant from the United States Department of Justice, Law Enforcement Assistance Administration, which has been administered by the Northwest Missouri Law Enforcement Assistance Council. It is part of a comprehensive program to expand and improve criminalistics operations in the Greater Kansas City Area. This program was conceived by the Council and has been actively supported by all its past and present members, as well as by members of the Board of Directors of the Regional Center for Criminal Justice.

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Midwest Research Institute in its capacity as general technical consultant to the Regional Criminalistics Laboratory, played a key role in the preparation of this book. MRI's efforts are gratefully acknowledged.

Special thanks are also due the staff of the Crime Laboratory Unit of the Kansas City, Missouri Police Department, and particularly to Sergeant Donald E. Lyon of that Unit, for the important assistance also rendered in this regard.

The general body of literature on criminalistics and crime scene search was drawn upon in writing this handbook. However, the following were of particular benefit:

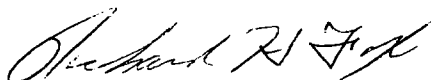
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## CHAPTER I

### INTRODUCTION

#### The Purpose of a Crime Laboratory

A crime laboratory is a scientific organization with the closely dedicated mission of aiding the process of criminal justice. It provides this aid by answering, or helping to answer, the vital questions of whether a crime has been committed; how and when it was committed; who committed it and, just as important, who could not have committed it. The crime laboratory seeks answers such as these through the scientific analyses of physical clue material collected primarily from the scenes of crimes or from suspects.

Not all crime laboratories have the same capabilities. Some can do much more than others. Laboratories also tend to emphasize and build up expertise in particular areas. The manner of collection of some types of physical evidence, powder residues from the hands of suspects, for example, will vary according to the type of test procedures the laboratory applies. Therefore, it is important that police investigators familiarize themselves with the capabilities of the crime laboratories supporting their jurisdictions, as well as with the requirements of the national forensic science laboratories. The necessary familiarity can be attained without extensive study or great expenditures of time.

Regardless of variances in capability, the basic missions of reducing or eliminating uncertainty in the criminal investigation and supplanting fact for supposition is common to all crime laboratories in the United States. (A national directory of these laboratories is included as Appendix B.)

- Physical clue material in and about the scene of a crime is highly fragile in the sense that the elements, time, inadvertent movement, improper handling and packaging and numerous other influences can reduce or destroy its evidentiary value. The legal and scientific standards concerning the collection and processing of physical evidence are rigid. Thus, mistakes can easily be made in processing the scene of a crime; but the more important fact is that mistakes can be easily avoided if sound procedures are followed.

Recent studies of the use of crime laboratory support have repeatedly shown the importance of police training in crime scene search to both the volume of use of a crime laboratory, and the involvement of the laboratory in the more serious crime cases. The proper means of processing a crime scene, marking and packaging physical evidence and transporting it to a crime laboratory require specialized training, however, of a nature that is within every police officer's ability to acquire. Scientific knowledge is not a prerequisite. What is required, in addition to procedural knowledge, is an appreciation of what could potentially be evidence, and what types of information the crime laboratory examiner might obtain from different physical clue material.