

# NIJ Sets Standards With Office Of Law Enforcement Standards

By Thomas J. Russell and Kirk D. Rice

The standards program of the National Institute of Justice (NIJ) was established to provide the criminal justice community, purchasers and manufacturers with information useful for the selection, procurement and evaluation of law enforcement, crime prevention and correctional equipment. The standards are prepared by the Office of Law Enforcement Standards (OLES) as part of NIJ's overall Law Enforcement and Corrections Standards and Testing Program, which includes developing standards and test protocols, equipment testing and test result publication. OLES is part of the National Institute of Standards and Technology (NIST), which is part of the Commerce Department's Technology Administration.

## OLES: 29 Years of Standard Bearing

OLES, formerly the Law Enforcement Standards Laboratory, was established as a matrix management organization in 1971 through an understanding between the departments of Justice and Commerce and was based on a 1967 recommendation from the President's Commission on Crime. NIJ is the primary sponsor of OLES projects, but the National Highway Traffic Safety Administration, the FBI, the Federal Aviation Administration, the Federal Bureau of Prisons, and the Office of Management and Budget also occasionally support projects.

NIST's mission is to promote U.S. economic growth by working with industry, universities and other government agencies to develop and apply technology, measurements and standards. Similarly, the mission of OLES is to apply science and technology to help its customers acquire high-quality resources. OLES focuses on the development of minimum performance standards, which are promulgated by NIJ as voluntary national standards. In addition, OLES:

- Develops methods for examining evidentiary materials;
- Develops standards for equipment and operating procedures;
- Develops standard reference materials; and
- Performs other scientific and engineering research, as required by NIJ.

OLES has published, mostly through NIJ, more than 200 standards, guides and technical reports during its 29 years. Studies and standards have focused on emergency vehicle warning systems, police clothing, components of intrusion alarm systems, physical security of door and window assemblies, metal detection systems, metal and explosive vapor detectors, arson accelerant detectors and narcotic test kits. OLES also developed standard reference materials for glass comparisons, reference collections of auto-mobile paints, synthetic fibers, gunpowder additives, and DNA identification and detection for forensic laboratories.

## Development and Usage of Standards

Working with NIJ, OLES identifies needed performance standards and develops a rank order for addressing solutions. In preparing the NIJ standards, OLES obtains input from many different sources. Standards from groups such as the American National Standards Institute, the American Society for Testing and Materials and numerous international standards organizations are examined for test procedures that may be appropriate. Federal specifications, military specifications, and standards developed by state and local governments also are evaluated. NIJ and OLES identify collaborators with the technical expertise to develop a new procedure only when it has been determined that existing test methods are inadequate or that no appropriate methods are available.

Before a standard is published, it is reviewed and evaluated by potential

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users, manufacturers, and government and private experts. This is to establish performance limits high enough to screen out inferior products, but not so high that no product will pass its tests, and to encourage manufacturers to market products that exceed the minimum requirements.

Two significant features are implicit in NIJ standards. First, because of their federal level of origin, NIJ standards can be used by any government entity, regardless of whether that entity has its own standards, with the assurance that they will be recognized and accepted by most vendors. Second, since the standards are prepared by NIST/OLES, an organization specifically attuned to criminal justice needs and procedures, NIJ standards are recognized and accepted by the criminal justice community as well.

Each NIJ performance standard provides assurance to users that the product it affects meets certain minimum acceptable performance levels. When using NIJ performance standards, it is advisable to specify in the procurement document that the vendor provide documentation that the product meets the standard.

## Stab-Resistant Body Armor

To address the increasing threat of knife attacks against correctional officers, NIJ directed OLES to develop a national voluntary performance standard for slash- and stab-resistant body armor. Correctional representatives on the Law Enforcement and Corrections Technology Advisory Council (LECTAC) were especially supportive of the initiative. The ballistic threat to law enforcement and corrections personnel is addressed through NIJ Standard-0101.03 (soon to be 0101.04), Ballistic Resistance of Police Body Armor. One particular threat category not covered by the Ballistic Resistance standard is that from sharp and edged weapons. The stab and slash threats posed by these weapons represent a primary threat to correctional officers and a secondary threat to police officers.

Research on this project has taken place through a collaborative effort between OLES, the U.S. Secret Service and the Police Scientific Development Branch (PSDB) in the United Kingdom. PSDB developed a stab test apparatus to accurately simulate the blow delivered by a knife-wielding assailant, as well as a method for assessing the relative sharpness of blades. A stab test rig has been installed at NIST/OLES and currently is being used to support the development of a standard.

Under this project, stab threats have been defined as two knife blades and one spike (ice pick), the latter being chosen specifically to reflect typical threats encountered in a correctional environment. Stab-resistance performance levels also have been defined in terms of stab energy. A stab test method also has been developed. It is described in a draft standard that has been circulated for comment and

review by members of LECTAC and the National Armor Advisory Board, a group consisting of representatives from the law enforcement and correctional communities, body armor manufacturers, fabric weavers, fiber producers and the government. There are plans to finalize the standard in the near future and to select a commercial test laboratory that would become certified to conduct stab testing as part of a formal body armor compliance test program. The standard and formal test programs are expected to go into effect later this year.

## Summary

The NIJ standards developed by OLES reflect broad user experience, scientific study and extensive product testing. This information is available to help the criminal justice community, including law enforcement, corrections

and forensic science, as well as the fire service, to establish a basis for their purchasing decisions. The ballistic body armor standard and the soon-to-be-published stab standard serve as illustrative examples of the benefits to these groups. In addition to the standards, OLES has several consumer guides, technical reports and other materials dealing with law enforcement and correctional equipment.

Inquiries and requests for further information should be addressed to: Office of Law Enforcement Standards, National Institute of Standards and Technology, 100 Bureau Drive, Stop 8102, Gaithersburg, MD 20899-8102, or e-mail: oles@nist.gov.

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