



B46 Conclusion of Validation Study of Commercially Available Field Test Kits for Common Drugs of Abuse

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The goals of this presentation are to discuss sensitivity, specificity, and reproducibility data for commercially available drug field test kits; to describe the effects of environmental conditions on the performance of field drug test kits; and to integrate information presented to decide upon test kit type most suitable for own agency.

This presentation will impact the forensic community by providing law enforcement agencies with data to enable them to select the test kits best suited to their needs. Information is provided with respect to the measured criteria as well as corollary observations regarding test kit quality control, handling safety, and color. Results of this study will be included in the Best Practices Guide provided by NFSTC to all interested parties.

The National Forensic Science Technology Center (NFSTC), as part of its Field Investigation Drug Officer (FIDO) program, has developed a comprehensive training program and quality assurance system that provides law enforcement with the resources necessary to perform preliminary identification of controlled substances utilizing field test kits. In order to provide information concerning test kit performance, NFSTC expanded the FIDO project to include a validation study of the test kits most frequently employed by law enforcement agencies. The NFSTC previously presented to the Academy preliminary results of this validation study in 2006. This presentation presents the results of some additional testing on the NarcoPouch®, NIK®, and NARK® II field test kits as well as the results of the entire validation study performed on the QuickCheck® test kits.

Kits included in this study are those manufactured by ODV Inc., Public Safety Inc., Sirchie Group, and the Lynn Peavey Company. In particular, the kits designed for presumptive identification of cocaine, methamphetamine, and heroin were assessed.

The results presented here include a narrower limit of detection (LOD) range than what was previously reported as well as the effects of environmental stress conditions on the test kits. Each kit type was subjected to dry heat, moist heat, refrigeration, or freezing temperatures for a period of two weeks.

Each sample was tested in duplicate with color assignment occurring after a one minute time interval. Colors were assigned as a numeric designation of hue, value, and chroma within the Munsell Color Chart System.

The results of this validation study will provide law enforcement agencies with data to enable them to select the test kits best suited to their needs. Information is provided with respect to the measured criteria as well as corollary observations regarding test kit quality control, handling safety, and color. Results of this study will be included in the Best Practices Guide provided by NFSTC to all interested parties.

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