



General Section – 2006

D40 Validation of Commercially Available Field Test Kits for Drugs of Abuse

Joan G. Ring, MS, Kathleen A. Savage, PhD*, and Kirk Grates, NFSTC, 7881 114th Avenue North, Largo, FL 33773; and Michael Healy, Manatee County Sheriff's Office, 515 11th Street, West, Bradenton, FL 34205*

This presentation will provide attendees with information regarding validation of commercially available field test kits for drugs of abuse which will allow them to make purchases that suit their purposes.

The National Forensic Science Technology Center (NFSTC), 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, this program has been expanded to include a validation study of the test kits most frequently employed by law enforcement. The test kits included in the validation study are those manufactured by ODV, NIK, and NARK II. In particular, the kits designed for presumptive identification of marijuana, cocaine salt, cocaine base, methamphetamine, and heroin were assessed. Sensitivity, specificity, and reproducibility were the criteria evaluated. Neat drug standards, neat cutting agents, samples of known percentages of drug standards mixed with common cutting agents, and street samples were tested. Each sample was run in duplicate with color assignment after a one minute time interval. Colors were represented by a numeric designation of hue, value, and chroma from the Munsell Color Chart System.

The results of this validation study provide law enforcement agencies with data to enable them to select 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 and conclusions of this study will be presented here and included in the Best Practices Guide provided by NFSTC to all interested parties.

Validation, Drugs of Abuse, Field Test Kits