SWGDRUG

Presentation to the

National Academies Committee on Identifying the Needs of the Forensic Sciences Community

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SWGDRUG

Scientific Working Group for the Analysis of Seized Drugs

Mission of SWGDRUG

The mission of SWGDRUG is to recommend minimum standards for the forensic examination of seized drugs and to seek their international acceptance.

SWGDRUG Core Committee

- DEA – Nelson Santos
- Secretariat – Scott Oulton (non-voting)
- FBI - Eileen Waninger
- ASCLD – Garth Glassburg
- NIST - Susan Ballou
- ASTM and NEAFS- Jack Mario
- Educator – Dr. Chris Tindall

SWGDRUG Core Committee

- CAC & NWAFS - Jerry Massetti
- MAFS - Richard Paulas
- MAAFS - Linda Jackson
- SAFS - Dr. Conrad Roberson
- SWAFS - Gary Chasteen
- South Africa - Tshepo Shole

SWGDRUG Core Committee

- Canada - Richard Laing
- Japan - Dr. Kishi Tohru
- United Kingdom - Dr. Sylvia Burns
- Australia - Catherine Quinn
- Germany - Dr. Udo Zerell
- ENFSI - Dr. Erkki Sippola
- UNODC - Dr. Iphigenia Naidis

SWGDRUG Process

- The SWGDRUG process is an international forensic science community endeavor
- The role of the core committee is to vote to accept or reject subcommittee recommendations
- All recommendations are released for public comment for a minimum of 60 days
- For a proposal to become an official recommendation, 3/4s of the full core committee must be present. 2/3s of those present must vote in the affirmative (YES) for a proposal to become a recommendation

SWGDRUG Documents

- **Recommendations**
  - Code of Professional Practice
  - Education and Training
  - Methods of Analysis
  - Quality Assurance
- **Supplemental Documents**
  - A Code of Professional Practice for Drug Analyst
  - Validation on Analytical Methods

Supplemental Documents

- **Adopted by the Core Committee in August 2005**
  - The supplementary documents are not SWGDRUG recommendations
  - Supplementary documents are intended to be a resource for those responsible for implementing SWGDRUG recommendations
  - These documents are not inclusive and SWGDRUG recognizes that there are many ways of implementing the recommendations
  - These are living documents and as such, SWGDRUG invites comments. Send your comments to swgdrug@hotmail.com

Code of Professional Practice

- Document on Professional Practice should exist for every organization (Code of Conduct)
- Provides the framework of ethical values and scientific and legal obligations within which the analysts should operate
  - Professional Conduct
  - Casework
  - Reporting

Education and Training

- After 2005, analyst entering the profession should have a bachelor's degree or equivalent in a natural science
  - Program shall include classes in general, organic and analytical chemistry
- Analyst prior to 2005 must have had at least 5 years experience in drug analysis.
- Continuing Professional Development
  - 20 contact hours/year

Education and Training

- **Initial Training Requirements**
  - **Documented program that focuses of the development of practical and theoretical knowledge, skills and abilities necessary for drug analysis**
    - **Stds of Performance**
    - **Supervised Casework**
    - **Competency Testing**
    - **5 minimum topic areas**

Methods of Analysis

- **Sampling for Qualitative Analysis**
  - Answer questions about the population by examining a portion
  - Statistically based sampling used when inferences are made about the entire populations
  - Non- statistically based samplings answers questions related to the presence of a drug, or to address statutory enforcement levels
  - No inference is made to the entire population

Methods of Analysis

- Analytical techniques are categorized by their discriminating power. “A” techniques being the most discriminating, “C” being the least
- All techniques must be validated
- Identification criteria require the use of at least one “A” and one other technique.
- All “A” test must have reviewable data
- Second test should be performed on a separate portion of the sample if sample size permits

Methods of Analysis

- If no “A” technique used, then 3 techniques should be employed with at least two being from category “B”
- B techniques must be un-correlated
- B techniques must have reviewable data
- Two separate samplings should be used
- Marijuana treated differently

Botanical Materials Addition

- Adopted by the Core Committee in August 2005
- Allows a properly trained/competent/expert witness in botanical determinations to identify plant material based on documented morphological characteristics
- Botanical competence in this context applies to those examiners recognized as professional botanists or those assessed to be competent by such
- Internationally, this practice is recognized as conforming to existing standards

Quality Assurance

- **General Practices** (14 areas)
  - Documented Quality System
  - Personnel
    - Designated Personnel with Job Descriptions i.e., Quality Assurance Manager, Analyst, etc.;
    - Qualifications and education for each position
    - Initial Training Requirements
    - Documented training program
    - Maintenance of Competency
    - Contact hours through training

Quality Assurance

- Physical Plant
- Evidence Control
  - Integrity of evidence
  - Storage of evidence
- Analytical Procedures
  - Validated and documented procedures
  - Verification of stds.

Quality Assurance

- Instrument/Equipment Performance
  - Monitored and documented
- Chemical and Reagents
  - Checked prior to use
- Casework Documentation
  - Allow for peer review
  - Report writing
  - Case review –tech and admin.
- Proficiency and Competency testing
- Method Validation and verification
- Laboratory Audits – annually

Quality Assurance

- Deficiency of Analysis
  - Documented policy
- Health and Safety
- Additional Documentation

Quality Assurance Validation of Methods

- Introduction
- General Validation Plan
  - Performance Characteristics
  - Quality Control – acceptance criteria
  - References
  - Supplemental Document

Future Recommendations

- Uncertainty of Measurements
- Report Writing
- Quantitation
- Analysis of precursors and inorganics

Needs of the Forensic Drug Chemistry Community

- Uncertainty of Measurement
  - Legal issues?
  - What statistical approach works best?
  - When to apply and report?
- Reporting
  - What should a report say?
  - Legal, Enforcement, Intelligence, etc.

Resources and Information

WEBSITE: SWGDRUG.ORG

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