

# **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 & NWAFFS - Jerry Massetti**
- **MAFFS - Richard Paulas**
- **MAAFFS - Linda Jackson**
- **SAFFS - Dr. Conrad Roberson**
- **SWAFFS - 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

- n The SWGDRUG process is an international forensic science community endeavor**
- n The role of the core committee is to vote to accept or reject subcommittee recommendations**
- n All recommendations are released for public comment for a minimum of 60 days**
- n 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

## n Recommendations

- n Code of Professional Practice
- n Education and Training
- n Methods of Analysis
- n Quality Assurance

## n Supplemental Documents

- n A Code of Professional Practice for Drug Analyst
- n Validation on Analytical Methods



# Supplemental Documents

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

# Code of Professional Practice

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

# Education and Training

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

# Education and Training

## n Initial Training Requirements

n Documented program that focuses of the development of practical and theoretical knowledge, skills and abilities necessary for drug analysis

n Stds of Performance

n Supervised Casework

n Competency Testing

n 5 minimum topic areas

# Methods of Analysis

## n Sampling for Qualitative Analysis

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

# Methods of Analysis

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

# Methods of Analysis

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

# Botanical Materials Addition

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



# Quality Assurance

## n **General Practices** ( 14 areas)

n Documented Quality System

n Personnel

n Designated Personnel with Job Descriptions i.e., Quality Assurance Manager, Analyst, etc.;

n Qualifications and education for each position

n Initial Training Requirements

n Documented training program

n Maintenance of Competency

n Contact hours through training

# Quality Assurance

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

# Quality Assurance

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

# Quality Assurance

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

# Quality Assurance Validation of Methods

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

# Future Recommendations

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

# Needs of the Forensic Drug Chemistry Community

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

# **Resources and Information**

**WEBSITE: [SWGDRUG.ORG](http://SWGDRUG.ORG)**

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