# History for the Psilocyn/Psilocybin Mushrooms SOP

| Revision # | Issue or review date | History | Author or Reviewer |
|---|---|---|---|
| 0 | 7/22/02 | Original Issue | D.C. Sincerbeaux |



**Approval**

Technical Leader _____ Date: 7-19-02
*David Sincerbeaux*

QA/QC Manager _____ Date: 7-23-02
*Rick Groff*

- No verification required - method has been in use for some time
- Contains all the required sections
- written to the appropriate level of detail

RLG 7-23-02

# Psilocyn/Psilocybin Mushrooms
# Standard Operating Procedures

**1.0.0 Background**

Psilocyn and psilocybin are related tryptamines that are found in many species of mushrooms. The mushrooms have been used in religious ceremonies for at least 3000 years by the native peoples of Mexico and Central America. Psilocyn and psilocybin are schedule one hallucinogens. More information is available through the "*Drug Identification Bible 2002".*

**2.0.0 Scope**

The following procedures are used to identify Psilocyn and or psilocybin. Whenever possible, two different tests, and two different sampling events will be employed in confirming the presence of controlled substances. One of the tests must provide structural information, i.e. either MS, NMR, or FTIR.

**3.0.0 Equipment and Reagents**

The following equipment can be used to identify the analytes of interest.

3.1.0 A GC/MS and appropriate analytical software. Reference GC/MS SOP.

3.2.0 Reagent grade solvents, methanol and acetone.

**4.0.0 Color Spot Test**

4.1.0 "Weber test"

4.1.1 Grind mushroom sample with mortar and pestle.

4.1.2 Add powdered sample to well of spot plate. Add 1% Fast blue BB solution. Should turn orange-red within a couple of minutes.

4.1.3 Remove some of the liquid to another well and then add a drop of concentrated HCl. A positive test is one that turns a blue-green color.

**5.0.0 GC/MS Sample Preparation and Analysis**

3.1.0 Extraction.

3.1.1 Grind up sample with mortar and pestle.

3.1.2 Place approximately 0.25 grams of sample into a test tube, add 2-3 mls of methanol, cap, shake, and let stand for at least 30 minutes. **NOTE** At this stage the methanolic extract may be injected into the GC/MS.

3.1.3 Centrifuge and decant solution into clean test tube. Cap and place into freezer for at least one hour.

3.1.4 Remove from freezer and immediately add equal volume of acetone and mix.

3.1.5 Centrifuge, decant, and concentrate (1ml) supernatant.

3.2.0 Analysis.

3.2.1 Run samples on GC/MS using a split or splitless data acquisition method depending on the sensitivity of the instrument.

3.2.2 Compare with standard of either psilocyn or psilocybin. NOTE psilocybin breaks down into psilocyn in the hot injection port of a GC.

3.3.0 Conclusions and Reporting.

3.3.1 Confirmation. The retention time must be within 0.04 min of a valid scan of the standard and the MS spectra must match. If both conditions are satisfied then confirmation can be reported as "Contains psilocyn and/or psilocybin".

## 4.0.0 Thin Layer Chromatography

If differentiation of psilocyn and psilocybin is required then a T1 system (10mls methanol + 7 drops of NH4OH), developed with PDMAB, works well.