Name of Procedure:

Preliminary Tests
p-Dimethylaminobenzaldehyde Reagent (PDMAB)

Suggested Uses:

The PDMAB color reagent consists of filter paper soaked in a PDMAB/methanol solution. Indoles react to give positive color reactions in less than 30 seconds. Primary aromatic amines undergo catalyzed condensation reactions with PDMAB to form yellow-orange imine compounds. Carbamates also react with the PDMAB reagent.

Apparatus Needed to Perform Procedure Including Preparation of Reagent:

Fume hood
Gloves
Eye protection
Laboratory coat
Pipet with bulb
Graduated cylinder
50ml beaker
Glass stirring rod
p-Dimethylaminobenzaldehyde
Methanol
Filter paper
Wide mouth bottle with top
Hydrochloric acid
Funnel
Reagent bottle
Porcelain spot plate
Spatula

Formula for Preparing Reagent:

1. Weigh out 1.0 gram of PDMAB.

2. Dissolve in 100 milliliters of methanol.

3. Pour into a large beaker or porcelain pan.

Formula for Preparing Reagent (continued):

4. Soak the filter paper in the solution.

5. Remove the filter paper and allow to dry completely.

6. Cut filter paper into 1 inch squares (approximate).

7. Store PDMAB paper in a wide mouth bottle with top.

8. Pour concentrated hydrochloric acid into a seaprate reagent bottle.

9. Properly label reagent bottles.

Quality Control Check:

A quality control check of this reagent will be performed using a known standard of LSD and following the application procedure listed below.

Expiration Date of Chemical Reagent:

No expiration date. Reagents need to be properly contained in a sealed container and stored in a cool place.

Application of Procedure on Evidence:

1. Place a small amount (approximately 0.1mg) of sample on a piece of PDMAB paper.

2. Press the sample onto the paper with a spatula.

3. Place a drop of methanol on the sample spot and allow the methanol to dry.

4. Add hydrochloric acid to the filter paper.

5. Observe the color formation.

6. In some cases, (ie. LSD), the test material is dissolved in solvent, then added to the PDMAB paper. A drop of concentrated hydrochloric acid is the added to the paper to develop the color.

Application of Procedure on Evidence (continued):

7. Record results.

Safety Concerns:

Always wear eye protection, gloves and a laboratory coat when preparing this reagent.

Eye protection and a laboratory coat should be worn when using this reagent for color tests.

Concentrated hydrochloric acid is a strong oxidizing agent and corrosive.

Literature References:

Feigl, Fritz, **Spot Tests in Organic Analysis**, Elsevier Publishing Company, 1960.

Moffat, A. C., ed., **Clarke's Isolation and Identification of Drugs**, 2nd Ed., Pharmaceutical Press, London, 1986.