

**Name of Procedure:**

Preliminary Tests  
Koppanyi Reagent

**Suggested Uses:**

The Koppanyi reagent consists of filter paper treated with (soaked in) cobalt acetate, methanol and glacial acetic acid and a solution of 5% isopropylamine in methanol. Barbiturates (5,5-disubstituted malonylureas) and other compounds will produce a red-violet color formation in less than 30 seconds. Refer to pages 631-649, "Spot Tests: A Color Chart Reference for Forensic Chemists", (see **Literature References**) for color formations with various other drugs.

**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  
Filter paper  
Scissors  
Glacial acetic acid  
Cobalt acetate  
Methanol  
Wide mouth bottle with top  
Funnel  
Reagent bottle  
Porcelain spot plate  
Spatula

**Formula for Preparing Reagent:**

1. Dissolve 0.1 gram of cobalt acetate in 100 milliliters of methanol.
2. Add 0.2 milliliter of glacial acetic acid.
3. Soak filter paper in the solution and allow to completely dry.
4. Cut filter paper into approximately 1 inch squares.
5. Store filter paper in a wide mouth bottle with top.
6. Make a separate solution of 5% isopropylamine in methanol.
7. Pour into reagent bottle.
8. Properly label reagent bottles.

**Quality Control Check:**

A quality control check of this reagent will be performed using a known standard of a barbiturate 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 0.1 milligram) of sample on a piece of the Koppányi paper.
2. Press the sample into the paper well with a spatula.

**Application of Procedure on Evidence (Continued):**

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3. Place a drop of 5% isopropylamine solution on the edge of the Koppanyi paper and allow the drop to meet the sample.
4. Observe the color produced.
5. 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.

**Literature References:**

Butler, William P., **Methods of Analysis**, IRS publication #341, December 1966, p.106.

Johns, S.H., "Spot Tests: A Color Chart Reference for Forensic Chemists", **Journal of Forensic Science**, July, 1979, pp. 631-649.

This procedure has been used in the Drug Chemistry Section since 1971.