

**Name of Procedure:**

Preliminary Tests  
Cobalt Thiocyanate Reagent

**Suggested Uses:**

The Cobalt Thiocyanate reagent consists of a solution of Cobalt thiocyanate. This reagent reacts with some secondary and tertiary amines and other alkaloids to produce a blue color.

**Apparatus Needed to Perform Procedure Including Preparation of Reagent:**

Fume hood  
Gloves  
Eye protection  
Laboratory coat  
Pipet with bulb  
Graduated cylinder  
50ml beaker  
Cobaltous thiocyanate  
Water  
Glass stirring rod  
Funnel  
Reagent bottle  
Porcelain spot plate  
Spatula

**Formula for Preparing Reagent:**

1. Measure out 2.0 grams of Cobaltous thiocyanate.
2. Dissolve in 100 milliliters of water.
3. Pour into a reagent bottle.
4. Properly label reagent bottle.

**Formula for Preparing Reagent (continued):**

**Alternate Method:**

1. Weigh out 0.4 gram of ammonium thiocyanate.
2. Add ammonium thiocyanate to 25 milliliters of water and dissolve.
3. Weigh out 0.7 gram of cobalt acetate.
4. Dissolve the cobalt acetate in the solution of ammonium thiocyanate.
5. Pour into a reagent bottle.
6. Properly label reagent bottle.

**Quality Control Check:**

A quality control check of this reagent will be performed using a known standard of cocaine 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 1-2 drops of the reagent into a clean well of a spot plate.
2. With a spatula, add approximately 0.1 milligram of the unknown powder/tablet to the reagent in the spot plate.
3. Observe the color produced.
4. Record results.

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**Safety Concerns:**

Always wear eye protection and laboratory coat when preparing this reagent. 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.136.

Alternate Method Used by Western Regional Laboratory since 1971.