

Name of Procedure:

Preliminary Tests
Ferric Chloride Reagent

Suggested Uses:

The ferric chloride reagent consists of a solution of ferric chloride in water. This reagent reacts with phenols, enols and other functional groups to give colored solutions in less than 30 seconds. Refer to page 133, **Clarke's Isolation and Identification of Drugs** (see **Literature References**) for color formations of various 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
Funnel
Reagent bottle
Porcelain spot plate
Spatula
Ferric chloride
Water

Formula for Preparing Reagent:

1. Measure out 1.5 grams of ferric chloride.
2. Dissolve ferric chloride in 29.0 milliliters of water.
3. Pour solution into a reagent bottle.
4. Properly label reagent bottle.

Quality Control Check:

A quality control check of this reagent will be performed using a known standard of acetaminophen 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.

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:

Moffat, A. C., ed., **Clarke's Isolation and Identification of Drugs**, 2nd Ed., Pharmaceutical Press, London, 1986, p. 133.

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