

DRUG CHEMISTRY SECTION TECHNICAL PROCEDURE MANUAL		
Procedure B-06	Polarized Light Microscopy 0.05N Hydrochloric Acid Reagent	
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Name of Procedure:

Polarized Light Microscopy
0.05N Hydrochloric Acid Reagent

Suggested Uses:

Microcrystalline test for excipients and diluents.

Apparatus Needed To Perform Procedure Including Preparation of Reagent:

Polarized Light Microscope
Fume hood
Gloves
Eye protection
Laboratory coat
Spatula
Microscope slides
Graduated cylinder
Glass stirring rod
Glass beaker
Reagent bottle
Concentrated hydrochloric acid
Distilled water

Quality Control Check:

Check the reagent with a known excipient or diluent standard using the application procedure listed below.

Formula for Preparing Reagent:

1. Measure out 250 milliliters of water and place in a beaker.
2. Measure out 1.0 milliliter of concentrated hydrochloric acid and combine it with the 250 milliliters of water.
3. Pour solution into a reagent bottle.
4. Properly label reagent bottle.

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Expiration Date of Chemical Reagent:

The reagent can be used until depletion provided it is stored in an airtight reagent bottle.

Application of Procedure on Evidence:

1. Place a small portion of the crushed substance on a microscope slide.
2. Place one drop of the 0.05N hydrochloric acid on the substance.
3. Immediately view specimen for any effervescence, solubility characteristics, crystal shape(s) and color(s) using the crossed and/or uncrossed polars of the polarized light microscope.
4. **Option:** Steps 2 and 3 may be omitted, viewing specimen dry.
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 the microcrystalline test.

Always dispose of used microscope slides in a broken glass container.

Hydrochloric acid is a strong oxidizing agent and corrosive.

Literature References:

Developed by Chemist J.R. Daniel of the North Carolina State Bureau of Investigation Drug Chemistry Laboratory, in use in the laboratory since 1975.