

DRUG CHEMISTRY SECTION TECHNICAL PROCEDURE MANUAL		
Procedure A-06	Preliminary Tests Potassium Permanganate Reagent	
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**Name of Procedure:**

Preliminary Tests  
Potassium Permanganate Reagent

**Suggested Uses:**

The Potassium Permanganate reagent consists of a solution (purple) of potassium permanganate in water. Compounds containing reactive double bonds and other functional groups react to form a brown color.

**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  
Potassium permanganate  
Funnel  
Reagent bottle  
Porcelain spot plate  
Spatula  
Water  
Culture tube (6 X 50mm)

**Formula for Preparing Reagent:**

1. Weigh out 0.3 gram of potassium permanganate.
2. Dissolve in 30 milliliters water.
3. Pour into a reagent bottle.
4. Properly label reagent bottle.

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### **Quality Control Check:**

A quality control check of this reagent will be performed using a known standard of an opiate 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 approximately 0.1 milligram sample in a culture tube (6 X 50mm) with a spatula.
2. Add 1-2 drops of potassium permanganate solution.
3. Observe for discoloration of potassium permanganate reagent color.
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 Edition, Pharmaceutical Press, London, 1986, p. 1170.

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