

10. What metals will interfere the most with Pb in this method?

Experiment 11: Lead Iodide Determinations

SYNOPSIS The presence of lead is determined by the development of distinctive lead iodide crystals.

READINGS page 293 in Critical Reviews.

MATERIALS

Microscope
Microscope slide

SOLUTIONS

KI solid
dilute nitric acid.

Instructions

1. Mix an aqueous test solution with dilute nitric acid to create a slightly acidic medium.
2. Add a few drops to a microscope slide.
3. Place a small crystal of KI at the edge of the drop and allow it to dissolve and diffuse into the solution.
4. The presence of lead is determined by the crystallization of lead iodide as bright yellow hexagonal plates.

REPORT

1. What is the chemistry of the measurement? (Reactions).
2. What causes the color yellow?
3. What species could interfere with this measurement?
4. Why is this a spot test and not a quantitative analysis?