

FA SOP-18 Magnesium Smoking Method

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A. Purpose:

1. Magnesium smoking is a technique used to reduce the glare of a shiny object by lightly coating the surface with fine magnesium residue.

B. Responsibility:

1. Assigned Unit staff

C. Safety:

1. The examiner must wear eye protection and conduct this procedure in an empty, ventilated fume hood.
2. The use of gloves and other personal protective devices is at the discretion of the examiner.
3. Due to the brightness of the flame, do not look directly into the burning magnesium.
4. There is a fire extinguisher located near the fume hood.
5. In case of fire, follow the guidelines outlined in GL 2, Safety Manual.

D. Procedure:

1. Light short pieces of magnesium ribbon with a flame.
2. Pass the object over the smoke that is being generated by the burning magnesium.
3. If the object collects too much residue, wipe the residue off and repeat the process.
4. The coating should be light enough to see the color of the item through the coating of residue.
5. Document the condition of the item after smoking. Photos, sketches, or written notes are acceptable.
6. Proceed with making observations and comparative examinations.

E. Equipment:

1. Magnesium ribbon tape
2. Flame source (such as a lighter)
3. Hemostats or forceps
4. Fume hood

F. References:

1. *Smoking a Bullet* by R. Janneli and G. Geyer. AFTE Journal (1977). Vol. 9, No. 2. Pages 128-130.
2. General Laboratory SOP 2, Safety Manual