

Physical Metallurgy & Metallography Laboratory

Laboratory Report

Experiment - 4

Cold and hot mounting of specimens

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Cold Mounting:-

Procedure:-

1. First take the mounting cups.
2. Spray the mounting cups with both parts
3. Take the sample specimen and it should be cleaned.
4. Place the specimen in the mounting cup.

5. place the specimen exactly at the middle of mounting cup.
6. Take the epoxy resin and 50 grams of the ^{acacia's} liquid and 6 grams of Aka-cure, slow
7. Take the all in beaker, and mix it well slowly in 3 minutes.
8. pour the resin the mounting cup
9. It will take time 8 to 24 hours
10. After that take ^{remove} mounting cups from resin.

Precaution:-

1. wear proper apron and gloves
2. Mix correct ratio of epoxy resin carefully

Hot - Mounting

Procedure:-

1. Take the first Automatic hot mounting presses.
2. Check the heating, force and cooling settings are correct.
3. Take the sample and keep it on the stage.
4. place the sample exactly at the middle of the stage you want to polish pointing down.
5. Press down arrow it will go lower the sample.
6. keep the funnel on the stage - pour the clau test with help of big scoop of resin.
7. For a second sample use this stage. Apply glue stick on the stage.
8. Apply Antistick to the side of one stage.

9. keep it on the first sample.
10. Again pour the clavo fast with help of big scoop of resin.
11. Now tight the cap turn anticlock until you hear a click. Tighten clockwise.
12. Once tight, loosen by $\frac{1}{4}$ turn anticlockwise.
13. See the setting carefully. keep the temperature 180°C and press the start button.
14. The hot mounting is completed if both lights are off.
15. Take the sample out.

Precaution:-

1. Avoid creation of dust.
2. do not breath any dust by the mounting media.

Cold Mounting:-

Advantages:-

1. cold mounting is used for specimens that may be damaged by heat or pressure.
2. The heat generation can be controlled by the use of ice or cool air blow setting.

Disadvantages:-

1. Time taken process approximately 8-24 hours

Hot Mounting

advantages:-

1. The requirements include less expensive, uniform size and shape.
2. Hot mounting takes place under pressure in a mounting press, where the specimen is placed in a cylinder together.

disadvantages

1. Glue makes the sample opaque
2. Sample can only be partially rotated.

Environmental hazards mounting resin!

Epoxy resins

Acrylic resins

Methyl-Methacrylate cold mounting resin

polyester Cold mounting resin