

SOIL LAB

I. Purpose:

The purpose of this lab is to compare soil samples in an attempt to differentiate or match them.

II. Materials:

Chemicals

Soil

Equipment

UV light source
 Hammer or mallet
 Micro-scope
 Weighing Dish
 Balance
 Slides

III. Procedure:

Physical Observation

First dry the soil samples; it is important that soil is observed dry. Now powder the soil, be sure to note any foreign objects as well as rocks, roots, or grass which are present. Also note the textures, shapes, and colors as compared to each other.

U-V Observation

Spread the soil out as thin as possible on a non-florescent surface. Now run over the soil with a U-V light source. **(CAUTION: U-V light is very harmful to eyes)**. Note the shape, size, number, and identity (if possible) of any material that fluoresces in the sample.

Microscopic Observation

Place a small amount of each soil on separate slides. Try to spread the dirt in the same proportion on each slide. Observe the samples only at 10x, anything stronger would be useless for soil. Note the textures, shapes, and colors as compared to each other. Do this observation with three samples from each soil sample.

[Warning: Place only a small amount of sample on a slide at a time. Be sure the dirt is placed only in the center of the slide so as not to allow it to fall in the microscope.]

IV. Observations:

Physical Observation

Sample A

Sample B

U-V Observation

Sample A

Sample B

Microscopic Observation

Sample A

Sample B

1st Slides

2nd Slides

3rd Slides

VII. Conclusion:

What did you learn?

What would you do different if you had the chance to do this lab over?/What warnings would you give someone else who has to do this lab?

Where is this kind of lab, data, and/or experiment used in the real world?