

Luster, Color and Streak Lab



Background

In your endeavor to identify various mineral samples you may investigate many different physical properties. The first two most obvious properties appeal to our eyes. They are color and luster. **Color** is *the visible light spectrum radiation reflected from a mineral*; whereas **luster** is *the character or quality of light reflected by a mineral*. Color can be tested by simply looking at the sample to determine its color; white, black, green, clear, etc. Luster can be determined by looking at the sample to determine if the mineral is metallic in appearance (looks like a chunk of metal) or non-metallic (doesn't look like a chunk of metal). If the sample is determined to be non-metallic there are various other classifications that it can be given such as resinous, vitreous (glassy), pearly, or earthy (dull). Color is one of the least accurate diagnostic of the physical properties of minerals but *the color of the powdered form of the mineral* can be much more helpful. We call that property the **streak**. The streak can be found by grinding a small amount of the mineral sample into a powder on a porcelain streak plate to determine the color of the powder. Using these three diagnostic properties coupled with other properties already investigated in the previous labs we can more correctly identify the mineral samples.

Materials Needed

- Various mineral samples used for investigation
- streak plate
- hand lens (optional)

Procedure

Carefully look at and examine the various mineral samples provided to you by your teacher.

1. Determine the luster of the specimen. Determine whether it is metallic or non-metallic. If it is non-metallic then determine its sub category such as resinous, vitreous (glassy), pearly, or earthy (dull).
2. Describe the color. Use the most accurate color description you can. You may want to use the hand lens to aide you in your description.
3. Using the streak plate provided in the mineral identification kit take your sample and scratch it against the white streak plate only once; if you see a color streak other than white record it in the data table. If the powder is about the same color as the white streak plate then scratch it against the dark colored streak plate and record the color of the streak in the data table. You may want to use the hand lens to aide you in your description.

Hint: *some minerals will not leave a mark because they are harder than the streak plate. If this is the case simply write "none" in the data table under Streak.*

4. Using your mineral identification key and the three properties investigated in today's activity come up with your best guess as to the name of the mineral. Record that in the data table under the heading of Name.

Luster, Color and Streak Lab



Data Table

Number	Luster	Color	Streak	Name (best guess)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

