

Physical and chemical properties



Pre Lab Questions: (4pts.)

- What are the learning goals of this experiment? The goals are to investigate the chemical properties of pure chemical substance and to investigate the physical properties of pure substances.
- Write two examples each of physical and chemical properties. Physical – Color, Odor, hardness, density, melting point, boiling point Chemical – heat of combustion, reactivity, pH,
- What happens if you heat a solution of chemicals in test tube facing towards you?

How would you avoid inhalation of chemical vapor during heating in a test tube? It could splat on face and burn you. The best way to avoid inhaling vapor is to either wear a mask or don't breathe directly in the vapors while the substances is burning.

How would you take care of itching eyelids or body parts caused by the contamination of 6M HCl? Wash your eyes with cold water immediately and if get any worse call 911.

Title: Physical and Chemical Properties**Procedure: (3pts.)**

- The first thing that must be done is to half fill one well of 24-well plate with 6M HCL and half filled a second well of the 24-well plate with 6M NaOH.
- The second thing to do is to place 4 smalls' test tubes into wells of the 24 well plate. Than place a small amounts of the substances into the tube that needs to be tested in each of the four micro test tube.
- In the first tube, watch and record color and odor

The next thing lights the burner and grab the test tube with the holder. Next heat the sample by slowly moving it just above the flame. Watch the effect of the substance by the heat. Allow cooling before storing.

For the second tube 1. Add enough cold water at least ? about the sample and stir with the rod and watch what happens. Light the burner and grasp the test tube with the holder and heat the sample by slowly moving the tube about the flame. Use the ? cm of red and blue litmus paper.

- Allow the solution to cool and stir with the rod and transfer a drop of the solution onto a piece of litmus paper.
- For the third tube Just add a few pipet drops of HCL to the sample and stir.
- Fourth test tube- just add a few piped drops of NaOH to the sample. Stir and record
- Clean up all four test tube and repeat steps 2 through 6.

Questions: Answer the questions briefly as shown in page 110 (3pts.)

- Yes I did. I saw heat of combustion in about every chemical I test today.
- The evidence I saw was mainly copper. It had the highest reactivity out of any substance I used.
- Reactivity of any substance with cooper and heat combustion of substrates.
- Physical, physical, physical, and chemical
- physical, chemical, physical, physical , physical , chemical
- I would re heat the solution to give me a physical change.