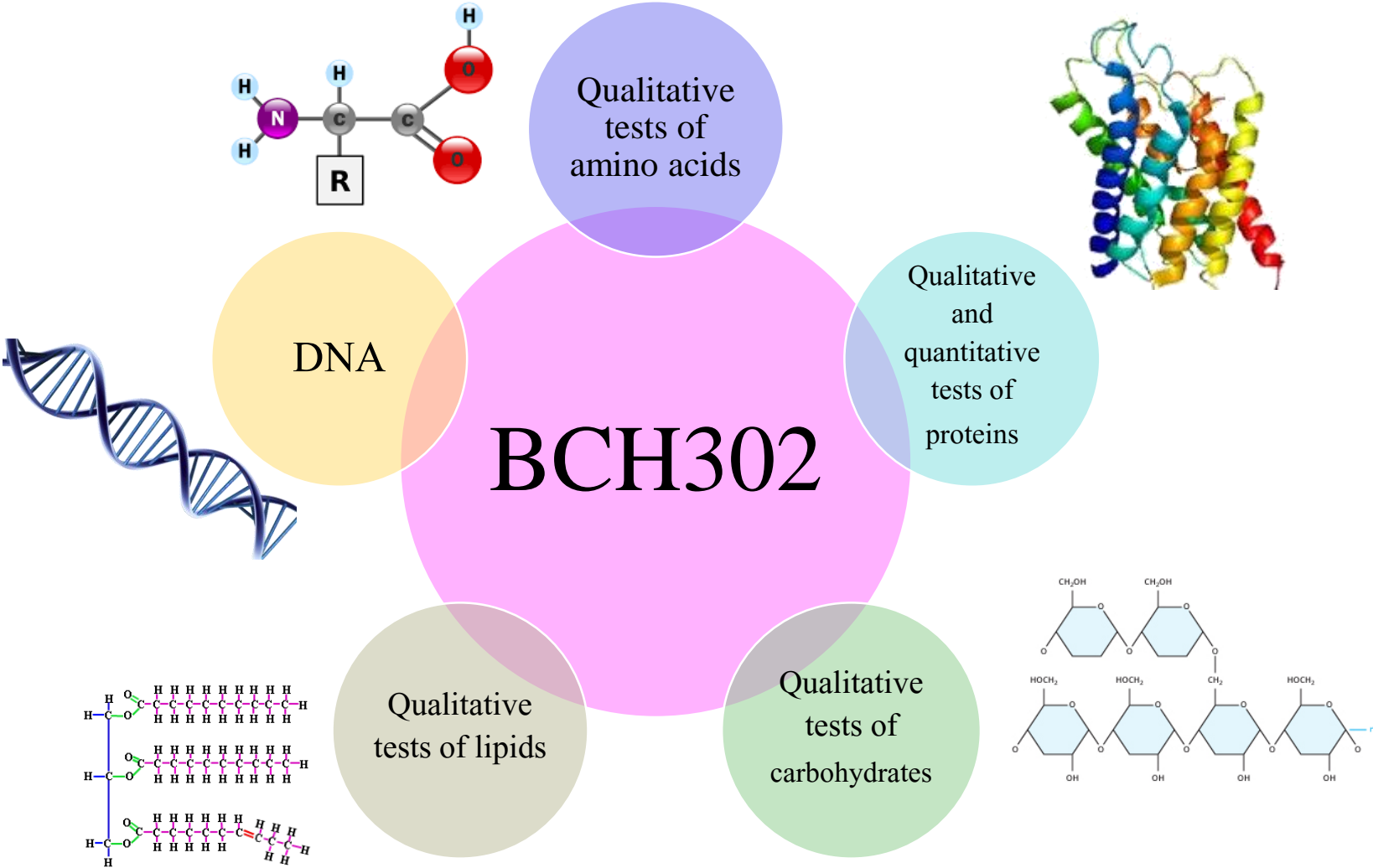


BCH 302

BCH302 [Practical]

Outline:

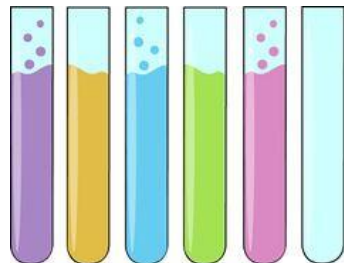


Types of assay:

Assays

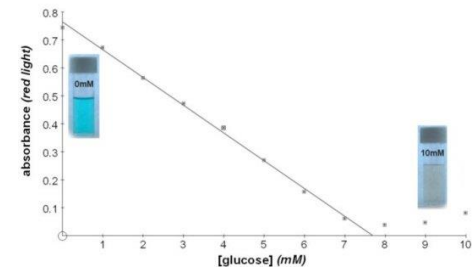
Qualitative assays

Determine if specific substance is there or not, by color or some other quality.



Quantitative assays

Determine the concentration of a substance.



Writing a Report:

1. **Cover page:** Title, course number, student name.
2. **Introduction:** In this part you discuss the background that will help to understand your topic.
3. **Objectives.**
4. **Materials and method:** As lab sheet.
5. **Principle.**
6. **Results:** You should report all your result that you get from your experiment. Any tables, figures or calculation.
7. **Discussion:** You must write a description and reasons for why you get your results.
8. **Questions.**
9. **References.**



General Laboratory Safety

Safe working protects:

- You.
- Other lab workers and visitors.
- Your work.



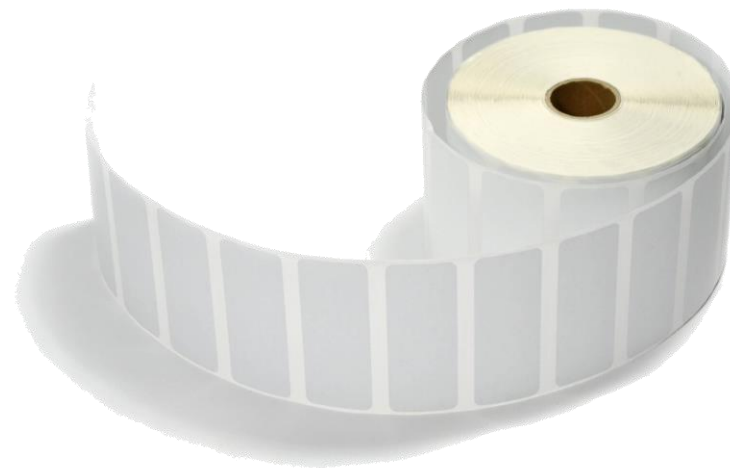
General consideration:

- Never **eat, drink** or chew gum in the lab.
- Do **not** taste , smell or touch any chemical.
- Tell your instructor about any accident .
- Tie your hair before doing an experiment.
- Closed-toed shoes should be worn at all times.
- Wash your **hands** with soap after an experiment.
- You must know all exits in your lab, eye washer, and fire extinguisher, first aid kit.
- Do **not** touch any electrical sources .



Before starting :

- Before start working, be sure to **label** the glassware.
- Glassware should be **clean** before using.



After work:

- After finishing the experiment turn off all the equipments, clean your work bench.
- **Glassware must be cleaned and kept back at the proper place.**



Personal Protective Equipment :



- Place your bag in the correct area.



- Lab coat should be worn all the time in the lab.

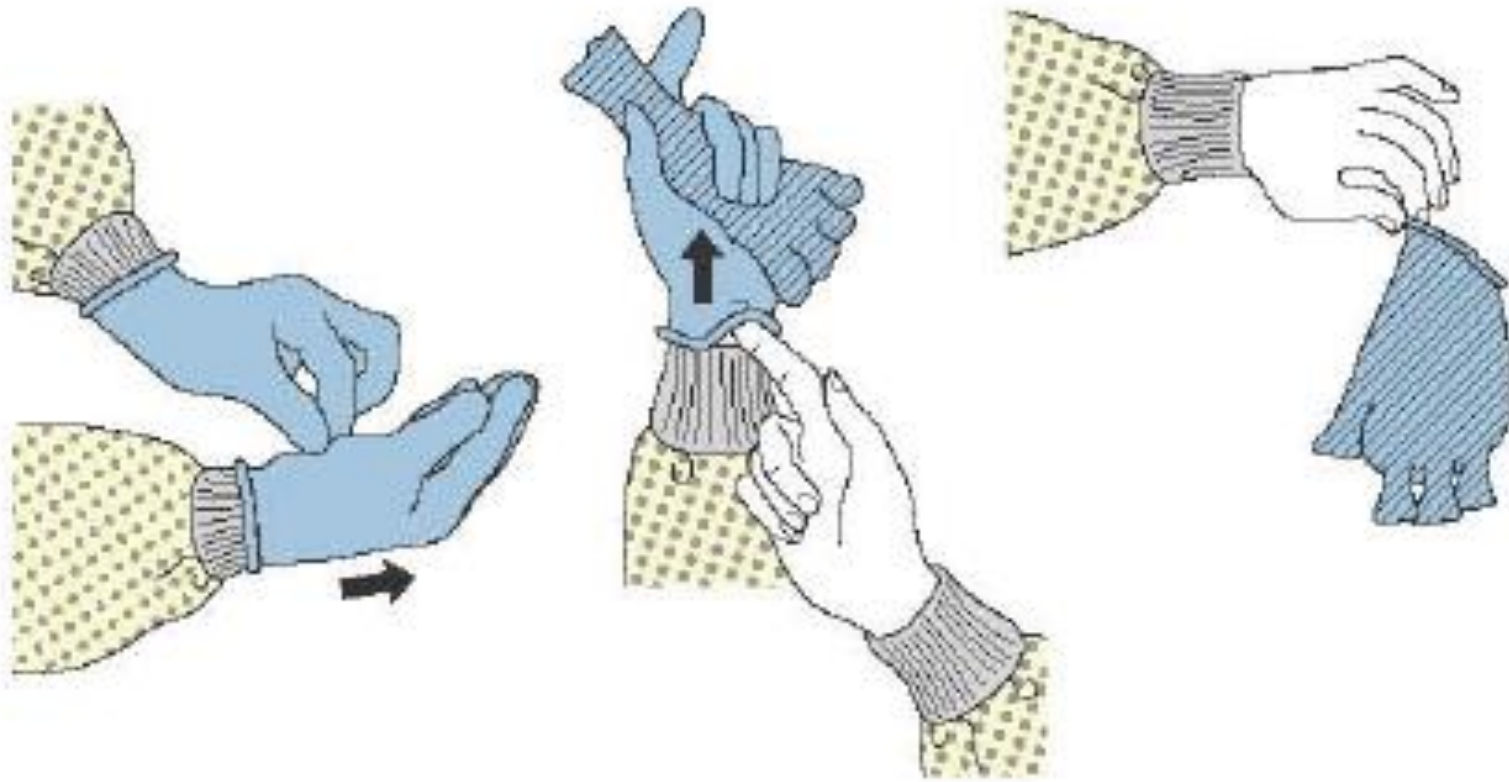


- Protective gloves should be worn when handling hazardous materials.



- Protective glasses should be worn when using hazard chemicals.

How to remove gloves?



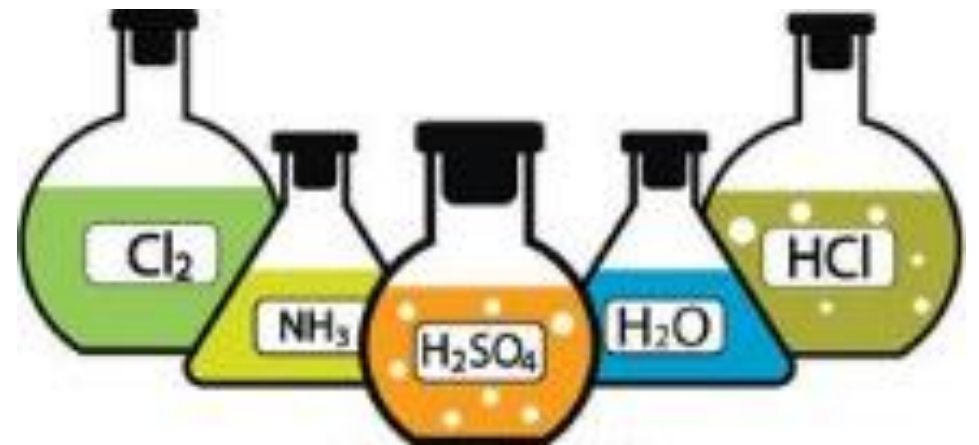
Dealing with chemicals:

- Consider all chemicals to be hazardous.
- Know what chemicals you are using and notice the **hazard symbols**.
- Carefully **read the label** twice before taking anything from a bottle.
- **Never point** a test tube that you are heating at yourself or your neighbour.
- You must work at the **hood** when dealing with a chemical with fumes.
- If chemicals come into **contact with your skin** or eyes, **flush** immediately with water and consult with your instructor.



Dealing with chemicals:

- Always pour acids into water. If you pour water into acid, the heat of reaction will cause the water to explode into steam.
- Do not forget to **label your tubes** before starting the lab.
- **Close** all chemical bottles after finishing
- Dispose chemicals properly.



Hazard symbols:

SAFETY PRACTICES



Flammable



Harmful /
Irritant



Corrosive



Poison /
Toxic



Explosion



Biohazard



Oxidizer



Environmental
Hazard



Radioactive

Information about chemicals:

➤ **Material Safety Data Sheet (MSDS)** is a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. It also contains information on the use, storage, handling and emergency procedures all related to the hazards of the material.

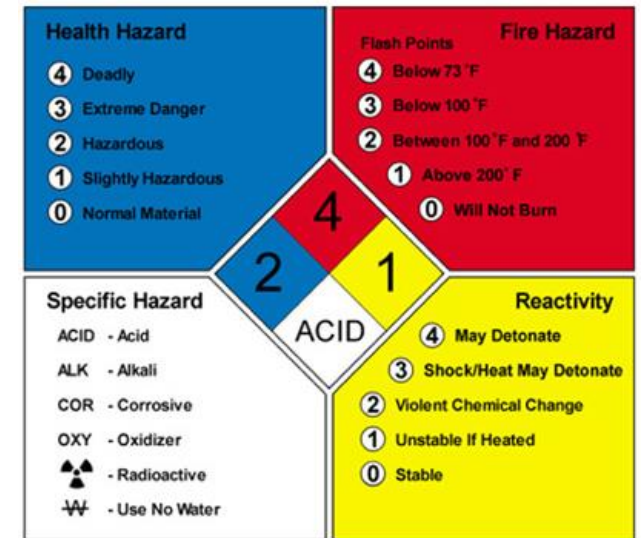


| | |
|---------------------|---|
| Health | 2 |
| Fire | 3 |
| Reactivity | 0 |
| Personal Protection | E |

Material Safety Data Sheet
Ethyl alcohol 200 Proof MSDS

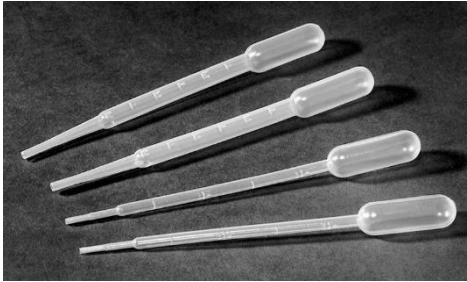
Section 1: Chemical Product and Company Identification

| | |
|--|--|
| Product Name: Ethyl alcohol 200 Proof | Contact Information: |
| Catalog Codes: SLE2248, SLE1357 | Sciencelab.com, Inc. 14025 Smith Rd. Houston, Texas 77396 |
| CAS#: 64-17-5 | US Sales: 1-800-901-7247 |
| RTECS: KQ6300000 | International Sales: 1-281-441-4400 |
| TSCA: TSCA 8(b) inventory: Ethyl alcohol 200 Proof | Order Online: ScienceLab.com |
| CI#: Not applicable. | CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300 |
| Synonym: Ethanol; Absolute Ethanol; Alcohol; Ethanol 200 proof; Ethyl Alcohol, Anhydrous; Ethanol, undenatured; Dehydrated Alcohol; Alcohol | International CHEMTREC, call: 1-703-527-3887 |
| Chemical Name: Ethyl Alcohol | For non-emergency assistance, call: 1-281-441-4400 |



General glassware and instrument

Glassware:



Pasteur pipette



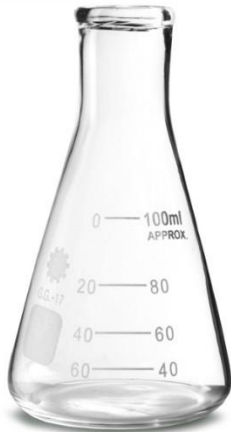
Test tubes



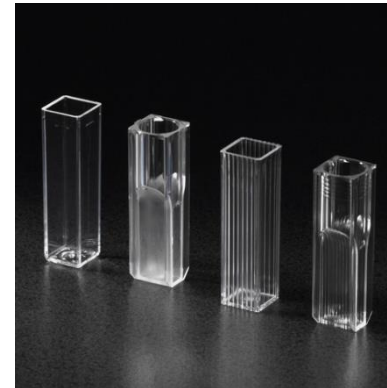
Pipette



Pipette pump



Conical flask



Cuvette

instrument:



Water bath



Spectrophotometer



Electronic balance

Homework:

- Search for MSDS of H_2SO_4 :
 - In case of eye contact?
 - In case of skin contact ?
 - Is it flammable?
 - HMIS.