

# BCH 202

BCH 202 [Practical]

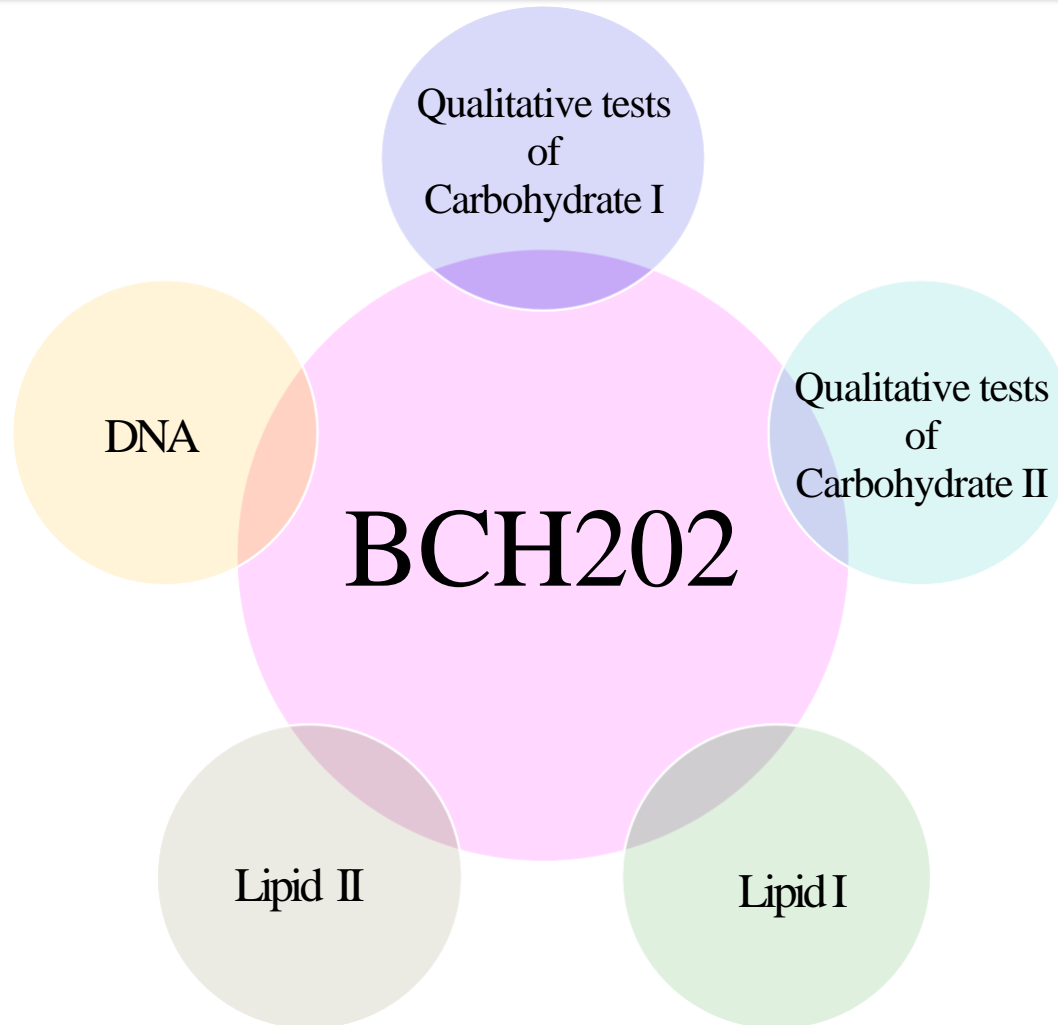
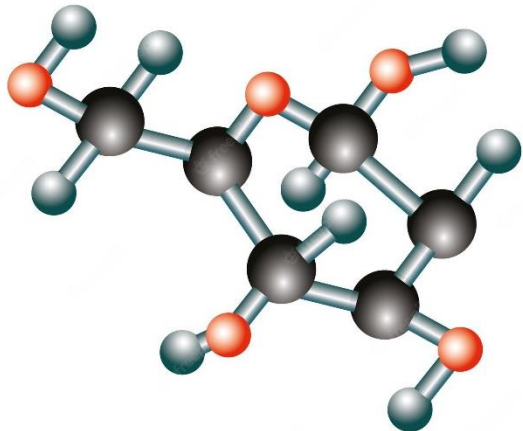
# Mark Distribution

	<b>Marks</b>	
<b>Report</b>	4 Marks	
<b>Quiz</b>	5 Marks	
<b>Homework</b>	1 Mark	
<b>Final</b>	<b>Practical</b>	10 Marks
	<b>Theoretical</b>	5 Marks
<b>Total</b>	25 Marks	

- **Final exam date:**

# Outline:

## General Biochemistry

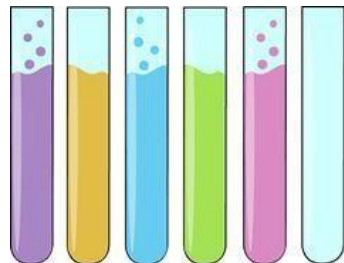


# Types of assay:

## Assays

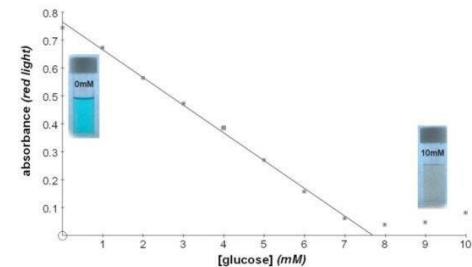
### Qualitative assays

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 code, student name.
2. **Introduction:** In this part you a background that will help to understand your topic.
3. **Objectives:** you will write it by your own words.
4. **Materials and method:** As in the lab sheet.
5. **Results:** You should report all your results that you got from your experiments. Any tables, figures or calculation.
6. **Discussion:** You must write a description and reasons for why you got your results.
7. **References.**



# Legend of tables and figures:

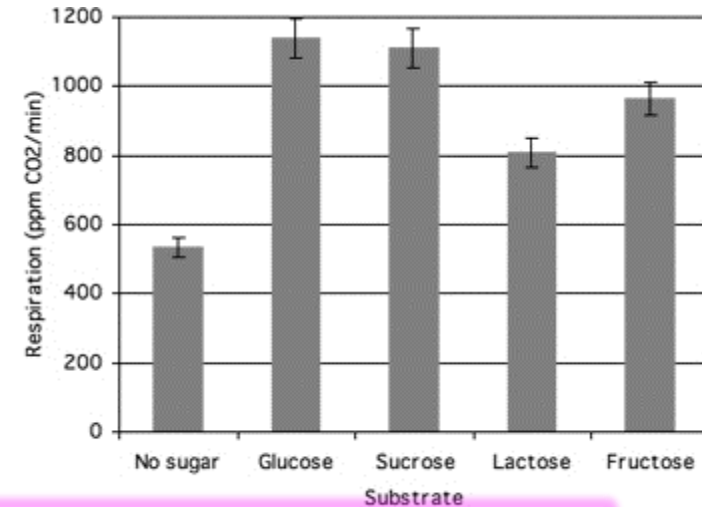
Table number

Table legend



**Table 2.** Effects of Lipofundin 20% on hepatic lipid peroxidation biomarkers.

Biomarkers	Control group	Lipofundin group
MDA ( $\mu\text{mol/L/mgPr}$ )	$3.89 \pm 0.75$	$7.63 \pm 0.31^*$
TH ( $\mu\text{mol/L/mgPr}$ )	$35.27 \pm 4.22$	$67.32 \pm 5.89^*$
PP ( $\mu\text{mol/L of MDA/mg Pr}$ )	$5.06 \pm 0.48$	$9.74 \pm 0.42^*$



**Figure 1.** The Effect of Substrate on Yeast Respiration.



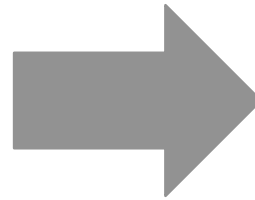
Figure number

Figure legend

# Justify the text:

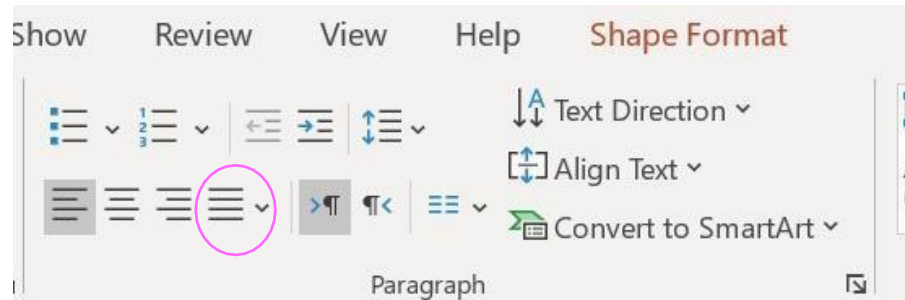
## Example:

It's consist of glass electrode which contain a very thin bulb, blown onto a hard glass tube which is sensitive to pH.The bulb contains a solution of hydrochloric acid and is connected to a platinum lead via silver -silver chloride electrode which is reversibile with respect to hydrogen ions.



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## How?



# General Laboratory Safety



# 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 equipment, 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.

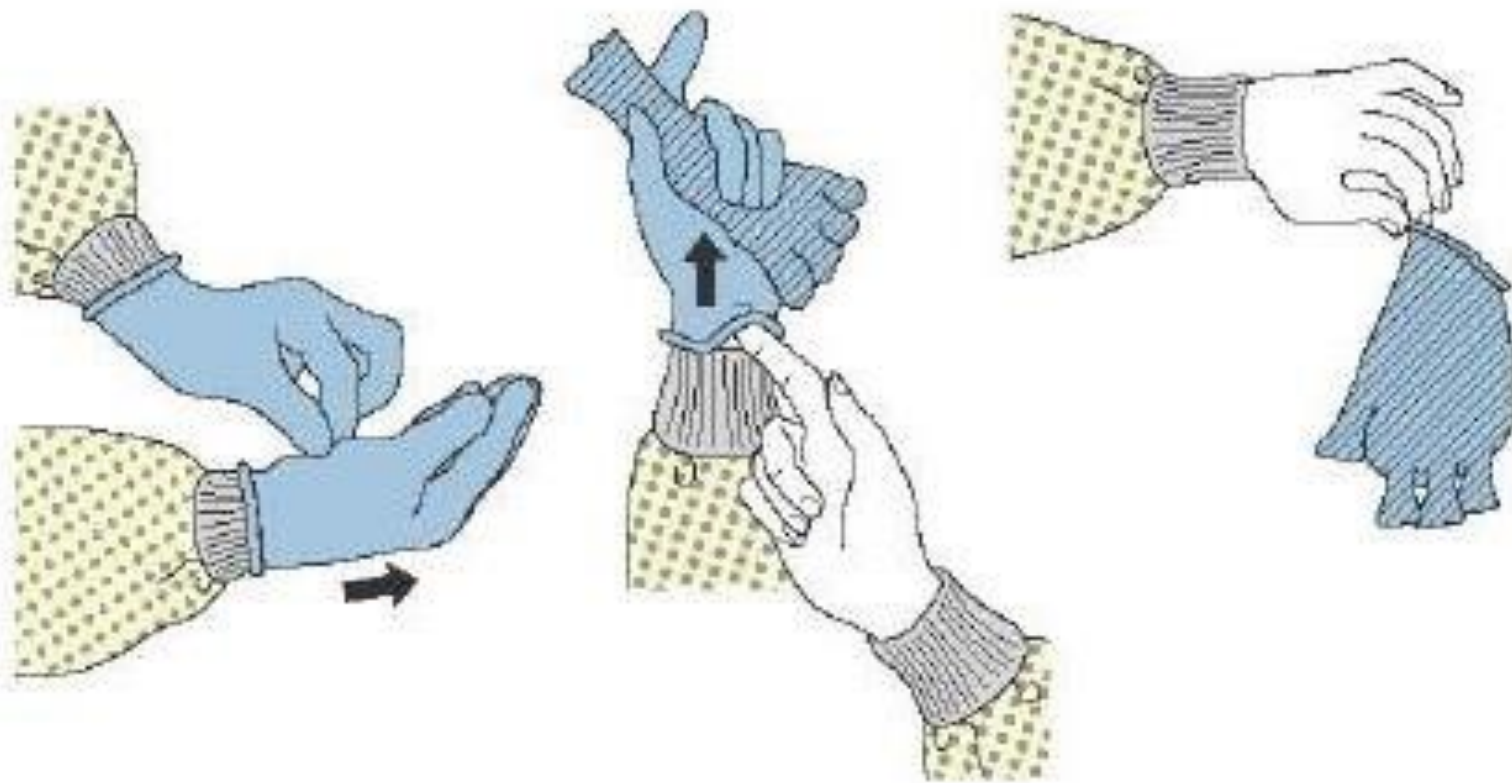


- Protective gloves should be worn when handling hazardous materials.



- Protective glasses should be worn when using hazard chemicals.

# How to remove gloves?



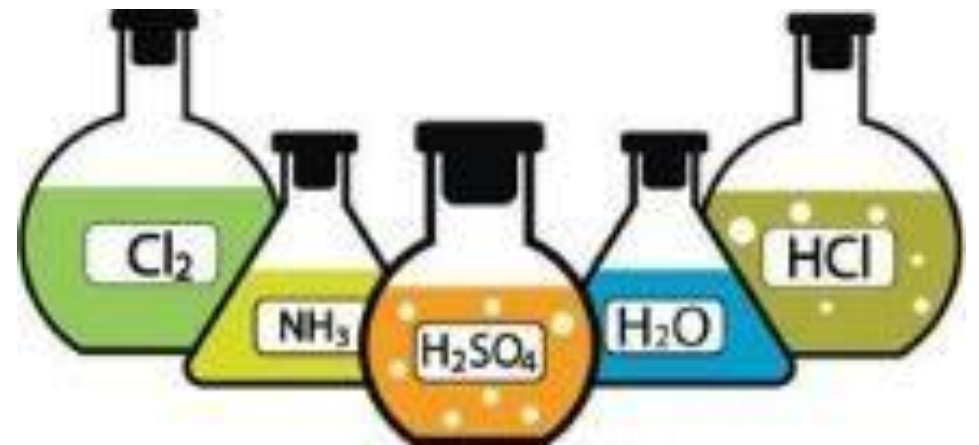
# Dealing with chemicals:

- 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 cont':

- 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:

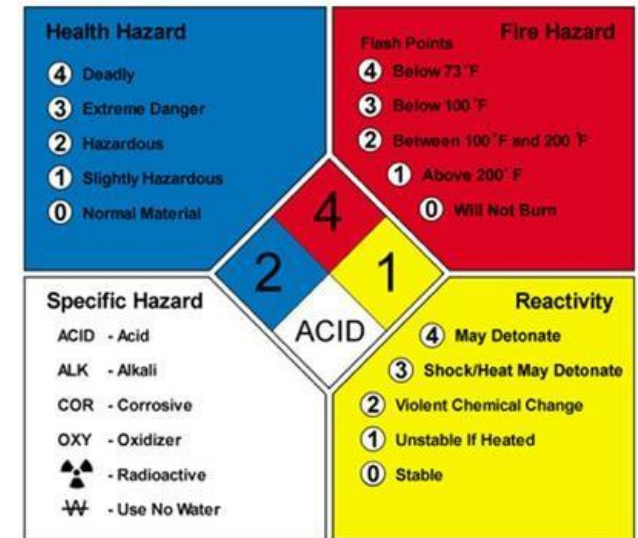
➤ **Material Safety Data Sheet (MSDS)** is a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. It also contains information on the use, storage, handling and emergency procedures all related to the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



**Material Safety Data Sheet**  
**Ethyl alcohol 200 Proof MSDS**

**Section 1: Chemical Product and Company Identification**

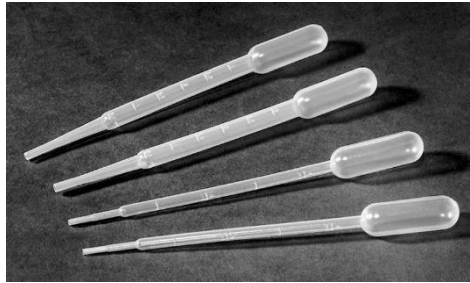
<b>Product Name:</b> Ethyl alcohol 200 Proof	<b>Contact Information:</b>
<b>Catalog Codes:</b> SLE2248, SLE1357	<b>Sciencelab.com, Inc.</b> 14025 Smith Rd. Houston, Texas 77396
<b>CAS#:</b> 64-17-5	US Sales: <b>1-800-901-7247</b>
<b>RTECS:</b> KQ6300000	International Sales: <b>1-281-441-4400</b>
<b>TSCA: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



(HMIS)

# General glassware and instrument

# Glassware:



Pasteur pipette



Test tubes



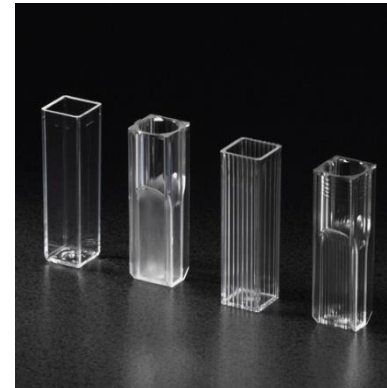
Pipette



Pipette pump

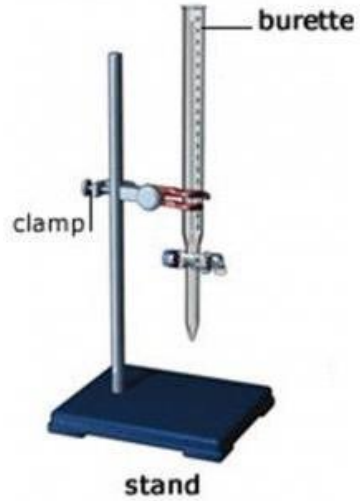


Conical flask



Cuvette

# Glassware:



Burette



Reagent bottle



Beaker



Wash bottle



Volumetric flask



Measuring cylinder

# instrument:



Water bath



Spectrophotometer



Electronic balance