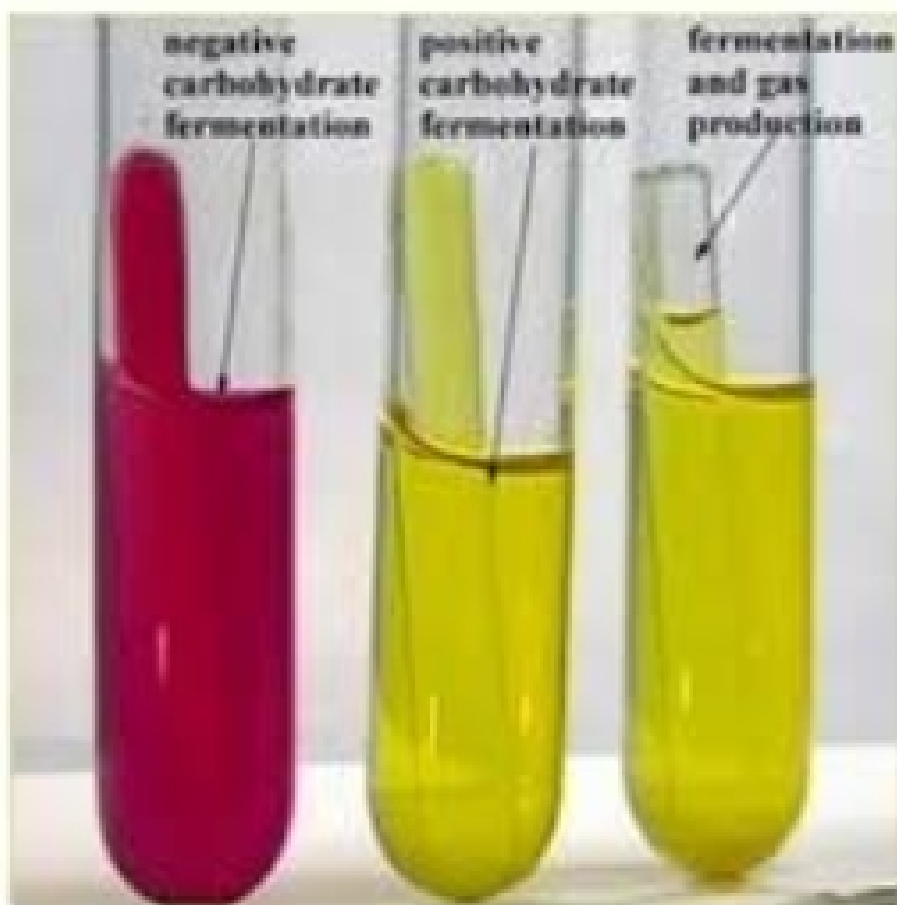


## Metabolics Study Guide and Lab Report Expectations

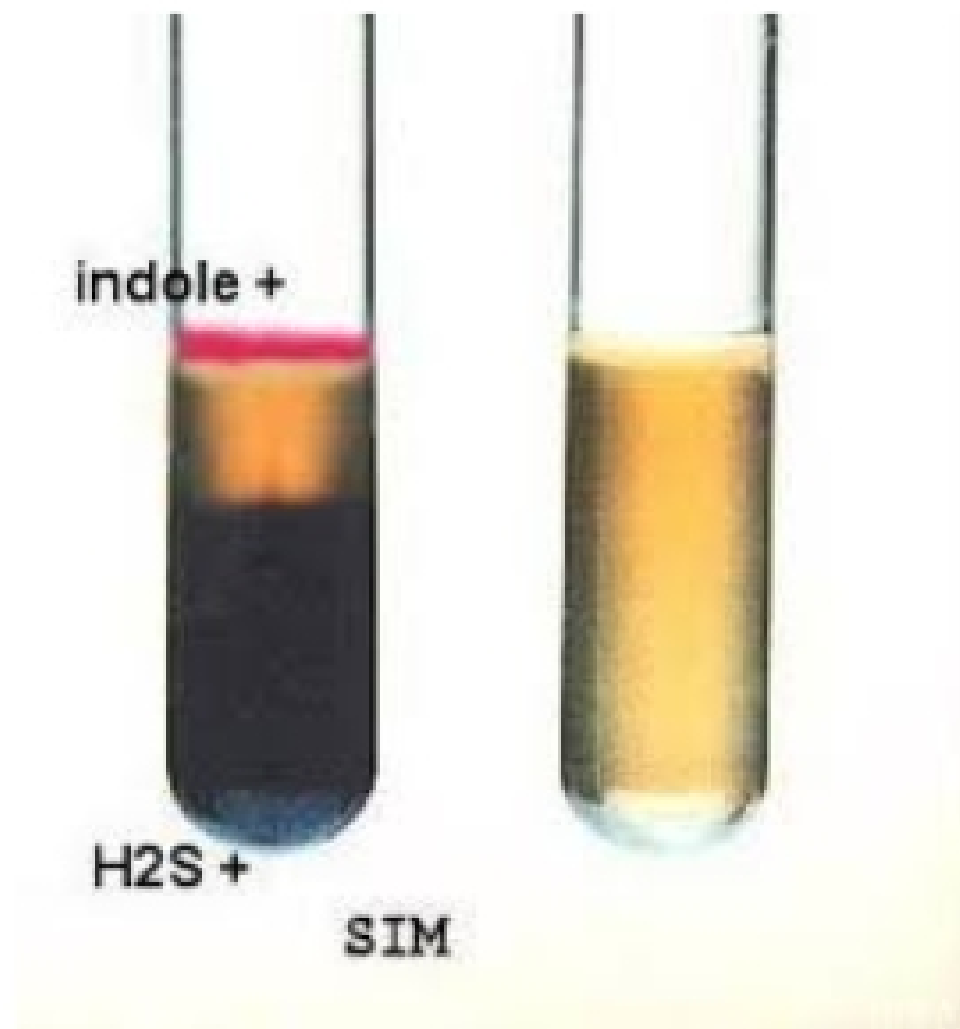
### Carbohydrate Fermentation:

- Carbohydrate fermentation produces acid and occasionally gas
- **Indicator: phenol red**
- Positive results: media turns from red to yellow, gas bubble formed in Durham tube
- Negative results: media remains red



### SIM Media:

- Determines if hydrogen sulfide is formed, if the organism is motile, and if indole is produced
- **Indicator: ferrous salts**
- **Reagent: Kovac's**
- Positive results: if hydrogen sulfide is formed it will react with the ferrous salts to form ferric sulfide (black precipitate in media), motility will be observed by growth away from the stab line, Kovac's reagent will turn red if indole is produced
- Negative results: no black precipitate, no growth away from stab line, Kovac's reagent remains yellow



### Urea Hydrolysis:

- Some organisms produce urease, which splits urea into ammonia and carbon dioxide
- **Indicator: phenol red**
- **Positive results: broth turns bright pink**
- **Negative results: broth remains light orange**

