

You should be able to identify each of the following functional groups within organic molecules:

amino group within an **amine** molecule (both the form found at low pH and high pH)

carbonyl group within an **aldehyde** molecule (you need to know it is within an aldehyde vs a ketone)

carbonyl group within a **ketone** molecule (you need to know it is within a ketone vs an aldehyde)

carboxyl group within a **carboxylic acid** (both the form found at low pH and high pH)

ester group within an **ester** molecule

hydroxyl group within an **alcohol** molecule

phosphate group within a **phosphate** molecule

sulfhydryl group within a **thiol** molecule



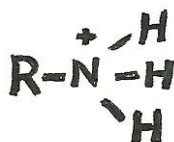
carbonyl

aldehyde



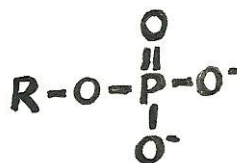
ester

ester



amino

amine



phosphate

phosphate



hydroxyl

alcohol



carboxyl

carboxylic acid



amino

amine



carbonyl

ketone



sulfhydryl

thiol



carboxyl

carboxylic acid