

Mechanism, pH, and Charge: General Considerations

- **Under acidic conditions:** the carbonyl oxygen will be protonated first. DON'T draw negatively charged intermediates under acidic conditions (charged intermediates should only bear + charge).
- **Under basic conditions:** the carbonyl oxygen will become negatively charged. DON'T draw positively charged intermediates under basic conditions (charged intermediates should only bear - charge).

These are good rules to follow when you write any organic reaction, but they are especially common in carbonyl chemistry (We will see specific examples in the next several lessons).

