

# Derived Complex Ions

- Related to your memorized polyatomic ions ( $\text{PO}_4^{3-}$ ,  $\text{CO}_3^{2-}$ , etc)
- Charge remains the same, but the number of oxygen atoms changes -  $\text{CO}_3^{2-}$  vs.  $\text{CO}_2^{2-}$

carbonate

carbonite



DO NOT CONFUSE with  $\text{CO}_2$  (carbon dioxide)

# Derived Complex Ions

- So, start with your memorized complex ion:

ADD one oxygen:

perphosphate:  $\text{PO}_5^{3-}$

“per” prefix & “ate” suffix

REGULAR:

phosphate:  $\text{PO}_4^{3-}$

“ate” suffix

Remove one oxygen:

phosphite:  $\text{PO}_3^{3-}$

“ite” suffix

Remove one more oxygen (2 in total):

hypophosphite:  $\text{PO}_2^{3-}$

“hypo” prefix & “ite” suffix