Key. Mr. Sudbury

Naming Acids

Acids are a special chemical that chemically behave a certain way. They typically begin with a hydrogen (H). The rules for naming the acid depend on if there is an oxygen in the acid.

Nonoxyacids *do not contain an oxygen* and you name them with a **hydro- prefix and change the –ide suffix with –ic**.

Example: HCl = ***hydro***chlor***ic*** acid

Oxyacids are names based on the polyatomic ion which it was formed from.

Ions that end in –ate, replace –ate with –ic acid

Example: H^+, NO_3^- = HNO_3 = Hydrogen nitr**ate** = Nitr**ic** acid

Ions that end in –ite, replace –ite with –ous acid

Example: H^+, NO_2^- = HNO_2 = Hydrogen nitr**ite** = Nitr**ous** acid

Ions that are per_____-ate, replace –ate with per_____-ic acid.

Example: H^+, ClO_4^- = $HClO_4$ = Hydrogen Perchlor**ate** = Perchloric**ic** acid

Ions that are hypo_____-ite, replace-ite with hypo_____-ous acid.

Example: H^+, ClO^- = HClO = Hydrogen hypochlor**ite** = Hypochlor**ous** acid

Name the following acids using IUPAC nomenclature rules.

136. Nitric acid ___ HNO_3
137. Hydrochloric acid ___ HCl
138. Hydroflouric acid ___ HF
139. Sulfuric acid ___ H_2SO_4
140. Sulfurous acid ___ H_2SO_3
141. acetic acid ___ $HC_2H_3O_2$
142. hydrobromic acid ___ HBr
143. hydroiodic acid ___ HI
144. nitrous acid ___ HNO_2
145. phosphoric acid ___ H_3PO_4
146. hydrosulfuric acid ___ H_2S
147. carbonic acid ___ H_2CO_3

Write the formulas of the following acids

148. H_2SO_4 ___ Sulfuric acid
149. HNO_3 ___ Nitric acid
150. HCl ___ Hydrochloric acid
151. $HC_2H_3O_2$ ___ Acetic acid
152. HF ___ Hydrofluoric acid
153. H_3PO_3 ___ Phosphorus acid
154. H_2CO_3 ___ Carbonic acid
155. HNO_2 ___ Nitrous acid
156. H_3PO_4 ___ Phosphoric acid
157. H_2S ___ Hydrosulfuric acid