

Summary of acid reactions

Name: _____

1. What's the difference between a strong and a weak acid?

Strong acid:

2. Reaction with metal:

General form:

Examples:

Molecular equation:

Full (complete) ionic equation:

Net Ionic equation:

3. Reaction with metal oxide:

General form:

Examples:

Molecular equation:

Full (complete) ionic equation:

Net Ionic equation:

4. Reaction with metal hydroxides:

General form:

Examples (give one example for when a solid hydroxide is added to acid and another for when a solution of a metal hydroxide is mixed with acid):

Molecular equation:

Full (complete) ionic equation:

Net Ionic equation:

5. Reaction with carbonates and hydrogen carbonates:

General form:

Examples (give one example for when a solid salt is added to acid and another for when a solution of salt is mixed with acid):

Molecular equation:

Full (complete) ionic equation:

Net Ionic equation:

6. Reaction with sulfites and hydrogensulfites:

General form:

Examples (give one example for when a solid salt is added to acid and another for when a solution of salt is mixed with acid):

Molecular equation:

Full (complete) ionic equation:

Net Ionic equation:

7. Reaction with sulfides:

General form:

Examples (give one example for when a solid salt is added to acid and another for when a solution of salt is mixed with acid):

Molecular equation:

Full (complete) ionic equation:

Net Ionic equation: Substitute a weak acid for the strong acid used above and write out molecular, full ionic and net ionic equations for the examples above.

Acid-base reactions: Additional questions

The difference between molecular and full ionic equation:

In the full ionic equation, strong electrolytes (salt solutions, strong acids and strong bases) appear in their dissociated (aqueous ionic) form. All other reagents are the same in both equations.

The difference between full ionic and net ionic equation:

The spectator ions in the full ionic equation—the aqueous ions that remain aqueous at the end of the reaction—do not appear in the net ionic equation.

Write molecular, full ionic and net ionic equations for the reaction that takes place when

1. a spatula full of iron(II) hydroxide is added to a beaker of hydrochloric acid.
2. a small amount of zinc sulfide is dropped into a beaker containing nitric acid.
3. a small lump of copper oxide is dropped into a beaker of sulfuric acid.
4. a 25-mL solution of sodium carbonate is mixed with 25.00 mL of ethanoic acid.
5. a couple of marble chips (calcium carbonate) is added to nitric acid.
6. a small volume of hydrochloric acid is added to a beaker of ammonia solution.
7. a solution of sodium hydrogen carbonate is mixed with a solution of ethnoic acid.
8. a spatula of copper hydroxide is added to a solution of hydrochloric acid.
9. a solution of magnesium sulfide is added to a solution of sulfuric acid.