

Mineral Identification

Property 7: Special Properties

October 27, 2009

SUMMARY

Some properties are not common in minerals. Therefore, they are called the special properties. Special properties include acid reactivity and radioactivity.

- A few minerals have properties that very few other minerals have. These are the special properties. There are many special properties including:
 - Acid Reactivity
 - This is when a mineral has a chemical reaction with an acid.
 - Typically produces carbon dioxide gas (CO₂)
 - Most common in carbonate minerals (calcite and dolomite)
 - All samples of calcite and dolomite will react with acid. It stays consistent.
 - Fluorescence
 - This is when a mineral glows when exposed to ultraviolet light.
 - Much like color, it can vary from sample to sample of a mineral. Some samples of a mineral will have it, others will not!
 - Examples: calcite, fluorite, and willemite.
 - Magnetism
 - The mineral acts as a magnet. It attracts metal objects.
 - Examples: magnetite
 - Radioactivity
 - This is when an unstable element breaks down into a stable element over time.
 - This process releases energy. Scientists can measure this energy and use that to identify the mineral and figure out its chemical composition.