What's in a pesticide?

We normally think of a pesticide as the product that can be purchased at the store –the insecticide, the weed killer, or the fungicide. But, unfortunately, there is more to it than that. The product you buy or are exposed to is actually a pesticide formulation which contains a number of different materials, including **active** and **inert** ingredients, as well as **contaminants and impurities.** In addition, pesticides, when subject to various environmental conditions, break down to other materials, known as **metabolites**, which are sometimes more toxic than the parent material.

Active Ingredients	Active ingredients are by nature biologically and chemically active against a target pest, be it an insect, weed or fungus. By definition these materials kill living things.
Inert Ingredients	Inert ingredients are often as toxic as the active ingredient, although the law defines these materials as secret because they are not added to the formulation to kill the target pest. Inerts, often petrochemicals like benzene, toluene or xylene, are generally the largest percentage ingredient of a pesticide product. They form the solution, the dust, or the granule in which the active ingredient is mixed.
Contaminants and Impurities	Contaminants and impurities are often a part of the pesticide product and responsible for the product hazards. Dioxin and DDT have been identified as contaminants, which have not been purposefully added but are a function of the production process.
Metabolites	Metabolites are breakdown products which form when a pesticide is used in the environment and mixes with air, water, soil or living organisms. Often the metabolite is more hazardous than the parent pesticide.

Fact:
27 chemicals listed by EPA as "inerts of *unknown* toxicological concern" are on the Toxic Release Inventory list under the Superfund hazardous waste clean-up law because of toxicity or environmental effects.

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