

If Your Cat Took Chemistry, Would She Eat This Stuff?

The following are the labeled ingredients for Puss'n'Boots Pounce (Shrimp Flavor) Treats for Cats: Flour, liver, dried whole egg, **glycerin**, pre-gelatinized wheat flour, shrimp by-products, wheat gluten, torula dried yeast, **calcium sulfate**, cheese meal, **phosphoric acid**, animal fat (preserved with **butylated hydroxyanisole**, otherwise known as BHA), **potassium chloride**, salt, **potassium sorbate** (a preservative), wheat middlings, color, choline chloride, **calcium carbonate**, **ferrous sulfate**, **vitamin E** supplement, **zinc oxide**, BHA (again!), **cupric oxide**, **cobalt carbonate**, **manganous oxide**, **vitamin A** supplement, **potassium iodide**, **D-calcium pantothenate**, **vitamin B-12** supplement, vitamin D-3 supplement, water sufficient for processing.

The purpose of these questions is the practice of writing formulas for simple inorganic and organic compounds whose names are found on labels of products in the supermarket, drugstore, or at home.

1. List the compounds that are **bold-faced** in the ingredients above, followed by their correct chemical formulas.
2. List the compounds that are **bold-faced red** in the ingredients above, followed by their correct structural formulas.
3. Look on the labels of at least three different food items (canned, dried, frozen) and highlight in yellow the ionic compounds, then list them with their chemical formulas. Also on each of the three food labels list the organic compounds with their structural formula and highlight them on each label in green.
4. Find a detailed diagram of hemoglobin and chlorophyll. On each diagram identify the central metal, and the ligands.

