

## Grocery Store Nomenclature Lab; SC1d

Chemicals are not just for chemistry class. We use chemicals every day and in everything we buy. The purpose of this lab is to determine the identity of numerous unknown chemicals using the provided clues and to correctly write the chemical names and formulas for each identified compound. This lab may be completed as a web quest or a take-home lab. You will need to use information from the Naming Podcasts and your composition books to help you.

| Chemical Name | Chemical Formula | Clue   | Products containing this chemical      |
|---------------|------------------|--|--|
|               |                  | A carbon-containing acid.  | vinegar                                |
|               |                  | An ionic compound containing four ions per formula unit. The cation is polyatomic.   | bread                                  |
|               |                  | An ionic compound with a polyatomic cation and polyatomic anion. The atoms in the anion are all from the same group.   | Fertilizer<br>Yeast        nutrient    |
|               |                  | An ionic compound containing two ions per formula unit. The cation has 18 electrons. The polyatomic anion contains C & has a charge of 2-.                                     | Antacids<br>Pet food                   |
|               |                  | The one cation and two anions each have 18 electrons.  | Pickled products, olives               |
|               |                  | An ionic compound that contains five ions per formula unit. The cation has 18 electrons.   | yogurt                                 |
|               |                  | An ionic compound containing two ions per formula unit. The cation has 18 electrons. The polyatomic anion contains 5 atoms (1 of which is sulfur) and has a charge of 2-       | bread                                  |
|               |                  | An ionic compound containing 2 ions per formula unit. The cation contains 27 electrons. The polyatomic anion contains 5 atoms (1 of which is sulfur) and has a charge of 2-.   | Pet food                               |
|               |                  | The anion is polyatomic but consists of just one type of atom. The cations have no electrons.  | Antiseptic, hair lightener             |
|               |                  | An ionic compound containing two ions per formula unit. The cation contains 24 electrons. The polyatomic anion contains 5 atoms (1 of which is sulfur) and has a charge of 2-. | Pet food, spaghetti,<br>plant nutrient |
|               |                  | An ionic compound containing two ions per formula unit. The cation has 10 electrons. The polyatomic ion contains 5 atoms (one of which is sulfur) and has a charge of 2-.      | Laxative<br>Soaking agent              |

|  |  |  |                             |
|--|--|--|-----------------------------|
|  |  | An ionic compound containing two ions per formula unit. The cation contains 23 electrons. The polyatomic ion contains 5 atoms (1 of which is Sulfur) and has a charge of 2-. | Pet food                    |
|  |  | An acid with three hydrogens.  | Soft drinks (pop)           |
|  |  | The one cation and one anion each have 18 electrons.   | soup                        |
|  |  | An ionic compound with two ions per formula unit. The anion has 3 times as many electrons as the cation.   | Iodized table salt          |
|  |  | A Type III binary compound containing three atoms per molecule. The total number of protons is 30.   | Bouillon cubes              |
|  |  | The polyatomic anion contains the elements 1, 6, and 8. The cation has 10 electrons.   | Croutons, salty snacks      |
|  |  | The anion has 5 atoms and has a common name different from its systematic name. The cation has 10 electrons.   | cookies                     |
|  |  | There are 2 ions per formula unit in this compound. The 1- anion has 8 more electrons than the cation.   | Table salt<br>Salted snacks |
|  |  | A binary ionic compound in which the anion and cation each have 10 electrons.  | toothpaste                  |
|  |  | An ionic compound consisting of a cation with 10 electrons and an oxyanion with 26 electrons.  | bleach                      |
|  |  | An ionic compound that contains three times as many cations as anions. The cation has 10 electrons and the anion is polyatomic   | Cleaning products<br>Yogurt |
|  |  | An ionic compound containing 2 ions per formula unit. The cation contains 28 electrons. The atoms in the polyatomic anion are in the same group on the periodic table.       | Pet food                    |