**Candy Chemistry***Review for Bath Bombs*

Ingredients: Sugar (2 parts), Powdered Drink mix (1 part), baking soda (1 part), citric acid (1 part)

**Part A:** Sample the candy as instructed.

1. Record your observations on the **properties of substances** before and after eating the candy in Table 1.

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| **Table 1. Observations** |
| **Before Eating** | **During/After Eating** |
|  |  |

 **Part B:** Analyze the popping candy reaction by answering the questions below. Refer to the provided chemical equation when necessary:

C6H8O7(aq) + 3NaHCO3(aq)  Na3C6H5O7(aq) + 3CO2(g) + 3H2O(l)
 citric acid baking soda sodium citrate carbon dioxide water

1. Complete Table 2 by drawing the missing **molecular models**.

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| **Table 2. Models** |
|  | **REACTANTS** | **PRODUCTS** |
| **Chemical Formula** | C6H8O7 | 3NaHCO3 | Na3C6H5O7 | 3CO2 | 3H2O |
| **Molecular Model** | *A drawing of a face  Description automatically generated* | A picture containing object  Description automatically generatedA picture containing object  Description automatically generatedA picture containing object  Description automatically generated |  | **Model:** | **Model:** |

1. Which atom is present in every compound of the reaction? What is a chemical property of this element?
2. Examine the evidence and make a claim about what happened to the individual atoms present during this reaction. Give a reasoning by stating the scientific principle that helps to explain the evidence.

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| --- | --- | --- |
| **Claim** | **Evidence** | **Reasoning** |
|  |

|  |  |
| --- | --- |
| **#Atoms in reactants** | **# of Atoms in products** |
| C = 9H = 11O = 16Na = 3 | C = 9H = 11O = 16Na = 3 |

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1. Did a **chemical reaction** take place after you ate the mixture? Circle one of the claims. Support your claims with evidence and reasoning.

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| ***Did a chemical reaction take place?*** |
| **Claim** | **Evidence** | **Reasoning** |
| YES, a chemical reaction took place.NO, a chemical reaction did not took place. |  |  |

1. Analyzing the chemical equation: C6H8O7(aq) + 3NaHCO3(aq) 🡪 Na3C6H5O7(aq) + 3CO2(g) + 3H2O(l) citric acid baking soda sodium citrate carbon dioxide water
	1. What part of the chemical equation represents the saliva added? \_\_\_\_\_\_\_\_\_\_\_
	2. What is the chemical formula for the gas that is formed as a result of this reaction? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. What classification of matter: elements, molecules, or compounds are the reactants and products?