



When an acid and baking soda are mixed, carbon dioxide (bubbly gas) is formed.

**Step 2:**            water  
                      ½ tsp baking soda  
                      ½ tsp baking powder

Add the baking powder to 50 mL of water. Add the baking soda to 50 mL of water.

Describe what happens. \_\_\_\_\_

**Step 3:**            sour milk, orange or lemon juice  
                      ½ tsp baking powder  
                      ½ tsp baking soda

Add the baking powder to 50 mL of sour milk, orange or lemon juice and baking soda to another 50 mL of the same acidic food.

Explain the results. \_\_\_\_\_

When you add baking powder to an acid, you are tampering with the balance of acid and alkali. When more acid than alkali is present, less carbon dioxide is produced!

Therefore, if you want to bake with sour milk or buttermilk instead of regular milk, you could do it by eliminating the extra acid. You would just replace each teaspoon of baking powder in the recipe with ½ teaspoon of baking soda.

**Questions:**

1.     When do you get bubbly action, when you added baking soda to the water or to the orange juice?
2.     Which gas was being released in the above question?
3.     What is baking powder a combination of?
4.     Why is baking soda or powder used instead of yeast in some recipes?
5.     What is the purpose of using baking soda or baking powder?