Blue Solution Experiment

Good work!!

* A vile of blue solution is placed on the table
* its then poured into a test tube
  - a straw is placed in the test tube
  - a person blows through the straw into the solution exhaled air slowly
    - it bubbles
    - the solution begins to turn green
    - the solution begins to turn yellow

problem: What was the variable that caused the color to change from Blue to Green and then to Yellow.

Hypotheses:

- Bubbles
- straw
- Saliva
- exhaled air (CO_2)
- * Bacteria
- Pressure
- test tube
- food particles (ham, cheese, mustard)
- * Inhaled air
- Tartar
- Heat

* = not tested

Experimental Procedures:

	Bubbles	straw	Saliva	CO_2
Procedure	• Placed a hose on the air compressor. We then placed the hose in the solution and made bubbles.	• simply placed the straw in the solution.	• we had a student simply spit into the solution.	• we placed a balloon over the top of a soda bottle. We then shook the bottle and the CO_2 rose upward and filled the balloon. We then attached the full ballon to the test tube.
Positive/ negative	slightly positive	negative	slightly positive	Positive

	Pressure	test tube	food - bread, ham, mustard	Heat
Procedure	• we attached a hose to the air compressor and put the hose into the test tube and allowed the pressurized air to hit the solution.	• we poured some of the blue solution into the test tube.	• we placed each piece of food into their own test tubes.	• we placed the test tube of blue solution over a bunsin burner to heat up the test tube to try to make the solution change color.
Positive/ negative	Slightly positive	negative	negative	negative

	Tartar
process	• one student scraped tartar from their teeth and placed it in the solution
	negative

controlled experiment
control = one test tube of only the blue solution

Conclusion: According to the data found through experimentation we have found that CO_2 caused the blue solution to turn yellow. Our class also concluded that a straw, saliva, pressure, a test tube, food particles, bubbles, Tartar, and heat do not cause the blue solution to change to green and then yellow. In conclusion we now know CO_2 is the only variable out of all eleven variables tested that changed the blue solution to green and then to yellow.