

Exploring Light Sticks Worksheet

Data Table

Test Tube	Observations Before Treatment	Observations After Treatment
+ sodium salicylate		
Control		
+ 0.1 M HCl then 0.1 M NaOH		
+ 0.1 M NaOH		

Questions

1. Why is a control used in experiments and demonstrations?

2. What is the effect of sodium salicylate on the light stick reaction?

3. How does changing pH affect the reaction time of the light sticks?

4. In the case of a commercial light stick, a specific amount of sodium salicylate is added. How much sodium salicylate would be too much? Why?

5. Traditional emergency flares used to be found in all road hazard kits. The flares were lit and burned out after a few hours. Discuss the advantages and disadvantages of replacing road flares with light sticks.