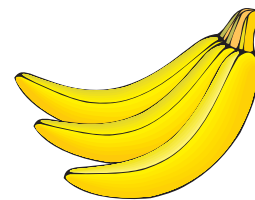


# Is There Sodium in Bananas? Worksheet



## Observations

Describe the appearance of each solid in the Petri dishes.

Calcium carbonate

Potassium carbonate

Sodium carbonate

List the metal ion present in each Petri dish and record the flame color it produced.

Petri Dish	Metal Ion	Color of Flame
1		
2		
3		

## Discussion Questions

- Compare the color of each solid to its respective flame color.
- How do you know the metal ions were producing the characteristic flame colors and not some other substance?
- Predict the color of the flame if the following materials were heated in the flame. Explain your prediction.
  - Sodium sulfate,  $\text{Na}_2\text{SO}_4$  \_\_\_\_\_
  - Potassium nitrate,  $\text{KNO}_3$  \_\_\_\_\_
  - Calcium chloride,  $\text{CaCl}_2$  \_\_\_\_\_
- What color or colors were visible when the banana was placed in the flame?
- What conclusion may be drawn about the mineral ions content of bananas based on the flame test results?
- Metal carbonates react with vinegar, a source of  $\text{H}^+$  ions, to produce carbonic acid, which decomposes to carbon dioxide and water. Complete the following equation for the reaction of the carbonate ions. What is the formula of carbonic acid?

