

11. Why should pyrotechnicians worry about the yield of the reactants in a firework? How does the yield affect the firework and the environment?

Type your response here: Yield affects the firework and environment because the packaging of a pyrotechnic mixture affects its behavior. Confinement greatly speeds up the combustion process by concentrating heat and hot gas in the reaction. Pyrotechnicians should worry about the yield of the reactants in a firework because they could combust

Resources

- [Pyrotechnics: It's Elemental](#)
- [Firework chemicals](#)

Evaluation

This project will be evaluated on a topic that is based on the completeness, clarity, and thinking you exhibit in the Directions and Analysis section above.

Points possible:

- Chemicals in fireworks: 10 points maximum

Chemicals in fireworks (10 points)
Chemicals in a firework and their role
Components of a firework and their descriptions
Coloring agents in fireworks and how they work
Composition and reactions of the black powder (Extra points for potassium chlorate and potassium perchlorate)
Mole and Mass calculations for oxygen
Mole and Mass calculations for carbon dioxide
Mole and Mass calculations for sulfur dioxide
Limiting reactants, maximum yield, and percent yield
Importance of yield calculations for pyrotechnicians

Self-Checked Activity: For Advanced Understanding

Note: This section may be optional; follow your instructor's directions.

The free response test item accessed below is related to this unit's concepts and content but will draw from your prior chemistry knowledge as well. The test items will challenge your