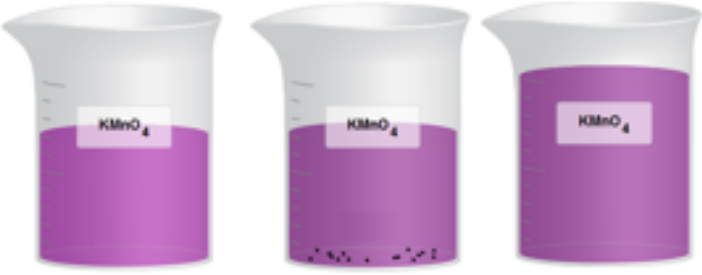


Molarity

Test your understanding and self check: For each question, support your answer with an explanation.

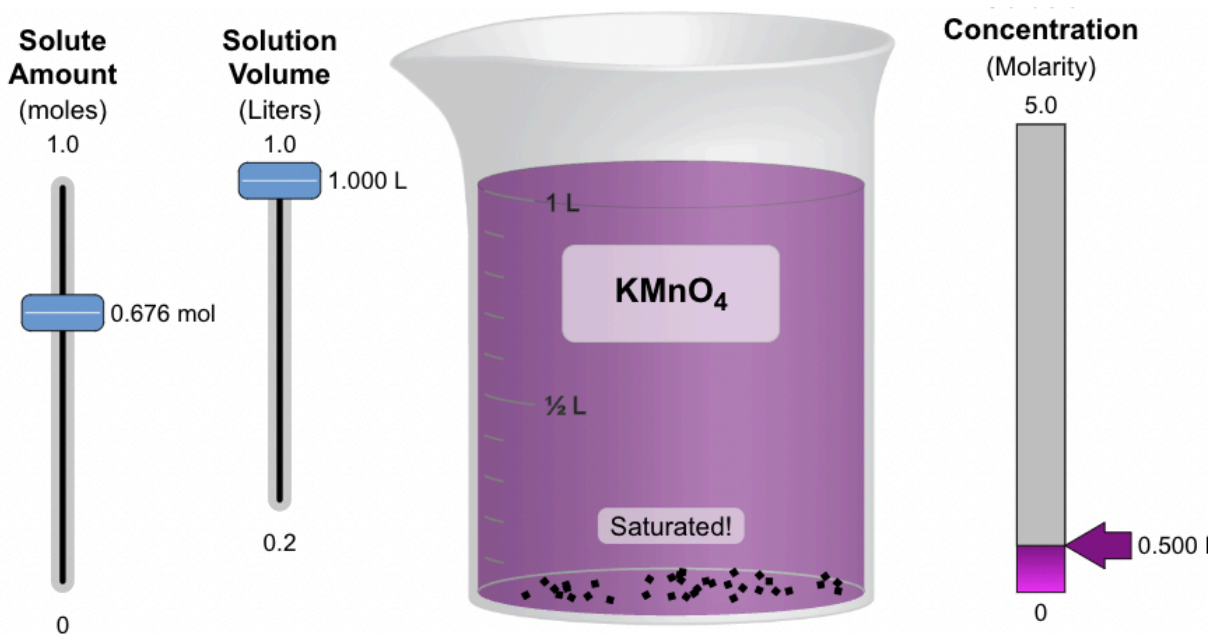
1. Which of these solutions look like they are saturated?



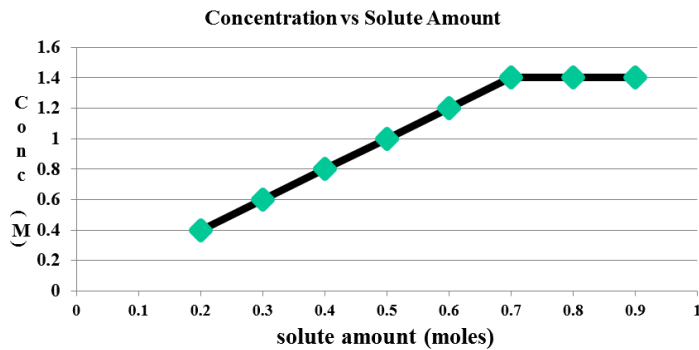
A. B. C.

D. none of these E. two of these

B- i think this because on the website Potassium permanganate, when you move the solute amount towards the middle you start seeing black dots, then the solution would say Saturated



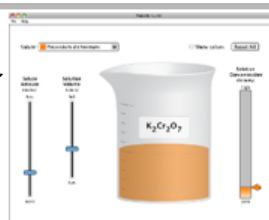
2. What do you think the solubility of this solution is?



- A. 0.7 moles B. 1.4 M
C. 2.0M/moles D. Can't be determined

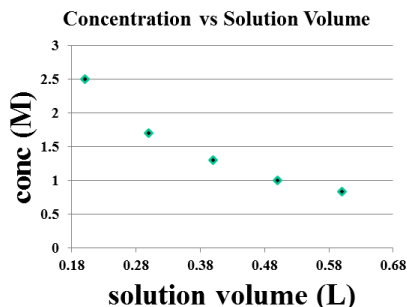
B

3. Which could help you identify the independent variables?



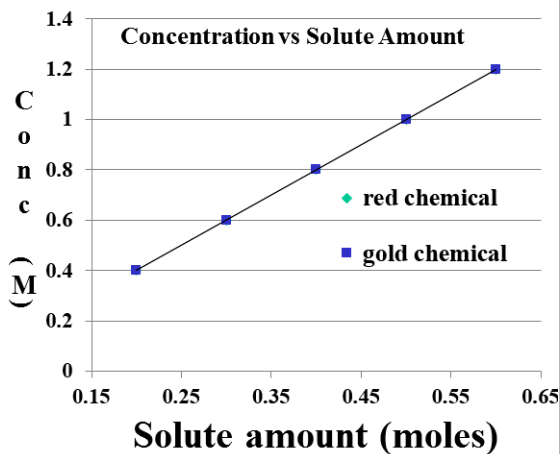
- A. Move a slider and see if another measurement changes
B. Assume that there is only one independent variable
C. Move a slider and anything that changes is an independent variable
D. More than one of these

4. Given this graph, what can you say about the experiment?



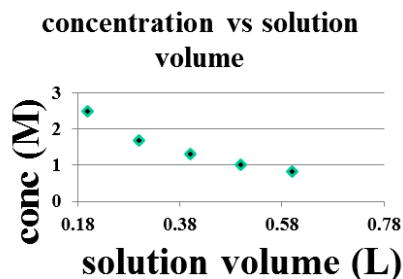
- A. Amount of solute was the independent variable
- B. Amount of solution was the independent variable
- C. Concentration was the independent variable
- D. More than one of these

5. Given this graph, what can you say about the relationship between amount of solute and concentration?

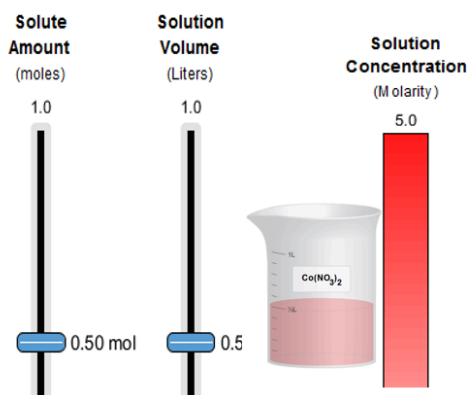


- A. The amount and concentration are directly related
- B. Some chemicals are not as soluble as others
- C. The relationship is the same for the chemicals used
- D. More than one of these

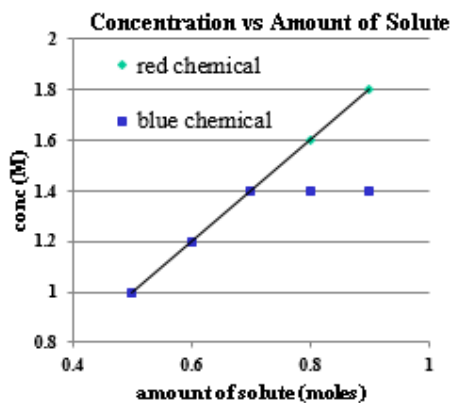
6. What was held constant in the experiment that gives this graph? (Assume good experimental design)



- A. The amount of solute
- B. The solution volume
- C. The concentration
- D. More than one of these



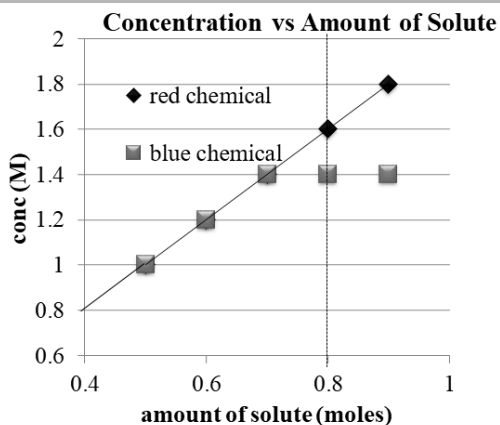
7. Given this graph, what can you say about the relationship between amount of solution and concentration?



- A. The amount and concentration are directly related
- B. Some chemicals are not as soluble as others
- C. The relationship is the same for the chemicals used
- D. More than one of these

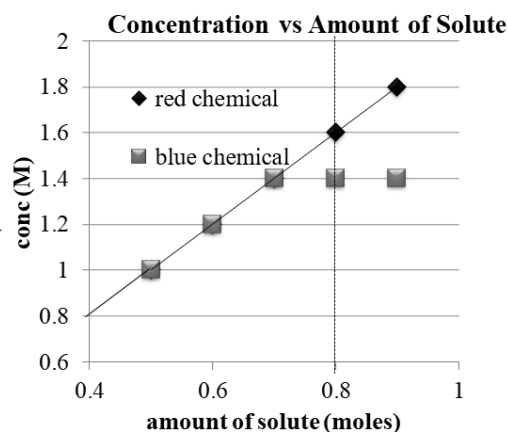
1. Answer and explanation with support
 - b- the red chemical is less soluble

8. Given this graph, what would you predict for the concentration at 0.8 moles of solute for each chemical?



- A. Red(♦) is 1.6M and Blue (■) is 1.4 M
- B. They are both 0.4M
- C. They are both 1.6 M

9. Given this graph, what would you predict the solubility of the red chemical?



- A. Red(♦) solubility is 1.6M
- B. Red(♦) solubility is 1.4M
- C. Red(♦) solubility is 0.8M
- D. Cannot be determined by this experiment

Optional next lab: [Concentration_Molarity_Remote_Lab](https://phet.colorado.edu/en/contributions/view/3511) by Loeblein