



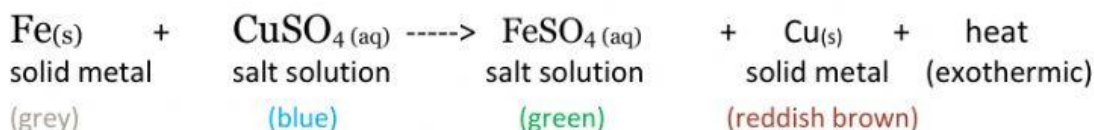
Assumption College Ubonratchathani
English for Science 3

Name:..... Class:..... No.

Chemical Reaction Between Iron and Copper Sulphate $\text{Fe} + \text{CuSO}_4$

(ปฏิกิริยาเคมีระหว่างเหล็กกับคอปเปอร์ซัลเฟต)

The chemical equation when Iron and Copper Sulphate is



Fe = iron (nail) is a metal

Cu = copper is a metal

CuSO_4 = copper sulphate (blue vitriol)

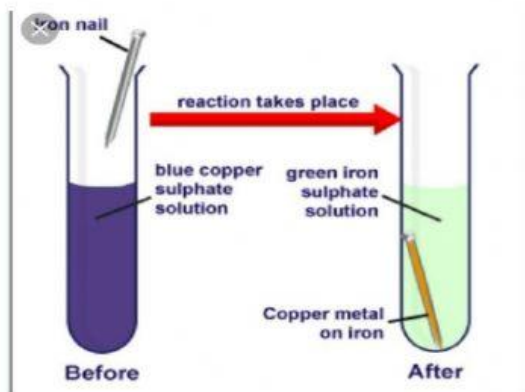
FeSO_4 = iron sulphate (ferrous sulphate)

(s) = solid substance

(aq) = aqueous solution (a solution where solvent is water)

THEORY (ทฤษฎี)

Iron (Fe) is more reactive than Copper (Cu) so iron will displace copper in copper sulphate (CuSO_4) and produce iron sulphate (FeSO_4) and copper (Cu)



potassium	most reactive	K
sodium		Na
calcium		Ca
magnesium		Mg
aluminium		Al
carbon		C
zinc		Zn
iron		Fe
tin		Sn
lead		Pb
hydrogen		H
copper		Cu
silver		Ag
gold		Au
platinum	least reactive	Pt

Tick the correct answer.

1. The reaction of iron (Fe) and copper sulphate (CuSO_4) solution produces iron sulphate and _____.

- | | |
|--------------------|------------------|
| a. iron | c. iron sulphate |
| b. copper sulphate | d. copper |

2. Which is a metal?

- | | |
|-------------------------|------------------------|
| a. iron only | c. copper only |
| b. both iron and copper | d. none of the choices |

3. What is the color of the copper sulphate (CuSO_4) solution?

- | | |
|----------|------------------|
| a. green | c. blue |
| b. grey | d. reddish brown |

4. What is the color of the iron (Fe) nail before it was dipped in copper sulphate (CuSO_4) solution?

- | | |
|----------|------------------|
| a. green | c. grey |
| b. blue | d. reddish brown |

5. What is the color of iron sulphate (FeSO_4) solution?

- | | |
|----------|------------------|
| a. green | c. blue |
| b. brown | d. reddish brown |

6. What is the color of copper (Cu)?

- | | |
|----------|------------------|
| a. green | c. blue |
| b. brown | d. reddish brown |

7. What are the reactants in chemical reaction between iron (Fe) and copper sulphate (CuSO_4) solution?

- | | |
|--------------------------------------|-----------------------------|
| a. iron and copper sulphate | c. iron and copper |
| b. iron sulphate and copper sulphate | d. copper and iron sulphate |

8. What are the products in chemical reaction between iron (Fe) and copper sulphate (CuSO_4) solution?

- | | |
|--------------------------------------|-----------------------------|
| a. iron and copper sulphate | c. iron and copper |
| b. iron sulphate and copper sulphate | d. copper and iron sulphate |

9. What is the **reddish brown** substance deposited on the nail?
- a. iron sulphate
 - b. copper
 - c. iron
 - d. copper sulphate
10. What is the **green solution** formed in the reaction between iron (Fe) nail and copper sulphate (CuSO_4) solution?
- a. copper
 - b. iron
 - c. iron sulphate
 - d. copper sulphate
11. What substance was displaced in chemical reaction between iron and copper sulphate solution?
- a. copper
 - b. iron
 - c. iron sulphate
 - d. copper sulphate
12. Which element is more reactive, iron (Fe) or copper (Cu)?
- a. copper is more reactive
 - b. iron is more reactive
 - c. both have the same reactivity
 - d. none of the above
13. What type of reaction is the chemical reaction between iron (Fe) and copper sulphate solution?
- a. endothermic reaction
 - b. exothermic reaction
 - c. neutral reaction
 - d. no temperature change
14. What characteristic of chemical reaction was **not observed** when the iron nail was dipped into copper sulphate solution?
- a. new substances were formed
 - b. change in color
 - c. gas was formed
 - d. change in temperature
15. Why did the **blue copper sulphate** changes **green color**?
- a. Because the solution is now iron sulphate.
 - b. Because of the presence of copper.
 - c. Because of the precipitate.
 - d. Because there was a gas formed.
16. Why did copper was displaced by iron in the sulphate solution?
- a. Because copper is more reactive than iron.
 - b. Because iron is more reactive than copper.
 - c. Because both iron and copper are reactive.
 - d. Because both iron and copper are not reactive.