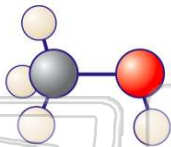




Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 Which property of a **distilled water solution** will **not** be affected by adding 50 mL of **CH<sub>3</sub>OH(l)** to 100 mL of the water solution at 25°C?

- A conductivity
- B vapor pressure
- C freezing point
- D boiling point



2 What is the **gram formula mass** of **Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>**?

- A 196 g
- B 214 g
- C 245 g
- D 310 g



3 What is the **total number of grams of HI** in 0.500 liter of 1.00 M HI?

- A 1.00 g
- B 0.500 g
- C 64.0 g
- D 128 g



4 Approximately **how many calories of heat** are needed to completely change 10 grams of **ice to water** at the melting point temperature?

- A 1 cal
- B 8 cal



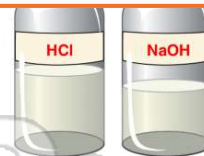
## PREVIEW

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7  
B 43.2%  
C 45.9%  
D 54.1%

**O**  
Oxygen  
15.999

- B 2.0 L
- C 3.0 L
- D 4.0 L



9 Expressed to the correct number of significant figures, the **sum** of two masses is **445.2 grams**.  
Which two masses produce this answer?

- A 210.10 g + 235.100 g
- B 210.100 g + 235.10 g
- C 210.1 g + 235.1 g
- D 210.10 g + 235.10 g

10 A **hydrated salt** is a solid that includes water molecules within its crystal structure. A student heated a **9.10-gram** sample of a hydrated salt to a constant mass of **5.41 grams**.

What **percent** by mass of water did the **salt** contain?

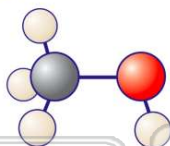
- A 3.69%      C 40.5%
- B 16.8%     D 59.5%



## ANSWER KEY

Which property of a **distilled water solution** will **not** be affected by adding 50 mL of **CH<sub>3</sub>OH(l)** to 100 mL of the water solution at 25°C?

- A conductivity
- B vapor pressure
- C freezing point
- D boiling point



(a)

What is the **gram formula mass** of **Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>**?

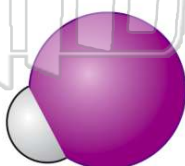
- A 196 g
- B 214 g
- C 245 g
- D 310 g



(d)

What is the **total number of grams of HI** in 0.500 liter of 1.00 M HI?

- A 1.00 g
- B 0.500 g
- C 64.0 g
- D 128 g



(c)

Approximately **how many calories of heat** are needed to completely change 10 grams of **ice to water** at the melting point temperature?

- A 1 cal
- B 8 cal
- C 80 cal



(d)



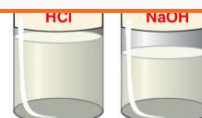
## PREVIEW

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- C 45.9%
- D 54.1%

Oxygen  
15.999

- C 3.0 L
- D 4.0 L



Expressed to the correct number of significant figures, the **sum** of two masses is **445.2 grams**.

Which two masses produce this answer?

- A 210.10 g + 235.100 g
- B 210.100 g + 235.10 g
- C 210.1 g + 235.1 g
- D 210.10 g + 235.10 g

(c)

A **hydrated salt** is a solid that includes water molecules within its crystal structure. A student heated a **9.10-gram** sample of a hydrated salt to a constant mass of **5.41 grams**.

What **percent by mass of water** did the **salt** contain?

- A 3.69%
- B 16.8%
- C 40.5%
- D 59.5%

(c)