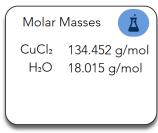
Empirical Formulas of Hydrates

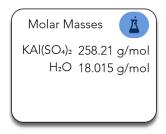
Question One

Cupric chloride, CuCl₂, when heated to 100°C is dehydrated. If 0.235 g of CuCl₂ \cdot x H₂O gives 0.185 g of CuCl₂ on heating, what is the value of x?



Question Two

If potassium aluminum sulfate hydrate, $KAl(SO_4)_2 \cdot x H_2O$, is heated to 100°C it leaves only $KAl(SO_4)_2$. Assume you start with 4.74 g of the hydrated compound and that the sample loses 2.16 g of water. What is the value of x?



Question Three

If "Epsom salt," MgSO₄ · x H₂O is heated to 250°C, all the water of hydration is lost. Upon heating a 1.687 g sample of the hydrate, 0.824 g of MgSO₄ remains. What is the formula of Epsom salt?

