

Answer on Question #53176 – Chemistry – General chemistry

Question:

What is the molecular weight of the following compounds?

C_2H_5OH , $CuSO_4$, $AgNO_3$

Solution:

$$\begin{aligned}M(C_2H_5OH) &= 2m(C) + 6m(H) + m(O) = 2 \cdot 12.011 + 1.008 \cdot 6 + 15.999 \\ &= \mathbf{46.069 \text{ g mol}^{-1}}\end{aligned}$$

$$\begin{aligned}M(CuSO_4) &= m(Cu) + m(S) + 4 \cdot m(O) = 63.546 + 32.064 + 4 \cdot 15.999 \\ &= \mathbf{159.606 \text{ g mol}^{-1}}\end{aligned}$$

$$\begin{aligned}M(AgNO_3) &= m(Ag) + m(N) + 3m(O) = 107.868 + 14.007 + 3 \cdot 15.999 \\ &= \mathbf{169.872 \text{ g mol}^{-1}}\end{aligned}$$