

Answer on Question #72543 - Chemistry - General Chemistry

Question:

How many grams are contained in a 7.44 mole sample of Ammonium Phosphate { (NH₄)₃PO₄ }?

- A. 149.0 g
- B. 1043.0 g
- C. 1109.5 g
- D. 1117.5 g
- E. None of the Above

Answer:

The mass of the sample is the product of the number of the moles n and the molar mass M :

$$m = M \cdot n = 149.0867 \left(\frac{\text{g}}{\text{mol}} \right) \cdot 7.44(\text{mol}) = 1109.2 (\text{g})$$

The value C, 1109.5 is very close to the obtained mass of 1109.2 g. Thus, the answer is C.

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