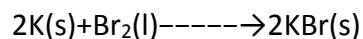


Answer to Question #62314, Chemistry / General Chemistry

For each of the reactions, calculate the mass (in grams) of the product formed when 15.47 g of the underlined reactant completely reacts. Assume that there is more than enough of the other reactant.



---Br₂ (l) is the underlined reactant

Express your answer using four significant figures.

Answer:

If you are given 15.47 g of Br₂, to find the mass of the product KBr, we can use dimensional analysis and equation coefficients to convert mass of Br₂ to moles of Br₂, to moles of KBr, to grams of KBr:

$$m = \frac{15.47 \text{ g Br}_2}{1} \times \frac{1 \text{ mol Br}_2}{159.808 \text{ g Br}_2} \times \frac{2 \text{ mol KBr}}{1 \text{ mol Br}_2} \times \frac{119.002 \text{ g KBr}}{1 \text{ mol KBr}} = 23.04 \text{ g}$$

23.04 g KBr