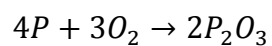


Answer on Question #45226, Chemistry, Inorganic Chemistry

When Phosphorus burns in a limited amount of Oxygen, phosphorus (III) oxide is formed.



In this reaction, 4 moles(124 g) of Phosphorus react with 3 moles(96 g) of Oxygen. Then, we have the follow proportion:

$$124 \text{ g P} - 96 \text{ g O}_2$$

$$10 \text{ g P} - x \text{ g O}_2$$

$$x = \frac{10 * 96}{124} = 7,74 \text{ g}$$

Therefore, Oxygen is limited reactant.