

## Answer on Question #66696 - Chemistry – General Chemistry

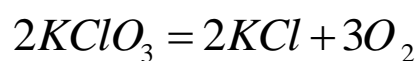
### Task:

How many moles of oxygen are produced when 7.5 moles of potassium chlorate decompose completely?

### Solution:

Potassium chlorate is a compound containing potassium, chlorine and oxygen atoms, with the molecular formula  $KClO_3$ .

Scheme of decomposition reaction of potassium chlorate:



By reaction equation:

$$\frac{n(KClO_3)}{2} = \frac{n(O_2)}{3};$$

Then,

$$n(O_2) = \frac{3n(KClO_3)}{2} = \frac{3 \cdot 7.5}{2} = 11.25 \text{ moles of } O_2$$

**Answer:** 11.25 moles of oxygen.

Answer provided by <https://www.AssignmentExpert.com>