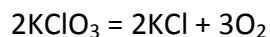


Answer on Question #52596 – Chemistry – Inorganic Chemistry

Question:

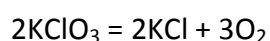
How many molecules of oxygen gas, O₂, are produced?



Conditions are incomplete!!! That's why I assume that we had 1 mole of KClO₃.

Answer:

Potassium chlorate decompose to form potassium chloride and oxygen, according to the following reaction:



It is shown that from 2 mol of potassium chlorate we can obtain 3 mol of oxygen, so from 1 mol of potassium chlorate we will obtain **1.5 mol** of oxygen.

It is well known fact, that in 1 mole of pure substance there are 6.023×10^{23} molecules, so in 1.5 mol of oxygen contain **9.035×10^{23} molecules** of oxygen.