Answer on Question #42545 - Chemistry - Physical Chemistry

Question:

Ammonium phosphate $(NH_4)_3PO_4$ contain 3.18 moles of hydrogen atoms. The number of moles of oxygen atom in the sample is?

Answer:

Sample of $(NH_4)_3PO_4$ contain 12 moles of “H“ and 4 moles of“O“. It means that ratio “H“ to“O“ is 12/4. That’s why we can do the conclusion that number of moles of oxygen atom in the sample is in three times less then number of moles of hydrogen atom.

Real amount of sample contain 3.18 moles of hydrogen. So real amount of oxygen in the sample is 3.18 moles/3 = 1.06 moles.

Answer: 1.06 moles of oxygen atom is in the sample.