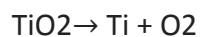# Answer on Question #48397, Chemistry, Inorganic Chemistry

Question: Titanium metal is obtained from the mineral rutile, TiO2. How many kilograms of rutile are needed to produce 100.0 kg of Ti?

Answer: The equation of this chemical reaction is:

TiO2→ Ti + O2

The number of moles of TiO2 = 100000g/80g/mole = 1250moles.

From the reaction we see that number of mole of TiO2 is equal to the number of mole of Ti.

So, the mass of Ti 1250mole*48g/mole = 60kg.