Answer on Question #42604, Chemistry, Inorganic Chemistry

Question:

how many grams Ca(oh)2 from Ca(OH)2 + 2HCl = CaCl2 + 2H2O given 45 g H2O

Solution:

We need to find the amount of substance of water:

$N(H_2O)(mole) = 45/18 = 2.5$;

From the reaction equation we can see, that the amount of $Ca(OH)_2$ is equal to the half of water amount:

$N(Ca(OH)_2)(mole) = 2.5/2 = 1.25$;

Now we can calculate the mass of $Ca(OH)_2$:

$M(Ca(OH)_2) = 1.25*74 = 92.5$

Answer: 92.5