When heated, calcium carbonate decomposes to yield calcium oxide and carbon dioxide gas via the reaction CaCO3(s)→CaO(s)+CO2(g) What is the mass of calcium carbonate needed to produce 75.0 L of carbon dioxide at STP?

Solution.

n(CO2) = 3.35 mole

n(CaCO3) = 3.35 moles

m(CaCO3) = 335 g

Answer. 335 g

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