a gaseous organic compound X was burnt in excess of oxygen. 0.112dm^3 volume sample of X, measured at s.t.p. produced 0.88 grams of carbon dioxide .How many carbon atoms are there in one molecule of X?

Solution:

n (X, mole) = 0.112/22.4 = 0,005;

n (CO_2, mole) = 0.88/44 = 0,02

N (carbon atoms) = 0.02/0.005 = 4

Answer: 4 carbon atoms