A major component of gasoline is octane . When octane is burned in air, it chemically reacts with oxygen gas to produce carbon dioxide and water .

What mass of carbon dioxide is produced by the reaction of 7.9g of octane?

Solution:

 $2C_{8}H_{18} \pm 50_{2} - m(C_{8}H_{18}) = 7,99$ $n(C_{8}H_{18}) = \frac{m}{M} =$ 16 CO2 + 18 H21 $\frac{m}{-4} = \frac{7,99}{(8+12.011+18\times1.008)g/moles}$ $\frac{7,99}{-4,1529} = 0,06921 moles$ 114,1529 moles= 0,06921×16 = 0,5537 moles n (00))= 0,5537 moles x 44,010 moles = 24,379 = 24,49 Answer: 24,49

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