

7) Calculate % composition of each element in $C_6H_5NH_2$

$C = 77.38\%$, $H = 7.58\%$, $N = 15.04\%$

8) A compound is found to have (by mass) 48.38% carbon, 8.12% hydrogen and the rest oxygen. What is its empirical formula?

$C_3H_6O_2$

9) A compound is found to have 46.67% nitrogen, 6.70% hydrogen, 19.98% carbon and 26.65% oxygen. What is its empirical formula?

CH_4N_2O

10) A compound is known to have an empirical formula of CH and a molar mass of 78.11 g/mol. What is its molecular formula?

C_6H_6

11) Another compound, also with an empirical formula of CH is found to have a molar mass of 26.04 g/mol. What is its molecular formula?

C_2H_2

12) A compound is found to have 1.121 g nitrogen, 0.161 g hydrogen, 0.480 g carbon and 0.640 g oxygen. What is its empirical formula? If the molar mass of the compound is 180.2 g/mol then what is the molecular formula for the compound?

$C_3H_{12}N_6O_3$