Ejercicios

1. Obtenga la forma empirica molecular si hay carbono 40% hidrogeno 6.7% y oxigeno 53.3% con una masa de 90 gramos

2. Genere la formula molecular y empirica con 37.8% de carbono 6.3% de hidrogeno y 55.8% de cloro con una masa de 127 gramos

solución

1

C= 40 / 12 g/mol = 3 mol / 3 = 1

H= 6.7 / 1 g/mol = 6.7 mol / 3 = 2

O= 55.3 / 16 g/mol = 3.331 / 3 = 1

F.E = CH_2O

C = 12 × 1 = 12
H = 1 × 2 = 1
O = 16 × 1 = 16
29

90/29

F.M = $C_3H_6O_3$

2.
C = 37.8 %
H = 6.3 %
Cl = 55.8 %
C = 37.8 / 12 g/mol = 3.15 mol / 1.5 = 2
H = 6.3 / 1 g/mol = 6.3 mol / 1.5 = 4
Cl = 55.8 / 35 g/mol = 1.57 mol / 1.5 = 1

F.E = C_2H_4Cl

C = 12 × 2 = 24
H = 1 × 4 = 4
Cl = 35 × 1 = 35
63

47 g / 6.3 = 2

C 2 × 2 = 4
H 2 × 4 = 8
Cl 2 × 1 = 2

F.M = $C_4H_8Cl_2$