DD MM AA

12/08/2024

Ejercicios

1 obtengan la formula empirica y 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 oxo con una masa de 127 gramos

solución

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

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

O = 53.3 / 16 g/mol = 3.33 1 / 3 = 1

Formula empirica = CH_2O

C = 12 x 1 = 12

H = 1 x 2 = 1

O = 16 x 1 = 16

29

90/29 = 3

Formula molecular $C_3H_6O_3$

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2 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

fórmula empírica C_2H_4Cl

C = 12 x 2 = 24

H = 1 x 4 = 4

Cl = 35 x 1 = 35

63

127 g / 63 = 2

2 x 2 = 4

2 x 4 = 8

2 x 1 = 2

fórmula molecular $C_4H_8Cl_2$