Molar Mass & Percent Composition Worksheet

ⓐ $CaCO_3$

ⓑ $MgCr_2O_7$

ⓒ $BaCl_2$

ⓓ SO_2

Molar Mass & Percent Composition Worksheet

Answers

ⓐ $CaCO_3$

Molar mass of $CaCO_3$ = Molar mass of Ca + Molar mass of C + (3 x Molar mass of O) = 40.078 + 12.011 + 72 = 124.089 g/mol

% of Ca = (40.078/124.089) x 100 % = 32.3 %
% of C = (12.011/124.089) x 100 % = 9.7 %
% of O = (72/124.089) x 100 % = 58 %

ⓑ $MgCr_2O_7$

Molar mass of $MgCr_2O_7$ = Molar mass of Mg + (2 x Molar mass of Cr) + (7 x Molar mass of O) = 24.305 + 103.98 + 112 = 240.285 g/mol

% of Mg = (24.305/240.285) x 100 % = 10.11%
% of Cr = (103.98/240.285) x 100 % = 43.28%
% of O = (112/240.285) x 100 % = 46.61%

ⓒ $BaCl_2$

Molar mass of $BaCl_2$ = Molar mass of Ba + (2 x Molar mass of Cl) = 137.33 + 70.9 = 208.23 g/mol

% of Ba = (137.33/208.23) x 100 % = 65.95%
% of Cl = (70.9/208.23) x 100 % = 34.05%

ⓓ SO_2

Molar mass of SO_2 = Molar mass of S + (2 x Molar mass of O) = 32.065 + 32 = 64.065 g/mol

% of S = (32.065/64.065) x 100 % = 50%
% of O = (32/64.065) x 100 % = 50%