

MOLAR MASS & COMPOSITION WORKSHEET

Determine the fraction and % composition of each element below in the following compounds.

Compound	% Composition			
H_2SO_4	H =	S =	O =	
CO_2	C =	O =		
$\text{Ca}(\text{OH})_2$	Ca =	O =	H =	
$\text{HC}_2\text{H}_3\text{O}_2$	H =	C =	O =	
N_2O	N =	O =		
Al_2S_3	Al =	S =		
NaOCl	Na =	O =	Cl =	
KMnO_4	K =	Mn	O =	
$\text{C}_2\text{H}_4\text{Cl}_4\text{O}_2$	C =	H =	Cl	O
CH_4	C =	H =		
H_3PO_4	H =	P =	O =	

Space for Rough Work

MOLAR MASS & COMPOSITION WORKSHEET

Answers

Compound	% Composition			
H_2SO_4	$\text{H} = (2/98) \times 100 = 2.1\%$	$\text{S} = (32/98) \times 100 = 32.7\%$	$\text{O} = (64/98) \times 100 = 65.2\%$	
CO_2	$\text{C} = (12/44) \times 100 = 27.3\%$	$\text{O} = (32/44) \times 100 = 72.7\%$		
Ca(OH)_2	$\text{Ca} = (40/74) \times 100 = 54.05\%$	$\text{O} = (32/74) \times 100 = 43.2\%$	$\text{H} = (2/74) \times 100 = 2.7\%$	
$\text{HC}_2\text{H}_3\text{O}_2$	$\text{H} = (4/60) \times 100 = 6.67\%$	$\text{C} = (24/60) \times 100 = 40\%$	$\text{O} = (32/60) \times 100 = 53.33\%$	
N_2O	$\text{N} = (28/44) \times 100 = 63.63\%$	$\text{O} = (16/44) \times 100 = 36.37\%$		
Al_2S_3	$\text{Al} = (54/150) \times 100 = 36\%$	$\text{S} = (96/150) \times 100 = 64\%$		
NaOCl	$\text{Na} = (23/74) \times 100 = 30\%$	$\text{O} = (16/74) \times 100 = 22\%$	$\text{Cl} = (35.5/74) \times 100 = 48\%$	
KMnO_4	$\text{K} = (39/158) \times 100 = 25\%$	$\text{Mn} = (39/158) \times 100 = 25\%$	$\text{O} = (64/158) \times 100 = 40\%$	
$\text{C}_2\text{H}_4\text{Cl}_4\text{O}_2$	$\text{C} = (24/202) \times 100 = 11.1\%$	$\text{H} = (4/202) \times 100 = 1.9\%$	$\text{Cl} = (142/202) \times 100 = 70.2\%$	$\text{O} = (32/202) \times 100 = 15.8\%$
CH_4	$\text{C} = (12/16) \times 100 = 75\%$	$\text{H} = (4/16) \times 100 = 25\%$		
H_3PO_4	$\text{H} = (3/98) \times 100 = 3.1\%$	$\text{P} = (31/98) \times 100 = 31.6\%$	$\text{O} = (64/98) \times 100 = 65.3\%$	

Space for Rough Work