1. A12(SOy)3

Mof AI =
$$26.982 \text{ glmol}$$

Mof S = 32.066 glmol
Mof O = 15.999 glmol
N# of AI = 2
N# of S = 3

Required

% A1= ?

%0=?

m# of
$$0 = 469 = 12$$

M of $A1_2(SO_4)_3 = (MofA1)_2 + (MofS)_3 + (MofO)_{12} = 26.982(2) + 32.066(3) + 15.999(12)_{12} = 342.1591mol$

Solution

$$\frac{1}{50} = \frac{12 \times 15.9499/mol \times 100\%}{342.159/mol} \times \frac{100\%}{56.112231 = 56.11\%}$$

: The percent composition of mass by Alminum, sulfur 8 oxygen are: A1: 15-77% 5:28.12%

0:56.11%

2. Assume total muss of 100 grams

Given

MNa= 32.49 Na

ms = 22.595 | NaSO =?

mo= 45.19 0

MNa=22.9909/mal 1 ns=9

Ms=32.066 glmol, No=?

Mo = 15-999 glmal

Required

Empirical Formula

h_{Na} = 9

Solution

MNa - MNa

= 32.49

22.990 9/mol

= 1.41 mol Na

 $h_s = \frac{m_s}{m_s}$ Ms

= 22.59

320669/mg

= 1.409308395 mol = 0.7016777896mol = 2.818926183

= 0.70 mol 5

no=mo Mo

= 45.19 15-9999 [mal

= 2.82 mol 0

Na	5	0
Dividue by < 1.41	0.70	2.82
lowest mole value, 0.79mol > 2.01	1	4.03
Randed <= 2	1	4
	\	

.. The empirical formula is Na2504

3. Assume a 100g sample

Griven

MH= 13.59 H

MH = 1.008 9/mol Mempound = 74.14

Mo = 15.999 glmal mo = 21.690

(800,130) + (10,01) =

Kequired

Molecular termular for CHO

NH 3

Solution

nc = mc

 $h_{H} = \frac{m_{H}}{m_{H}}$

off + while + will = ourson -

 $n_0 = \frac{m_0}{M_0}$

12.0119/ma) 22321

= 13.59 1.008 9/mal = 21.6

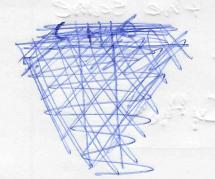
= 5.403390235 mg

= 13.39285714 mol = 1.35 mol 0

= 1.35008438md

= 5.40 mol C

= 13.39 mal H



in the moleculum Farmente is Coffi

Divide by 13.39 1.35
Novest 45.40
Mole, 1.3 Travol

9.92 4 reads 8/10 3/ = 04 0 8 9 11 0 = 6 va Empirical Formala is CyH100 Empirical molar mass La Maythoo = May + Mto + Mo = 4(12.011) + 10(1.008) + 15.999 glmol = 74.123 g/mol Ratio Monround to Mcution 74.14 = 1.000229349

Empirical Molar mass 74.123 = 1.000229349

Ratio = 1.00:1 La Molzanlan Farmula 195 the same as Empirical formula. ... The molecular Formula is CyH100