Answer on Question #42199, Chemistry, Organic Chemistry

Question:

calculate the empirical formula of a compound whose percentage composition is ÷ C=21.9% , H=4.6% , Br=73.4% ?

Solution:

The relative numbers of atoms will be:
W%(C)/A_r ÷ W%(H)/ A_r ÷ W%(Br)/ A_r
21.9/12 ÷ 4.6/1 ÷ 73.4/80
1.83 ÷ 4.6 ÷ 0.92

Divide by lowest number (0.92):
1.99 ÷ 5 ÷ 1

Therefore simple ratio is:
2 ÷ 5 ÷ 1

The empirical formula of the compound is **C_2H_5Br**