**The Mole: Empirical and Molecular Formula: Quiz 5b**

**Make sure to SHOW ALL WORK and INCLUDE UNITS!**

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1. 0.888 grams of a compound made up of carbon, hydrogen and oxygen are analyzed and found to contain 0.576 grams of carbon and 0.120 grams of hydrogen. Determine the empirical (or simplest) formula for this compound.

Answers:



mass oxygen = 0.888 g – 0.576 g – 0.120 g = 0.192 g

0.567 g of C x 1 mol of C = 0.04725 mol of C --- > 0.04725 mol of C = 4 mol C

12.01 g 0.0120



0.120 g of H x 1 mol of H = 0.120 mol of H --- > 0.120 mol of H = 10 mol H

1.01 g 0.0120



0.192 g of O x 1 mol of O = 0.0120 mol of O --- > 0.0120 mol of O = 1 mol O

16.00 g 0.0120



**C4H10O**