**Chem 1013: mini-quiz # 13: mole-mass-count word problem A 4 pts March 4**

Your name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Circle all the compound formulas below that are empiric formulas. (2 pts)

C4H8O2 P5Cl25N7 C3H10 O5 Mn4O8 C2H6

2. A compound contains 48.648% C , 8.108 % H and 43.24% O. What is the compound’s empiric formula ? \_\_\_\_\_\_\_\_C3H6O2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| element | Grams,g | GAW (g/mol) | g/GAW=n | n/nmin | 2\*n/nmin |
| C | 48.648 | 12 | 48.648/12=4.054 | 4.054/2.7025=1.5 | 3 |
| H | 8.108 | 1 | 8.108/1=8.108 | 8.108/2.7025=3.0 | 6 |
| O | 43.24 | 16 | 43.24/16=2.7025 | 2.7025/2.7025=1.0 | 2 |

**Chem 1013: mini-quiz # 13: mole-mass-count word problem B 4 pts March 4**

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1. Circle all the compound formulas below that are empiric formulas. (2 pts)

C4H8O P5Cl25N10 C3H10 O2 Mn4O8 C2H6

2. A compound contains 24.324 g C , 4.054 g H and 21.62 O. What is the compound’s empiric formula ? \_\_\_\_\_\_\_\_\_C3H6O2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| element | grams | GAW (g/mol) | n=g/GAW | n/nmin | 2\*n/nmin |
| C | 24.324 | 12 | 24.324/12=2.027 | 2.027/1.351=1.50 | 3 |
| H | 4.054 | 1 | 4.054/1=4.054 | 4.054/1.351=3.0 | 6 |
| O | 21.62 | 16 | 21.62/16=1.351 | 1.351/1.351=1 | 2 |