## Answers to practice problems in page 248

## Answers to Practice <br> Problems I <br> 1. $93.311 \% \mathrm{Fe}, 6.689 \% \mathrm{C}$ <br> 2. $50.05 \% \mathrm{~S}, 49.95 \% \mathrm{O}$ <br> 3. $35.00 \% \mathrm{~N}, 5.05 \% \mathrm{H}$, $59.96 \%$ O

4. a. $35.41 \% \mathrm{Sr}, 64.59 \% \mathrm{Br}$
b. $29.44 \% \mathrm{Ca}, 23.55 \% \mathrm{~S}$, 47.01\% O
c. $31.83 \% \mathrm{Mg}, 31.46 \% \mathrm{C}$, $36.70 \% \mathrm{~N}$
d. $63.70 \% \mathrm{~Pb}, 14.77 \% \mathrm{C}$, 1.86\% H, 19.67\% O
5. a. Both are $39.99 \% \mathrm{C}, 6.73 \% \mathrm{H}$, and $53.28 \% \mathrm{O}$ because, if you combine the hydrogen atoms in acetic acid, the empirical formulas are the same.
b. The percentage composition of the empirical formula is the same as that of the molecular formulas.

## Homework -General

Additional Practice Determine the percentage compositions of the following compounds:

1. NaClO Ans. $30.88 \% \mathrm{Na}$, $47.62 \% \mathrm{Cl}, 21.49 \%$ O
2. $\mathrm{H}_{2} \mathrm{SO}_{3}$ Ans. $2.46 \% \mathrm{H}, 39.07 \% \mathrm{~S}$, $58.47 \%$ O
3. $\mathrm{C}_{2} \mathrm{H}_{5} \mathrm{COOH}$ Ans. $48.63 \% \mathrm{C}$, $8.18 \% \mathrm{H}, 43.19 \% \mathrm{O}$
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