

# Participation Assignment

## CHEM 1050-Chemistry and the Citizen

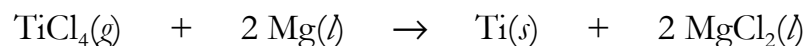
Name:

#9

Section: 03, MW

Due Date: Wednesday 2/10/2016

1. Calculate the theoretical yield of  $\text{Ti}(s)$  in grams when  $3.54 \times 10^7 \text{ g TiCl}_4(g)$  are reacted with an excess of  $\text{Mg}(l)$ .



2. Using the theoretical yield previously calculated, if  $7.91 \times 10^6 \text{ g of Ti}(s)$  are actually obtained, what is the percent yield?

3. A solution is prepared by adding 25.0 dextrose,  $\text{C}_6\text{H}_{12}\text{O}_6$ , to enough water to make 500.0 mL of solution. What is the solution's concentration in molarity, mol/L?

4. You have a magnesium sulfate solution that is 2.00 mol/L. How many milliliters of this solution will you need to make 250.0 mL of a 0.325 mol/L solution?