Participation Assignment CHEM 1090-General Chemistry I

Name:

Section: 32, TR

Due Date: Tuesday 2/18/2020

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1a. Calculate the mass in grams of titanium(IV) chloride, TiCl₄, produced when $9.70 \ge 10^8$ g TiO₂, are reacted with an excess of carbon and chlorine:

 $2 \operatorname{TiO}_2(s) + 3 \operatorname{C}(s) + 4 \operatorname{Cl}_2(g) \rightarrow 2 \operatorname{TiCl}_4(g) + \operatorname{CO}_2(g) + 2 \operatorname{CO}(g)$

1b. If $2.17 \ge 10^9$ g TiCl₄(g) are actually produced, what is the percent yield?