Determining the Percent Composition of Zn in a Galvanized Washer

Procedure:

1. Review lab safety rules and gather safety equipment.
2. Obtain a galvanized washer. Record its mass.
3. Place the washer in a small beaker.
4. Pour enough hydrochloric acid, HCl, into the beaker to immerse the washer in acid.
5. While reaction proceeds, balance the chemical equation below:

   _____ Zn(s) + _____ HCl(aq) → _____H_2(g) + _____ $ZnCl_2$(aq)

6. After the reaction has stopped, carefully remove the washer from the beaker using tongs.
7. Holding the washer with tongs, rinse the washer under running tap water.
8. Dry the washer.
9. Record the new mass of the washer.
10. Clean up and wash your hands.

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Calculations:

1. Determine how many grams of zinc were present in the washer.

2. Determine the percent composition of zinc in the washer.

3. Determine the number of grams of HCl that reacted with the zinc.

4. Identify the type of reaction that occurred between Zn and HCl.

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