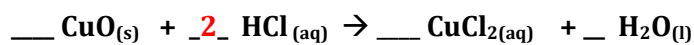


Copper Odyssey Conversion IV

Conversion IV - Changing copper (II) oxide to copper (II) chloride

Pre-lab: Balance the following reaction.



In a complete sentence describe and name the above compounds.

Solid copper (II) oxide reacts with aqueous hydrochloric acid and produces aqueous copper (II) chloride and liquid water

Observations : Conversion III product description:

Black or Blue solid in filter paper

Conversion IV reaction observation:

Turns into a greenish liquid

Conversion IV Questions

1. What type of chemical reaction is Conversion IV? double displacement

2. What were we trying to wash away from the black copper (II) oxide before beginning?

Any excess NaOH

3. Is water polar or nonpolar? polar How do you know? its bent shape

4. How can you tell that Conversion IV is underway?

The reaction started to bubble

5. How can one tell when Conversion IV is completed?

The liquid in the flask is green

6. List all of the substances in the bottle at the end of Conversion IV.

CuCl₂ H₂O

7. Is HCl acidic or basic? acid How do you know? formula starts with an H

8. Determine the number of moles of HCl in 20 mL of 6M HCl.

(Hint: convert mL to L then use Molarity=number of moles/L)

Molarity=number of moles/L

6M= x/.02 L

Moles= 0.12

11. Complete the table listing the symbol, name, classify as metal or nonmetal, give specific group, and give the symbol of another element which could be expected to react similar to the given element.

symbol	name	metal / transition metal / nonmetal	ion	Group	symbol of another element which could be expected to react similar
Cr	chromium	metal/transition	Cr ²⁺ Cr ³⁺	Transition metal	Mo, W, same column
Fe	iron	metal/transition	+	Transition Metal	Co, Ni, Cu
Co	cobalt	metal/transition	+	Transition Metal	Ni, Cu, Fe
Ni	nickel	metal/transition	+	Transition Metal	Co, Cu, Fe
Cu	copper	metal/transition	+	Transition Metal	Co, Ni, Fe
Zn	zinc	metal/transition	+	Transition Metal	Cu, Co, Fe, Ni
As	arsenic	Nonmetal	As ³⁻	Metalloid	Sb, P, N
Br	bromine	Nonmetal	Br ⁻¹	Halogen	F, Cl, I