Checking Electrons in a Model Metal Deposit

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Checking Electrons in a Model Metal Deposit

Question 1

Silver uses one electron per ion, so 4.0 mmol of electrons can deposit 4.0 mmol Ag. Zinc needs two electrons per ion, so the same amount of electrons can deposit 2.0 mmol Zn.

Question 2

Choice (1)

Zn^{2+} needs two electrons per deposited zinc atom while Ag^{+} needs one per deposited silver atom.

Question 3

The half-reaction needs two electrons per zinc ion. Depositing 1.5 mmol zinc uses 3.0 mmol of electrons.

Question 4

The measured zinc accounts for only 3.0 mmol of electrons, leaving 1.0 mmol that did not go into zinc deposition. The all-electrons ideal model does not match this trial.