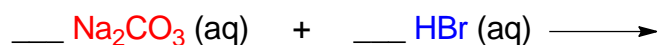


CONCEPT: GAS EVOLUTION EQUATIONS

- A **Gas Evolution Equation** is a molecular equation that involves the creation of specific gases.
 - The gases of _____, _____, & _____ are formed once *median products* lose a water molecule.
 - **Median Product:** The form a product holds before it fully converts into its final product form.
 - Final Product = Median Product – _____.

Gas-Evolution		
Reactant Ions	Median Product	Final Product
$\text{OH}^- + \text{NH}_4^+$		
$\text{H}^+ + \text{HCO}_3^-$		
$\text{H}^+ + \text{CO}_3^{2-}$		
$\text{H}^+ + \text{SO}_3^{2-}$		
$\text{H}^+ + \text{S}^{2-}$		

EXAMPLE: Predict whether a chemical reaction occurs and write the balanced molecular equation.



STEP 1: Break up **Reactant 1** and **Reactant 2** into their ionic forms.

STEP 2: **Swap Ionic Partners** by remembering that opposite charges attract.

- Apply the rules for combining ions based on the numerical values of their charges.

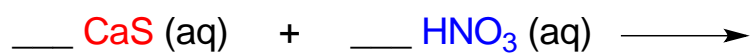
STEP 3: Identify the *Median Product* or gas that forms from the gas evolution equation.

- Except for hydrogen sulfide, break it up into water and gas.

STEP 4: If necessary, balance your molecular equation by placing the correct coefficients in front of each molecule.

CONCEPT: GAS EVOLUTION EQUATIONS

PRACTICE: Predict the products formed from the following gas evolution equation.



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