

Gas Production

Concepts

Explanation:

This demonstration shows the release of CO₂ from the reaction of vinegar (acetic acid) and baking soda (NaHCO₃). The baking soda dissolves to form HCO₃⁻ in the water present in the vinegar which is a dilute solution of acetic acid.



The acetic acid also dissociates in water to form H⁺ and CH₃COO⁻.



At this point the formation of H₂CO₃ occurs and then the dissociation of this releasing CO₂



This CO₂ then inflates the bag.

Sources:

If you have other explanations, concepts, or ideas for this demonstration please share them by contacting our Chem Demo team (bedell@nku.edu; sieveb1@nku.edu). We will pass them on to the community and credit you with the ideas.