Turning Acids into Bases:

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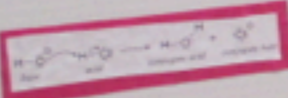
Background Information:

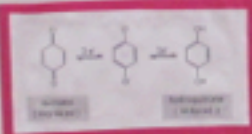
An acid is anything that donates a proton. A base is a substance that is capable of accepting a proton. Acid-Bases reactions usually can occur in a gaseous state, but will normally occur in an aqueous state. The most common acid and base is water itself. Typically when a proton is donated in water, it is accepted by water. H2O is converted into H3O+ (hydronium ion).

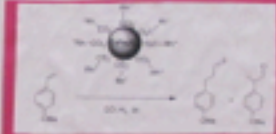
$$HA + H_2O \rightarrow H_3O^+ + A^-$$

Reason:

We feel like we have the necessary tools to make this proposal work as well as the correct mentors with the knowledge we can use. We also feel that this is a great opportunity to learn more about the behaviors of acids and bases as well as the natures of the elements of the periodic tables to apply to other fields in science.





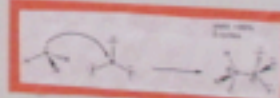


Conclusion:

Through using a catalyst, we can change the behaviors of an acid to mimic the behaviors that define a base.

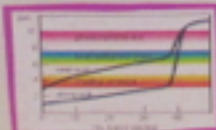
Significance:

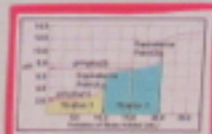
If we do achieve transforming an acid into a base, this work can possibly affect the way scientist use acids and bases in the labs. It will give people a new perspective on how electrons on a certain substance can be changed.



Method:

To make an acid to behave like a base, we could use titration to possibly modify the atoms of the acid and make them develop an acceptation for a proton rather than donating it. This could also be possibly achieved by using some sort of catalyst, which can be a beneficial substance that speeds up a chemical reaction, but is not entirely consumed by the reaction. It can be recovered unchanged at the end of the reaction it has been used to speed up, hence the term catalyst.





References: