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3rd period chemistry
Separation of mixtures lab
10/03/23

Research questions:

How can I separate a mixture into its original parts?

Intro:

Separating mixtures is a crucial part of chemistry because not only does it tell us what the mixture is apart of but it also allows us to study the individual ingredients of the mixture.

Procedure:

First, we can separate the rocks from the sand using hand tools. Next, we can remove the iron filings from the sand with the magnet. Lastly, we used the distilled water to filter the salt from the sand, then boiled the water to get the salt by itself.

Results:

We found that when we pulled the rocks out of the sand using tweezers and the rocks came out almost perfectly clean with little or no sand on them. The iron filings came out easily too with the use of the magnet, we found that the iron filings could be separated from the sand like that. And using a coffee filter, we found that the sand would get trapped in that while the salt passed through it with the water, then when the water evaporated, the salt was left by itself.

Conclusion:

So to answer our question, we can separate a mixture into its original parts by using a variety of different tools. This solution worked almost flawlessly with little or no setbacks. Though these ingredients may be everyday items, this procedure could work for other reasons too such as cooking, and is more important than it may come across

The four methods we used for this project were evaporation, filtration, magnet, and hand tools. Evaporation separates solutions, such as salt in water. Filtration separates small solids from a liquid, such as pouring the water through the sand. Magnetic separation was used to separate magnetic objects from non magnetic objects, such as the iron filings in the sand. And finally, hand tools separate some types of solids, such as the rocks in the sand.

- Sand
- Iron filings
- Rocks
- Salt