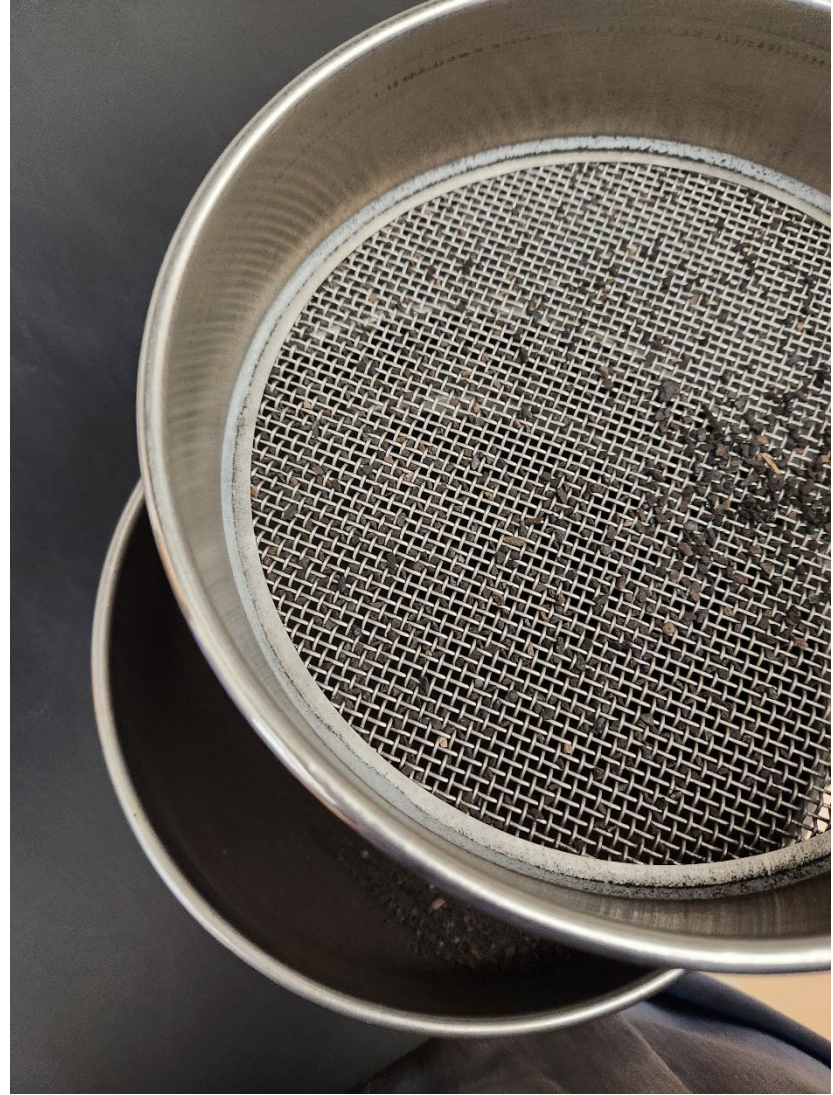
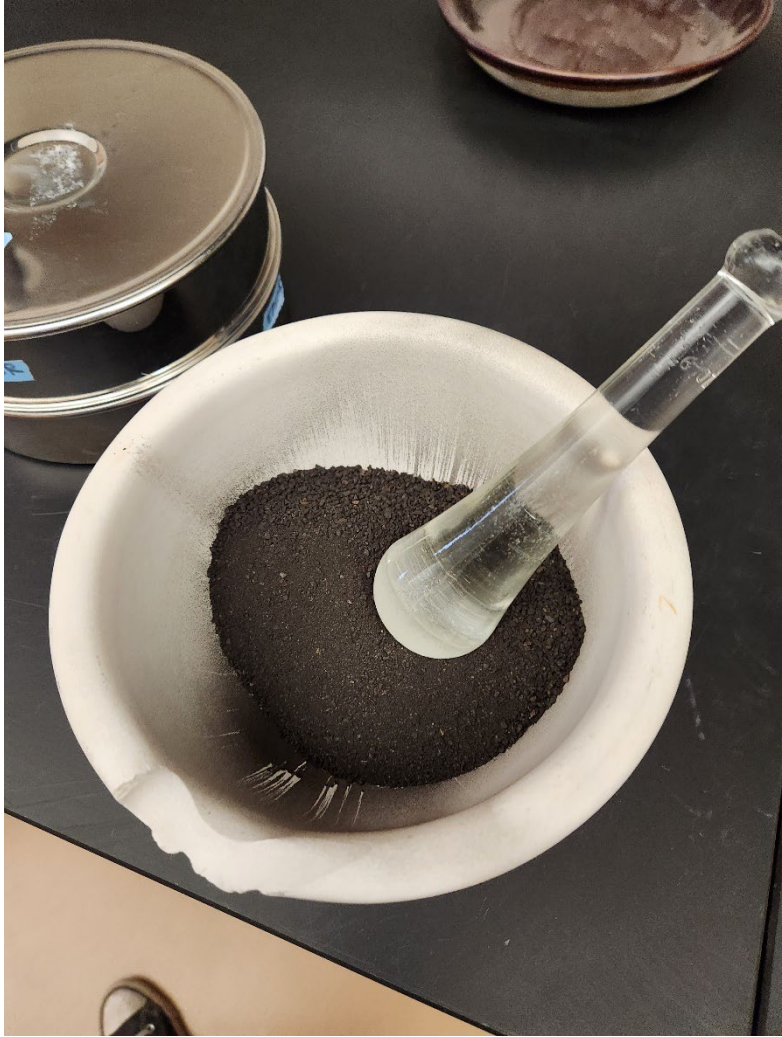


# Rare Earth Elements in Humate Samples by Microwave Digestion

# Method for Analysis

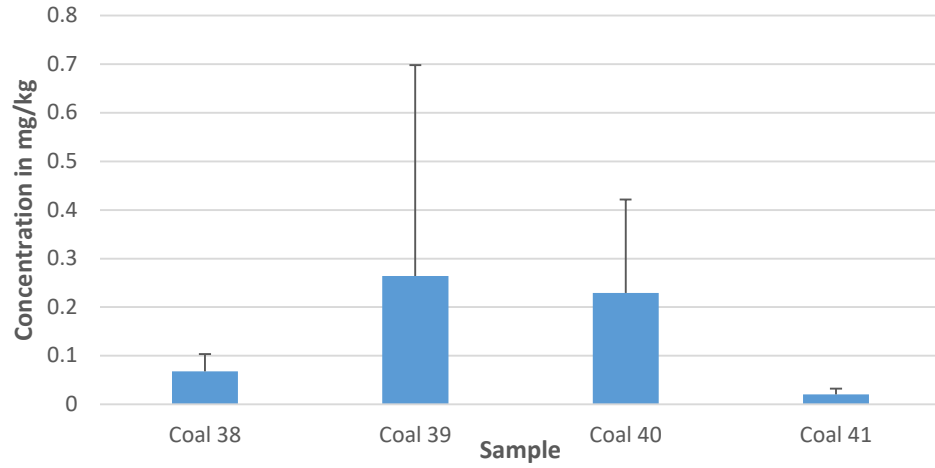
- Utilized Microwave digestion through a two-step digestion
- Nitric acid digestion followed by a Hydrofluoric acid digestion
- Deflocculated samples into finer more homogenized substance
- Sieved samples through sieve
- Used splitter to better homogenize and obtain small aliquot for digestion
- Filtered out digestion and diluted to 50 mL with Ro water
- Further dilutions with a 1:10 acid solution to Ro water
- Used ICP MS to determine concentration of Rare Earths in each sample.



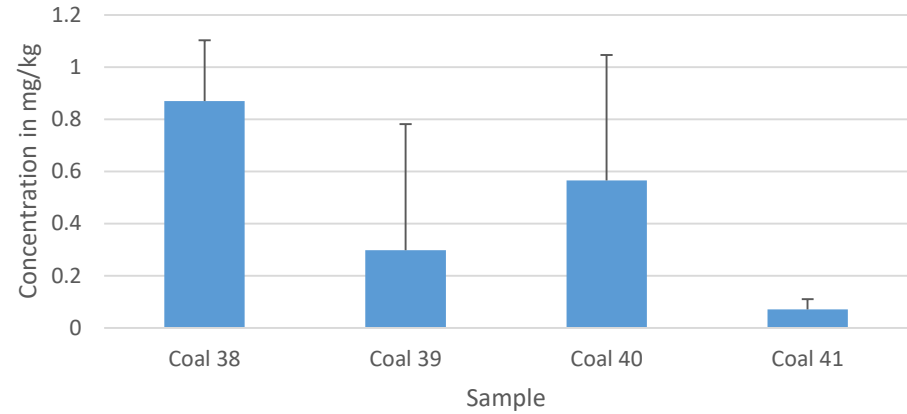
# Most abundant REEs found in the samples

- The most abundant REEs that were relatively found were lanthanum, Cerium, Neodymium and Yttrium.

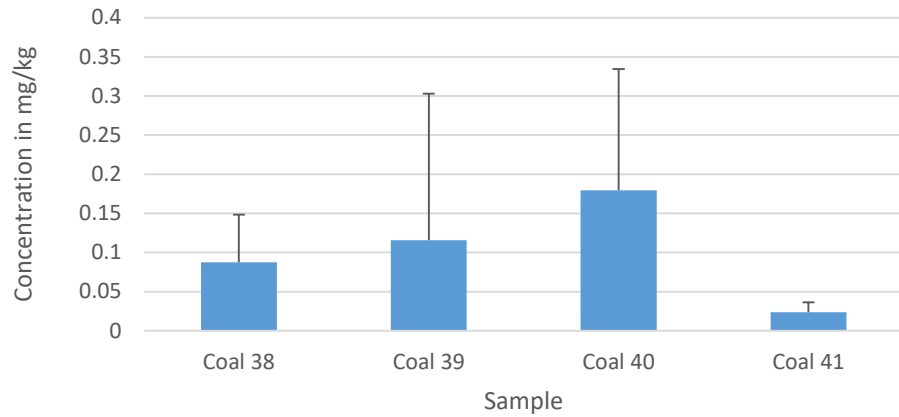
### Lanthanum Average Concentration



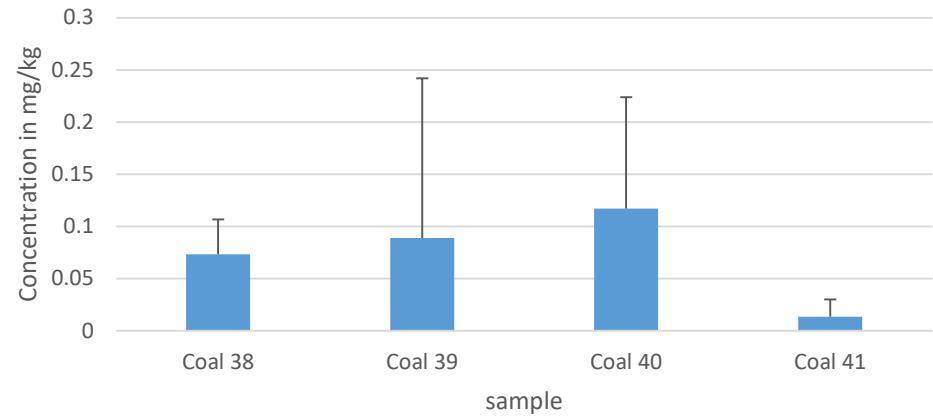
### Cerium Average Concentration



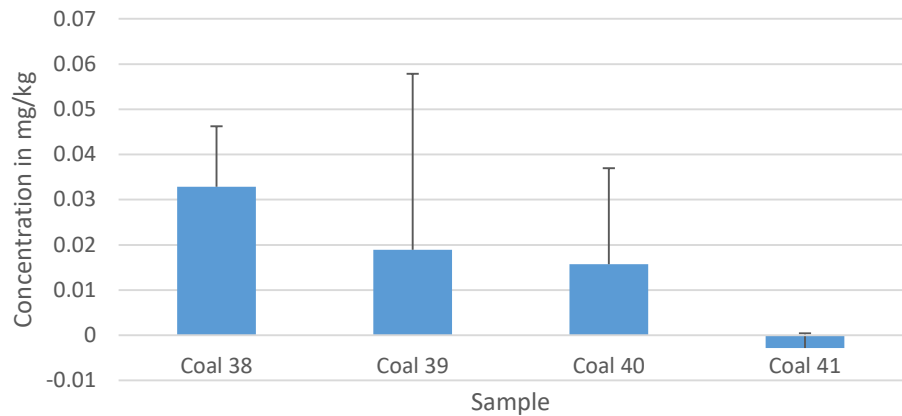
### Neodymium Average Concentration



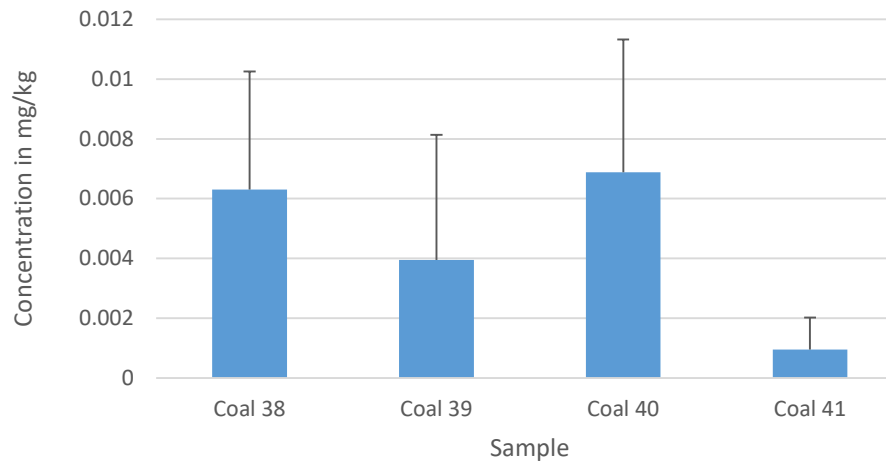
### Yttrium Average Concentration



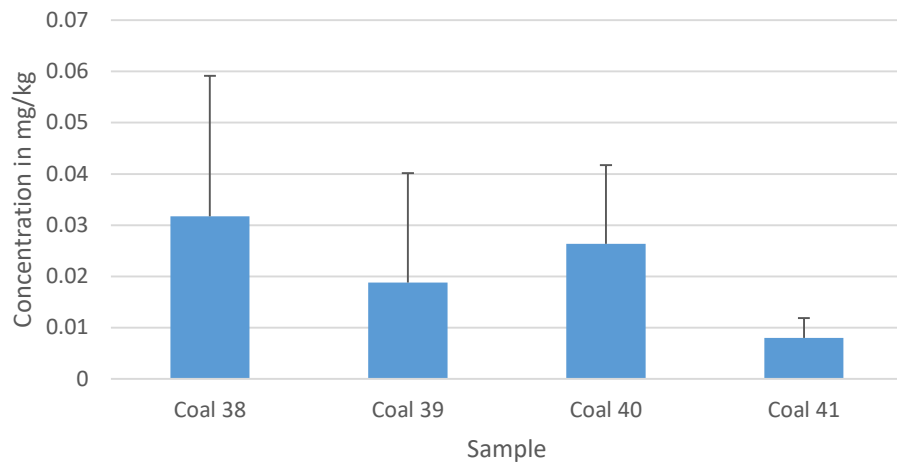
### Samarium Average Concentration



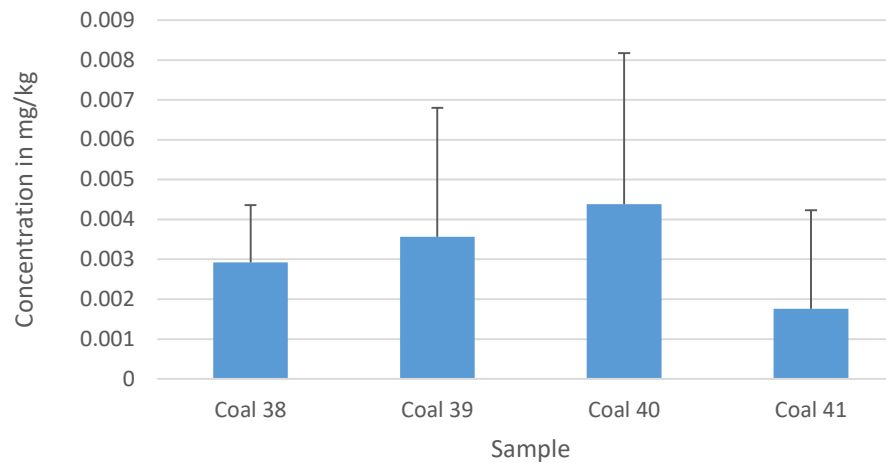
### Terbium Average Concentration



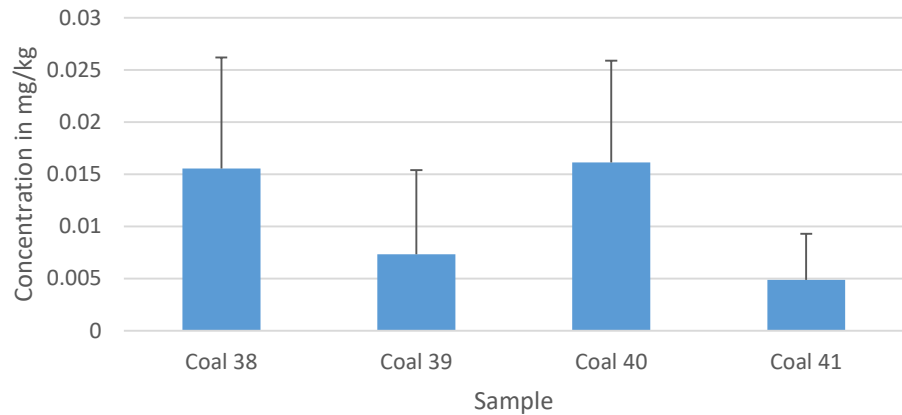
### Gadolinium Average Concentration



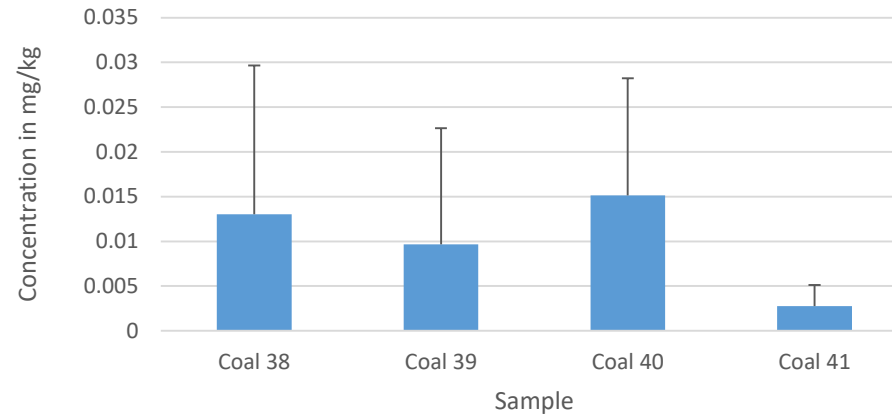
### Holmium Average Concentration



### Ytterbium Average Concentration



### Erbium Average Concentration



### Thulium Average Concentration

