12.119 Problem set 3: Understanding INAA data

(Due: April 4, 2006)

1) Rearrange order of elements in the table by grouping elements with **similar geochemical behavior.**

2) Compare the two set of duplicates. Assume $\pm 10\%$ is acceptable. Do these duplicate analyses agree with each other within $\pm 10\%$? If not, what could be the cause?

3) Compare the three set of washed and unwashed analyses. Are there any elements which systematically and consistently deviate in the washed samples compared to unwashed? Why?

4) Plot concentration (X-axis) vs depth on Y-axis (choose chart type as "XY (Scatter)" in Excel) for each element and comment on elements which have systematic variations with depth (please use the average for duplicates)

5) Make a matrix of correlation coefficients (please use r^2 as you did in problem set 1) and comment on what elements are highly correlated.

(Hint: there is a function in Excel "correlate (array1, array2)" which can be used to calculate r)