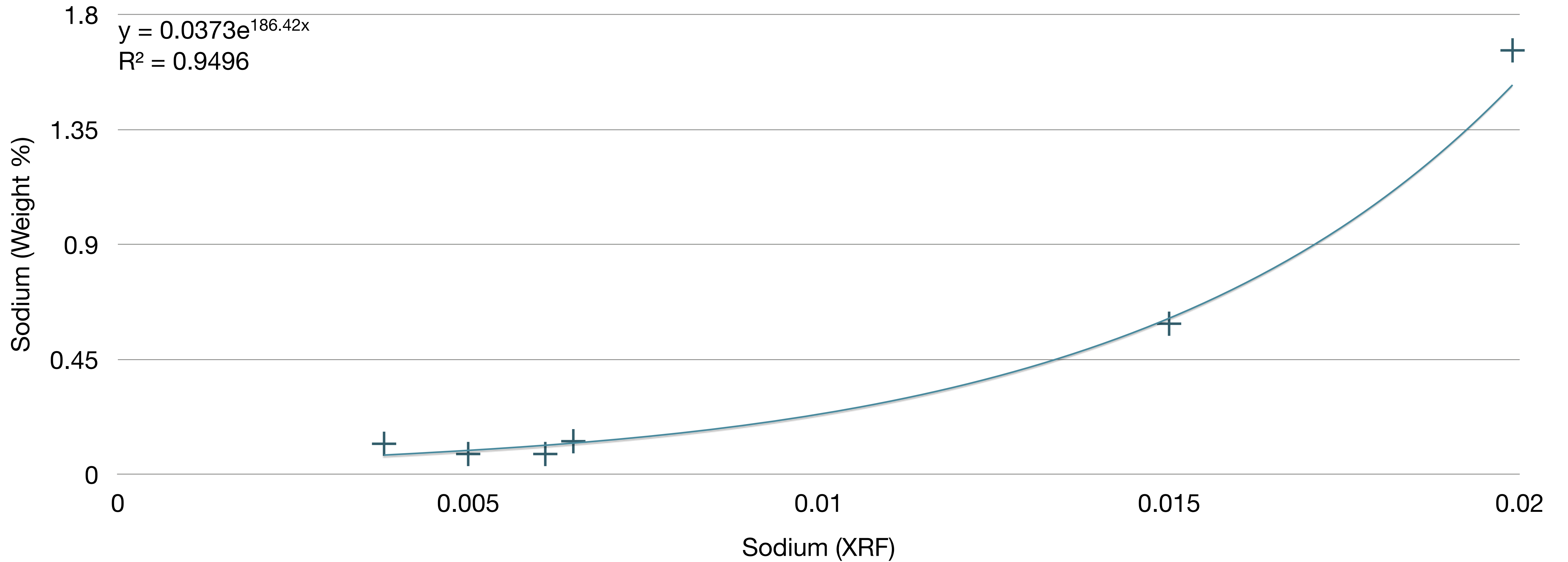


Salts in Water

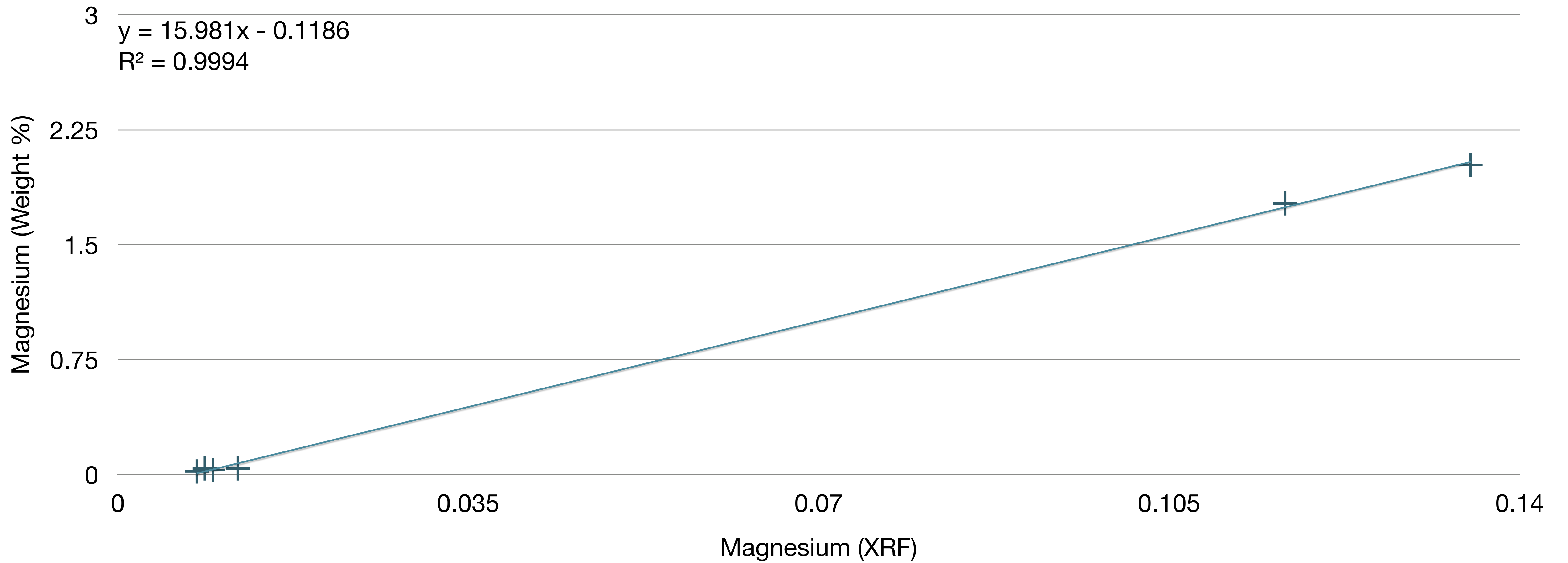
Lee Drake
March 17th, 2015



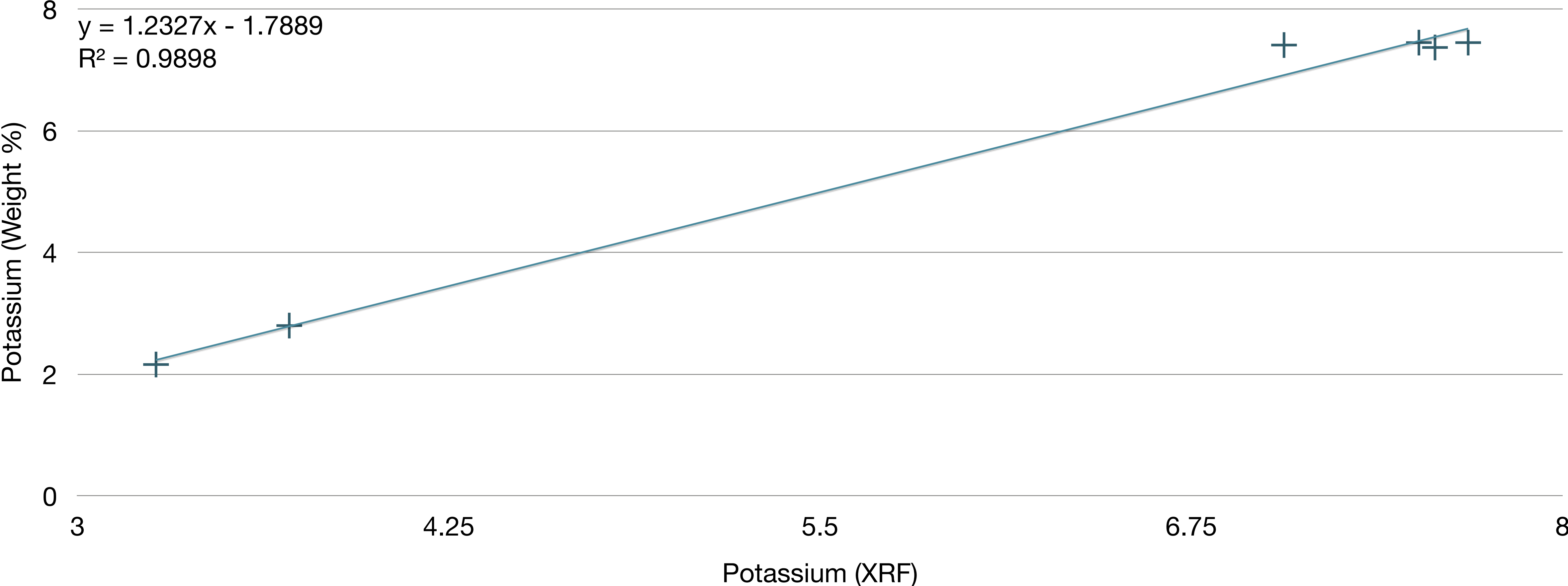
Sodium



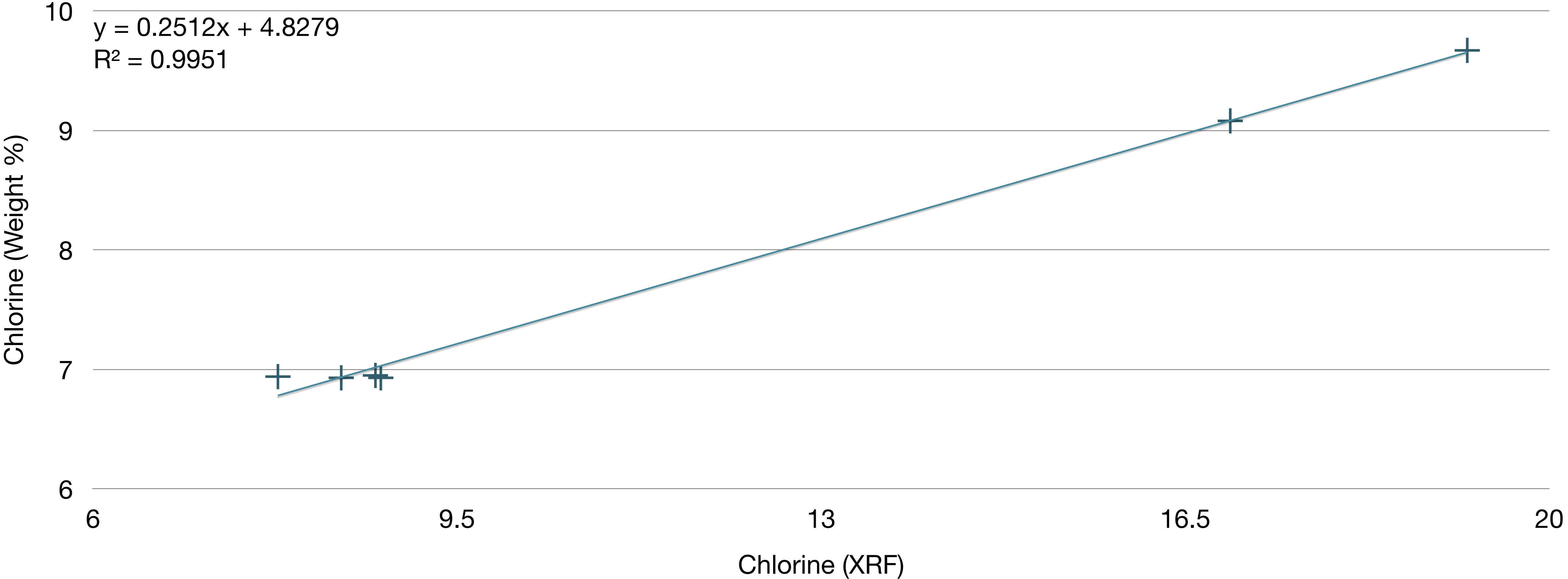
Magnesium



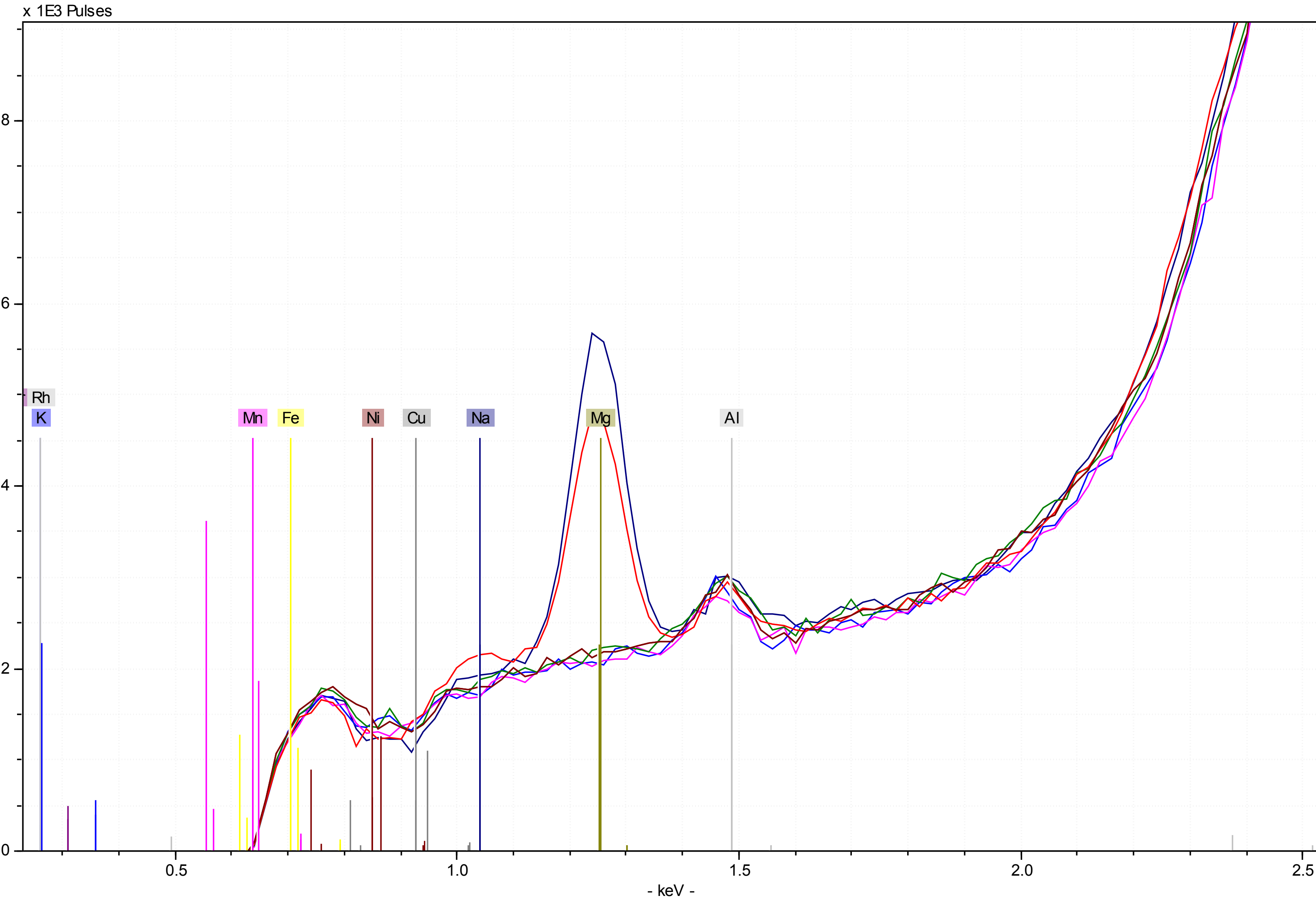
Potassium



Chlorine



Sodium Detection Limit



- #10 (1.66% Na, 1.77% Mg)
- #7 (0.59% Na, 2.02% Mg)

Sodium is clearly identifiable in sample #10 (red), and just barely identifiable in #7 (blue). The limit of determination is likely close to 0.7% in this material. Magnesium is very easy to quantify down to 0.5%.

Quantitative Data

Sample	Na	Mg	Cl	K
#1	0.01	0.01	8.77	7.68
#2	0.00	0.01	8.39	7.52
#3	0.01	0.01	8.72	7.57
#4	0.00	0.01	7.78	7.06
#7	0.01	0.14	16.93	3.71
#10	0.02	0.12	19.21	3.26

Data were collected using 12.8keV and 47 μ A using a constant helium flow.

Net Counts per second were normalized to the Rhodium L-beta line