

Table 3.6: Sample Weights (in grams)

Lab	Sample	Column		Cell		Total # Samples
		CO ₂ -Air Constant Flow	CO ₂ -Air - Saturated H ₂ O	CO ₂ -Air Constant Flow	CO ₂ -Air - Saturated H ₂ O	
1	Shale	1770.45 1765.24 1583.11 ¹	1764.77 1764.84	-	1764.97 1764.93	7 (3 duplicate pairs, one extra)
	Coal Refuse	-	1129.52 1129.48	-	1130.42 1129.51	4 (2 duplicate pairs)
	Limestone	1771.11	1765.52	-	-	2
2	Shale	2025.3 2025.4	1873.8 2025.5	-	2054.4 2054.1	6 (3 duplicate pairs)
	Coal Refuse	-	1278.1 1278.4	-	1278.4 1278.1	4 (2 duplicate pairs)
	Limestone	2008.6	2008.1	-	-	2
3	Shale ²	1198 (2" column) 5430 (4" column) 12,608 (6" column)	-	-	-	1

¹ Lab 1 prepared an extra Shale sample small particle fractions removed (<35M sieve).

² Lab 3 evaluated Shale in three leaching columns of varying diameters (2-inch, 4-inch, and 6-inch)

Comparisons were made on alkalinity, sulfate, calcium and conductivity. Results of the paired t-tests indicate that for all four parameters, mean concentrations were significantly greater for samples exposed to a constant flow compared to those exposed to the saturated water (i.e. significant at the 99% confidence interval). A graph depicting the comparisons run on alkalinity results for the two gas mixture scenarios is shown in Figure 3.2.

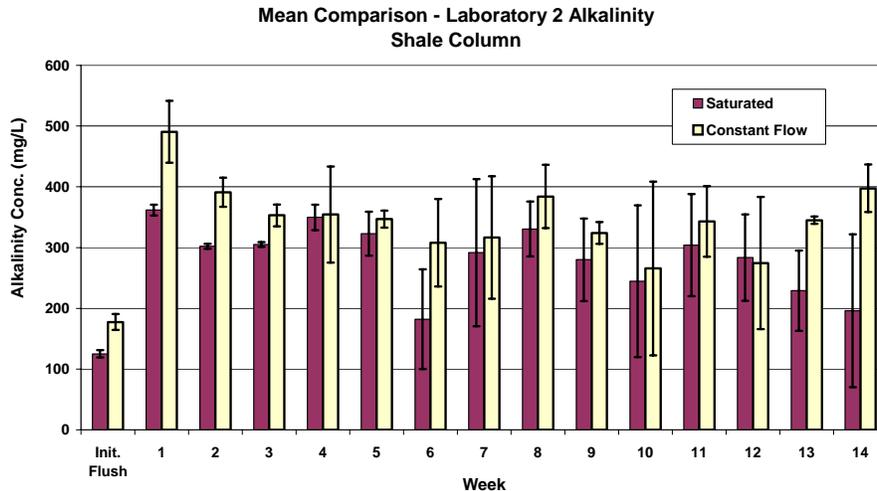


Figure 3.2. Alkalinity concentrations of two gas mixture scenarios.