

Table 7.3. Volume of leachate drained out of columns in mL.

Rock Type		Lab 1		Lab 2		Lab 3		Lab 4		Lab 5		Lab 6		Lab 7		Lab 8	
		C1	C2														
HCS -IN	min	304	338	190	200	171	166	350	340	225	170	315	270	196	220	164	124
	max	323	360	380	365	362	443	440	420	259	305	430	385	365	420	274	280
	range	19	22	190	165	191	277	90	80	34	135	115	115	169	200	110	156
	med	315	351	285	295	246	254	370	363	245	261	373	313	268	250	200	198
LKFC -PA	min	443	440	200	285	244	242	350	350	235	238	160	285	120	140	118	117
	max	459	457	375	405	367	401	395	410	300	314	305	350	245	340	220	245
	range	16	17	175	120	123	159	45	60	65	76	145	65	125	200	102	128
	med	453	449	283	325	314	316	365	355	267	252	240	310	190	210	171	199
KBF -WV	min	387	409	235	245	267	262	330	345	227	244	90	135	085	120		
	max	408	422	385	370	370	370	405	410	249	269	295	275	155	155	230	
	range	21	13	150	125	103	108	75	65	22	25	205	140	155	70	110	
	med	402	420	300	300	305	326	340	360	239	260	228	178	96	140	195	
BCS3 -PA	min	516	462	325	315	313	245	385	340	260	265	240	240	350	260	116	161
	max	565	559	490	500	420	412	460	440	340	315	330	385	530	430	274	250
	range	49	97	65	185	107	167	75	100	80	50	90	145	180	170	158	89
	med	523	522	398	385	347	312	410	350	282	299	283	308	400	288	193	208
MKSS -PA	min	515		355		302		330		277		165		145		156	148
	max	544		485		370		450		353		345		520		236	261
	range	29		130		68		60		76		180		105		80	113
	med	536		413		330		430		324		260		450		200	191

The first step in evaluating the leaching column data, especially for rock samples in the “gray zone”, should be to examine the acidity and alkalinity data, and related mine drainage indicator parameters of pH, conductivity and sulfates. These data should be compared to the acid-base accounting data for these rock samples. The primary goal of the leaching test is to determine or predict whether the mine drainage is likely to be acidic or alkaline, and to what degree. The secondary goal is to determine whether the metals concentration data are indicative of the weathering of these rock samples in the mine environment and the resultant metals concentrations in mine drainage discharges. A simple plot of a water quality parameter (e.g. sulfate) through time, using the raw data (i.e. not weighted, not transformed), is often useful to explore patterns of variation or trends, and get a feel for the data prior to more complex analyses of the data. In this study, 14 water quality analytes were determined for 5 rock types which yields more than 70 plots if all of the analytes are plotted for each rock type and additional plots are delineated to compare rock types. This section includes some examples of these time plots. In these data plots week 1 is the “initial flush” and weeks 2 through 15 are the 14 weekly leaching episodes.