

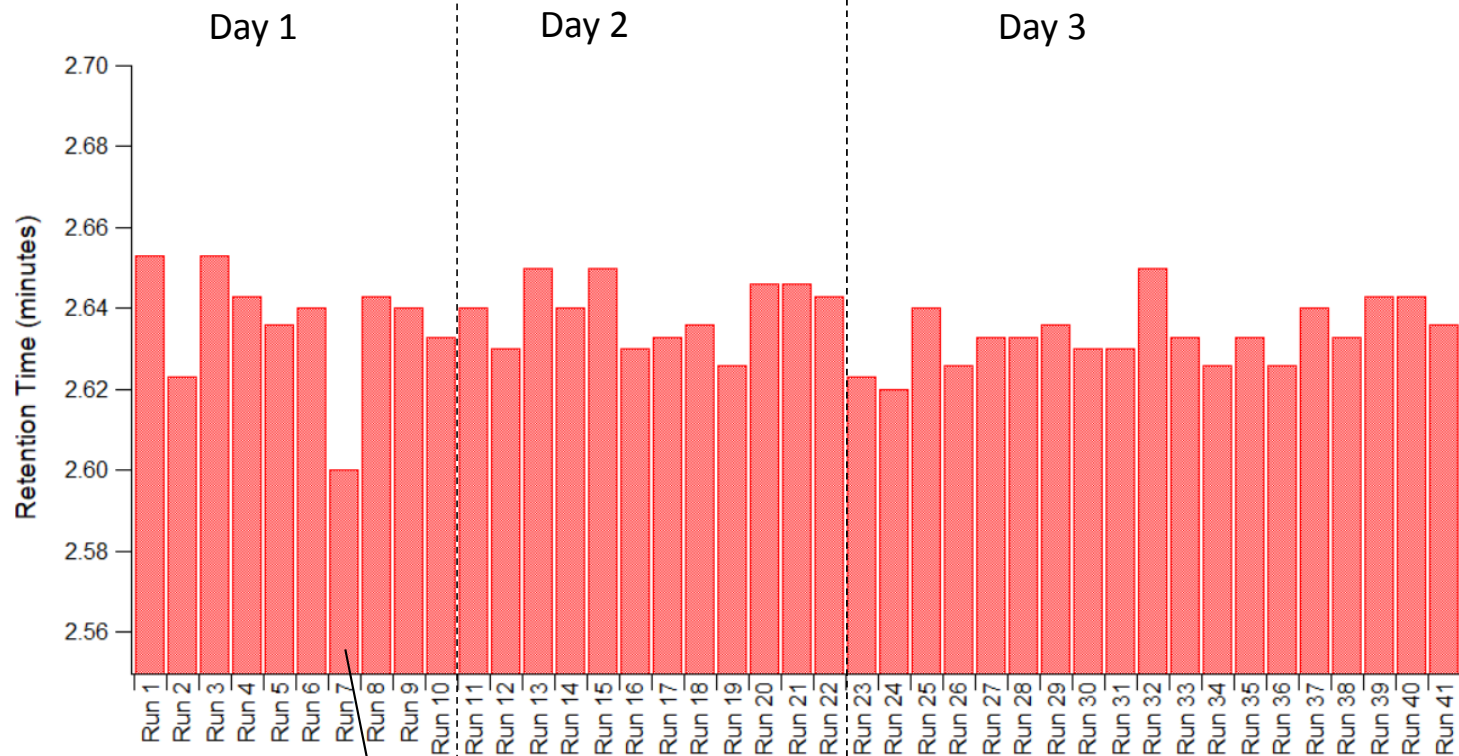
Appendix

Repeatability Test for Retention Time

Mixture TCA, TCP, TCB and PCP are injected into our field portable GC in three different days, total 41 injection.

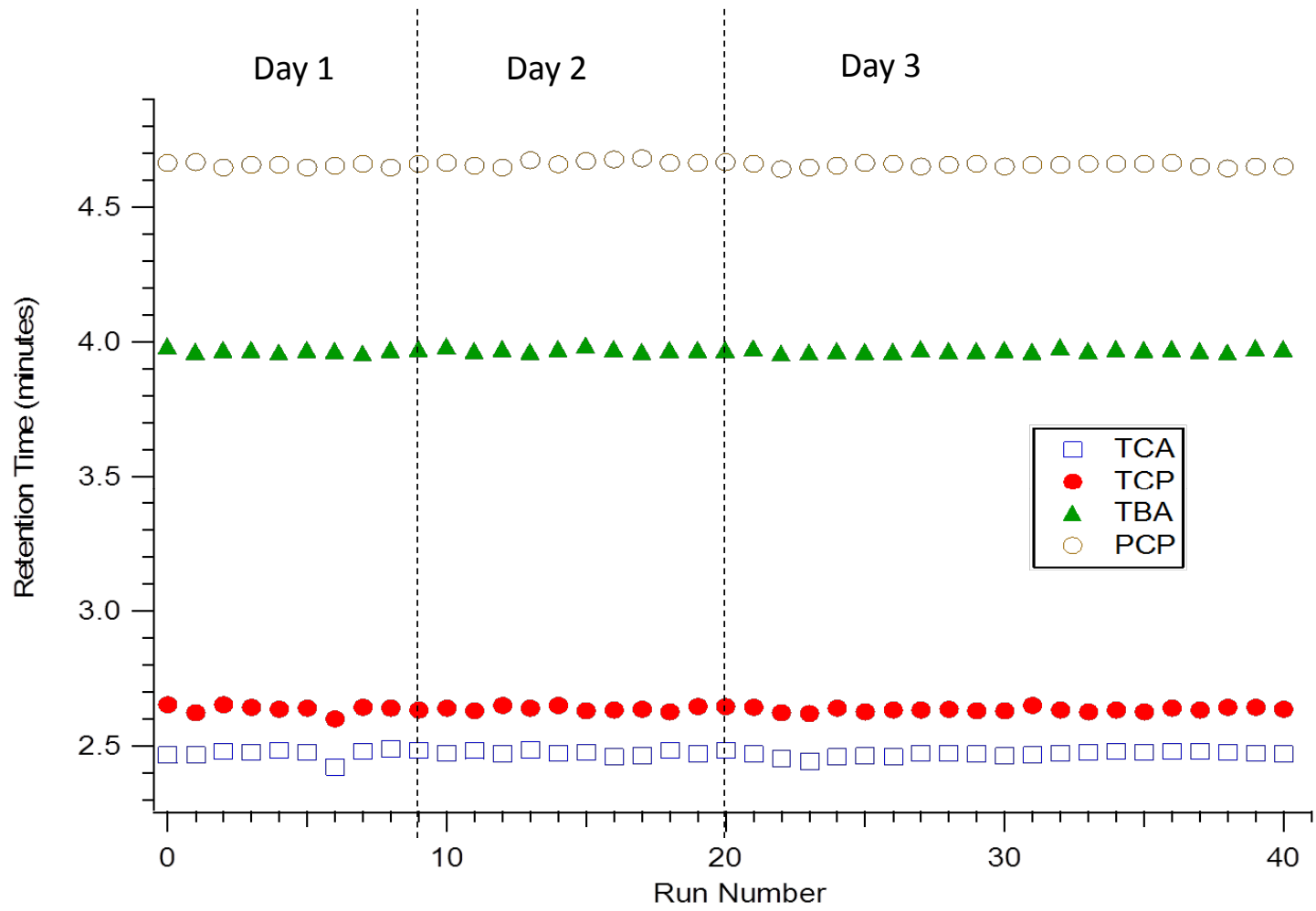
The retention time is very tight, relative standard deviation is less than 0.5%, maximum variation in retention time for TCP for example is about 3 seconds (0.05 minutes)

Day	Run number	Retention Time (minutes)			
		TCA	TCP	TBA	PCP
1	1	2.467	2.653	3.983	4.663
	2	2.466	2.623	3.963	4.666
	3	2.480	2.653	3.970	4.646
	4	2.476	2.643	3.970	4.656
	5	2.483	2.636	3.960	4.656
	6	2.476	2.640	3.970	4.646
	7	2.423	2.600	3.966	4.653
	8	2.480	2.643	3.956	4.660
	9	2.490	2.640	3.970	4.646
	10	2.483	2.633	3.973	4.660
2	11	2.473	2.640	3.983	4.663
	12	2.483	2.630	3.966	4.653
	13	2.470	2.650	3.973	4.646
	14	2.486	2.640	3.963	4.673
	15	2.473	2.650	3.973	4.658
	16	2.476	2.630	3.986	4.670
	17	2.460	2.633	3.973	4.676
	18	2.463	2.636	3.963	4.680
	19	2.483	2.626	3.970	4.663
	20	2.470	2.646	3.970	4.663
	21	2.483	2.646	3.970	4.666
	22	2.470	2.643	3.976	4.660
3	23	2.453	2.623	3.956	4.640
	24	2.443	2.620	3.960	4.646
	25	2.460	2.640	3.966	4.653
	26	2.463	2.626	3.963	4.663
	27	2.460	2.633	3.963	4.660
	28	2.473	2.633	3.973	4.650
	29	2.473	2.636	3.966	4.656
	30	2.470	2.630	3.966	4.660
	31	2.463	2.630	3.970	4.650
	32	2.466	2.650	3.963	4.656
	33	2.473	2.633	3.980	4.656
	34	2.476	2.626	3.966	4.660
	35	2.480	2.633	3.973	4.660
	36	2.476	2.626	3.970	4.660
	37	2.480	2.640	3.973	4.663
	38	2.480	2.633	3.966	4.650
	39	2.476	2.643	3.960	4.643
	40	2.473	2.643	3.976	4.650
	41	2.470	2.636	3.973	4.650
Average		2.471	2.636	3.969	4.657
Relative Standard Deviation (%)		0.49	0.39	0.17	0.19

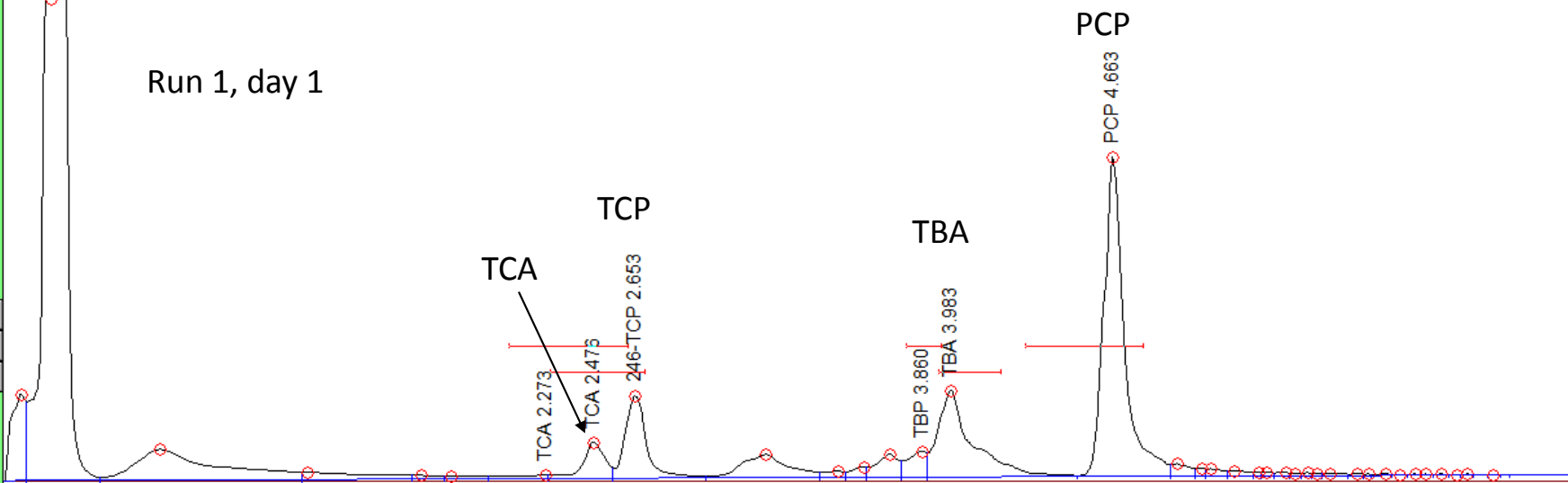


TCP Retention Time
AvgTime = 3.636 min
RSD = 0.39%

Lower retention time in Run 7 probably due to oven initial temperature was not completely settled



Run 1, day 1



Run 41, day 3

