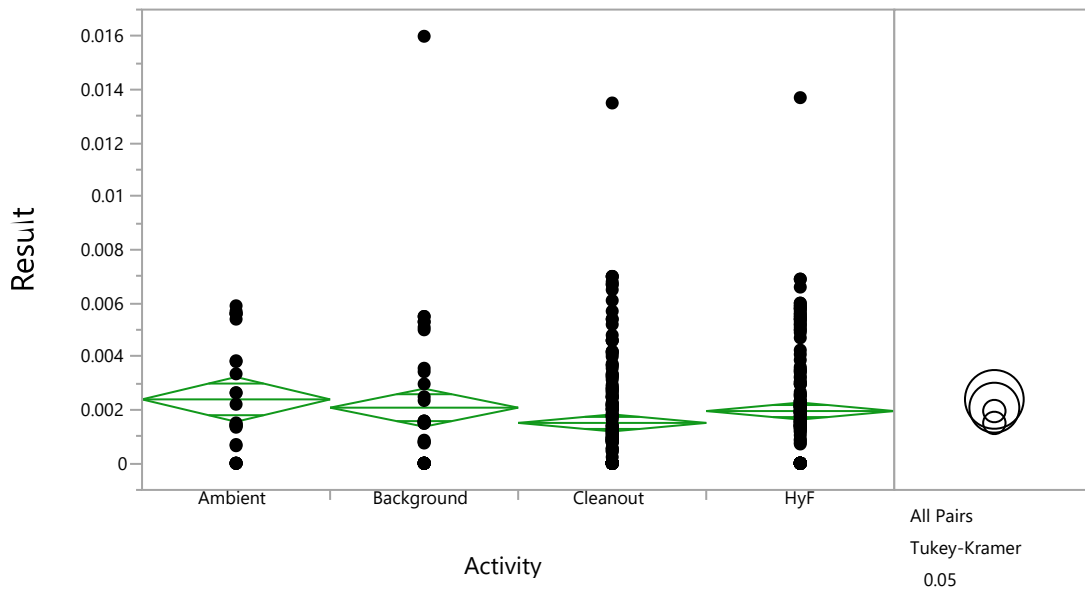


APPENDIX C

Tier 2 (50% - 79% detected) only. Analytes that are significantly different concentration between locations or events identified as ambient, background, cleanout, and HyF. This appendix contains only analytes in Tier #2, which have a percent detection between 50% - 79%, an indication of left-censored data and statistical analysis should be interpreted with caution. This appendix shows the results of comparisons between ambient, background, cleanout, and HyF by Tukey-Kramer HSD test for all pairs and the Wilcoxon paired comparison test.

Oneway Analysis of Result By Activity Analyte (Units)=Acetaldehyde (mg/m3)



Missing Rows 169

Oneway Anova

Summary of Fit

Rsquare	0.015641
Adj Rsquare	0.008543
Root Mean Square Error	0.002175
Mean of Response	0.001804
Observations (or Sum Wgts)	420

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	0.00003128	0.000010	2.2034	0.0871
Error	416	0.00196859	4.732e-6		
C. Total	419	0.00199987			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	0.002393	0.00043	0.00155	0.00323

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Background	36	0.002082	0.00036	0.00137	0.00279
Cleanout	179	0.001511	0.00016	0.00119	0.00183
HyF	179	0.001956	0.00016	0.00164	0.00228

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
HyF	Cleanout	27.0112	10.62126	2.54312	0.0110*	0.000040	0.000000	0.0007740
HyF	Background	7.1066	11.12881	0.63858	0.5231	0.000000	-0.000060	0.0007220
Background	Ambient	-5.3985	4.56418	-1.18280	0.2369	-0.000540	-0.001440	0.0001000
Cleanout	Background	-8.9583	10.90881	-0.82120	0.4115	0.000000	-0.000757	0.0000000
HyF	Ambient	-11.8930	12.24063	-0.97160	0.3312	-0.000140	-0.001400	0.0001700
Cleanout	Ambient	-28.5212	12.01443	-2.37391	0.0176*	-0.000702	-0.001460	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	6473.50	5473.00	248.981	1.714
Background	36	7551.50	7578.00	209.764	-0.038
Cleanout	179	34344.5	37679.5	191.869	-2.786
HyF	179	40040.5	37679.5	223.690	1.972

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
9.4475	3	0.0239*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57948	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Ambient	Background	HyF	Cleanout
Ambient	-0.00156	-0.00113	-0.00074	-0.00030
Background	-0.00113	-0.00132	-0.00090	-0.00045
HyF	-0.00074	-0.00090	-0.00059	-0.00015
Cleanout	-0.00030	-0.00045	-0.00015	-0.00059

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Ambient A	0.00239300
Background A	0.00208228
HyF A	0.00195560

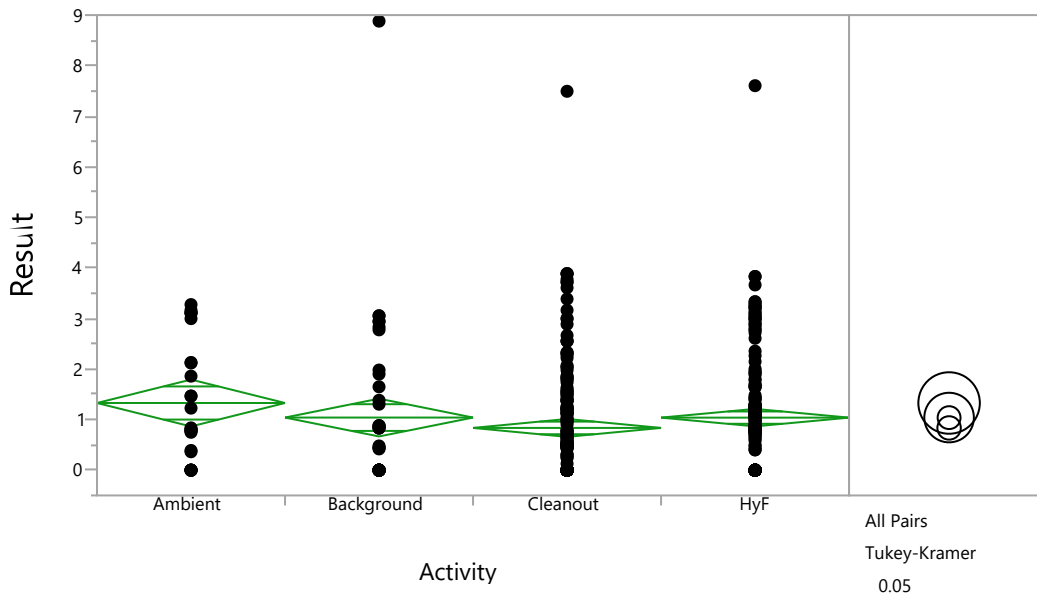
Level		Mean
Cleanout	A	0.00151107

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Ambient	Cleanout	0.0008819	0.0004566	-0.000296	0.0020596	0.2164
Background	Cleanout	0.0005712	0.0003973	-0.000454	0.0015962	0.4766
HyF	Cleanout	0.0004445	0.0002299	-0.000149	0.0010377	0.2157
Ambient	HyF	0.0004374	0.0004566	-0.000740	0.0016151	0.7733
Ambient	Background	0.0003107	0.0005599	-0.001133	0.0017549	0.9452
Background	HyF	0.0001267	0.0003973	-0.000898	0.0011516	0.9888

Oneway Analysis of Result By Activity Analyte (Units)=Acetaldehyde (ppb)



Missing Rows 130

Oneway Anova

Summary of Fit

Rsquare	0.012213
Adj Rsquare	0.005305
Root Mean Square Error	1.202645
Mean of Response	0.97226
Observations (or Sum Wgts)	433

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	7.67161	2.55720	1.7680	0.1526
Error	429	620.48675	1.44636		
C. Total	432	628.15836			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	1.32826	0.23586	0.86468	1.7918

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Background	40	1.04038	0.19015	0.66663	1.4141
Cleanout	179	0.83534	0.08989	0.65866	1.0120
HyF	188	1.03890	0.08771	0.86650	1.2113

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
HyF	Cleanout	23.0220	10.72435	2.14670	0.0318*	0.000000	0.000000	0.3256780
HyF	Background	11.3394	11.18393	1.01390	0.3106	0.000000	0.000000	0.4139909
Cleanout	Background	-2.4316	10.58930	-0.22963	0.8184	0.000000	-0.137230	0.0000000
Background	Ambient	-7.7106	4.71778	-1.63437	0.1022	-0.364114	-0.810375	0.0000000
HyF	Ambient	-15.3014	12.69626	-1.20519	0.2281	-0.166515	-0.776000	0.0180477
Cleanout	Ambient	-28.7414	11.99839	-2.39544	0.0166*	-0.389646	-0.810375	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	6767.00	5642.00	260.269	1.875
Background	40	8263.50	8680.00	206.588	-0.569
Cleanout	179	35998.5	38843.0	201.109	-2.288
HyF	188	42932.0	40796.0	228.362	1.707

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
8.3254	3	0.0397*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57917	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Ambient	Background	HyF	Cleanout
Ambient	-0.86029	-0.49352	-0.35966	-0.15807
Background	-0.49352	-0.69359	-0.53862	-0.33743
HyF	-0.35966	-0.53862	-0.31993	-0.12036
Cleanout	-0.15807	-0.33743	-0.12036	-0.32787

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Ambient A	1.3282626
Background A	1.0403815
HyF A	1.0388997

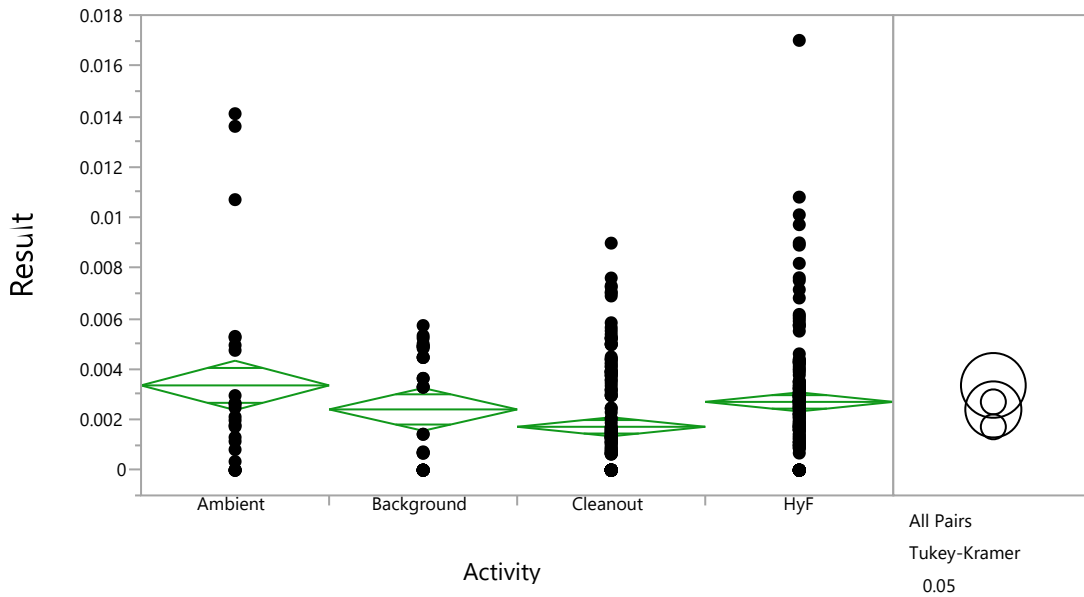
Level		Mean
Cleanout	A	0.8353359

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Ambient	Cleanout	0.4929267	0.2524070	-0.158073	1.143926	0.2077
Ambient	HyF	0.2893629	0.2516395	-0.359657	0.938383	0.6588
Ambient	Background	0.2878812	0.3029653	-0.493517	1.069279	0.7777
Background	Cleanout	0.2050455	0.2103309	-0.337433	0.747524	0.7639
HyF	Cleanout	0.2035638	0.1255929	-0.120361	0.527489	0.3679
Background	HyF	0.0014818	0.2094094	-0.538620	0.541583	1.0000

Oneway Analysis of Result By Activity Analyte (Units)=Acetone (mg/m3)



Missing Rows 211

Oneway Anova

Summary of Fit

Rsquare	0.046455
Adj Rsquare	0.038807
Root Mean Square Error	0.002432
Mean of Response	0.002297
Observations (or Sum Wgts)	378

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	0.00010774	0.000036	6.0736	0.0005*
Error	374	0.00221143	5.913e-6		
C. Total	377	0.00231917			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	24	0.003353	0.00050	0.00238	0.00433

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Background	32	0.002403	0.00043	0.00156	0.00325
Cleanout	161	0.001715	0.00019	0.00134	0.00209
HyF	161	0.002700	0.00019	0.00232	0.00308

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
HyF	Cleanout	46.6398	10.22432	4.56165	<.0001*	0.001100	0.000570	0.0015800
HyF	Ambient	3.1121	11.68364	0.26636	0.7900	0.000000	-0.000870	0.0009900
HyF	Background	1.9105	10.76988	0.17739	0.8592	0.000000	-0.000723	0.0011440
Background	Ambient	-2.0781	4.36089	-0.47654	0.6337	-0.000055	-0.001660	0.0010790
Cleanout	Background	-17.7941	10.40402	-1.71031	0.0872	-0.000420	-0.001420	0.0000000
Cleanout	Ambient	-25.5907	11.30358	-2.26395	0.0236*	-0.000880	-0.001780	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	24	5046.50	4548.00	210.271	0.975
Background	32	6459.00	6064.00	201.844	0.676
Cleanout	161	25744.0	30509.5	159.901	-4.600
HyF	161	34381.5	30509.5	213.550	3.737

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
21.4803	3	<.0001*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.58065	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Ambient	HyF	Background	Cleanout
Ambient	-0.00181	-0.00072	-0.00074	0.00026
HyF	-0.00072	-0.00070	-0.00092	0.00029
Background	-0.00074	-0.00092	-0.00157	-0.00053
Cleanout	0.00026	0.00029	-0.00053	-0.00070

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Ambient A	0.00335267
HyF A	0.00270032
Background A B	0.00240275

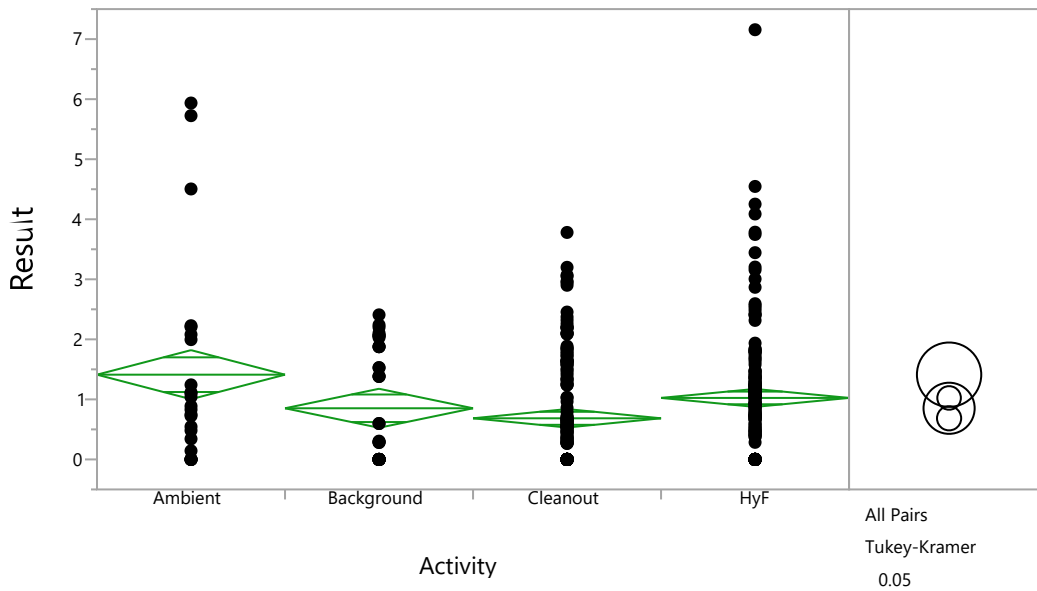
Level		Mean
Cleanout	B	0.00171548

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Ambient	Cleanout	0.0016372	0.0005321	0.000264	0.0030103	0.0120*
HyF	Cleanout	0.0009848	0.0002710	0.000285	0.0016842	0.0018*
Ambient	Background	0.0009499	0.0006566	-0.000745	0.0026444	0.4711
Background	Cleanout	0.0006873	0.0004706	-0.000527	0.0019018	0.4627
Ambient	HyF	0.0006523	0.0005321	-0.000721	0.0020254	0.6107
HyF	Background	0.0002976	0.0004706	-0.000917	0.0015121	0.9216

Oneway Analysis of Result By Activity Analyte (Units)=Acetone (ppb)



Missing Rows 152

Oneway Anova

Summary of Fit

Rsquare	0.038638
Adj Rsquare	0.031552
Root Mean Square Error	1.018006
Mean of Response	0.890521
Observations (or Sum Wgts)	411

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	16.95194	5.65065	5.4525	0.0011*
Error	407	421.78868	1.03634		
C. Total	410	438.74062			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	24	1.41141	0.20780	1.0029	1.8199

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Background	38	0.85186	0.16514	0.5272	1.1765
Cleanout	170	0.68491	0.07808	0.5314	0.8384
HyF	179	1.02416	0.07609	0.8746	1.1737

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
HyF	Cleanout	40.7262	10.55367	3.85896	0.0001*	0.366245	0.000000	0.5346333
HyF	Background	8.0394	11.08287	0.72539	0.4682	0.000000	-0.101033	0.5177944
HyF	Ambient	-4.7962	12.66823	-0.37860	0.7050	0.000000	-0.511901	0.2988895
Background	Ambient	-5.8125	4.61129	-1.26049	0.2075	-0.199324	-0.749329	0.1157789
Cleanout	Background	-9.4180	10.27276	-0.91679	0.3593	0.000000	-0.284576	0.0000000
Cleanout	Ambient	-29.3853	11.73586	-2.50389	0.0123*	-0.436742	-0.762379	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	24	5750.50	4944.00	239.604	1.460
Background	38	7782.50	7828.00	204.803	-0.066
Cleanout	170	30557.0	35020.0	179.747	-3.850
HyF	179	40576.0	36874.0	226.682	3.172

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
16.3882	3	0.0009*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57971	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Ambient	HyF	Background	Cleanout
Ambient	-0.75811	-0.18362	-0.12518	0.15384
HyF	-0.18362	-0.27759	-0.29676	0.05800
Background	-0.12518	-0.29676	-0.60248	-0.30429
Cleanout	0.15384	0.05800	-0.30429	-0.28485

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean	
Ambient	A	1.4114103
HyF	A	1.0241584
Background	A B	0.8518576

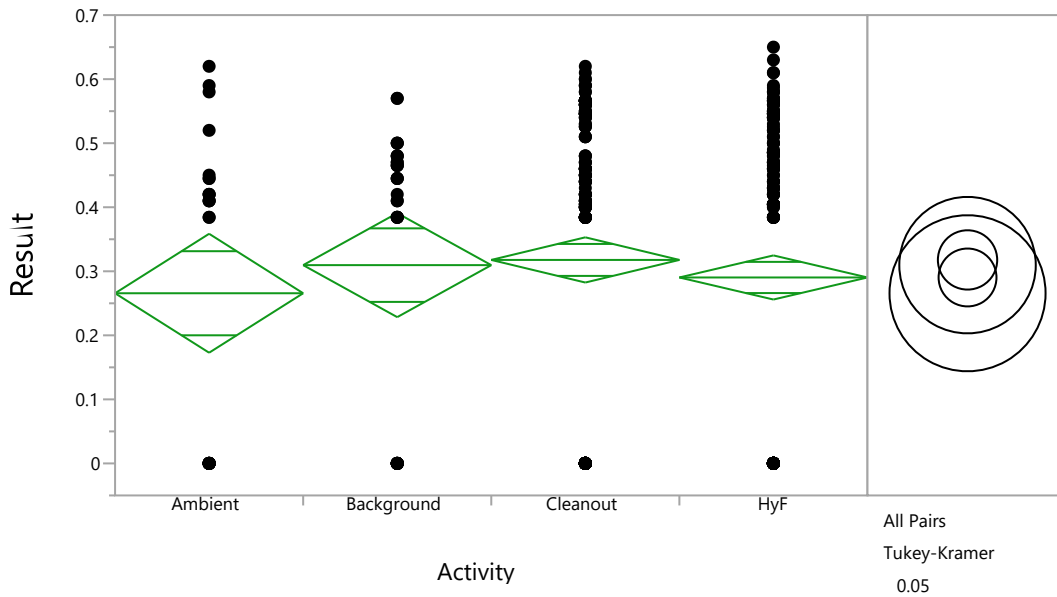
Level		Mean
Cleanout	B	0.6849148

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Ambient	Cleanout	0.7264955	0.2219837	0.153842	1.299149	0.0063*
Ambient	Background	0.5595527	0.2654292	-0.125178	1.244284	0.1522
Ambient	HyF	0.3872519	0.2212922	-0.183618	0.958122	0.2993
HyF	Cleanout	0.3392436	0.1090215	0.058000	0.620488	0.0107*
HyF	Background	0.1723008	0.1818284	-0.296764	0.641366	0.7791
Background	Cleanout	0.1669428	0.1826693	-0.304291	0.638177	0.7974

Oneway Analysis of Result By Activity Analyte (Units)=Dichlorodifluoromethane (ppb v/v)



Missing Rows 160

Oneway Anova

Summary of Fit

Rsquare	0.004299
Adj Rsquare	-0.00273
Root Mean Square Error	0.240887
Mean of Response	0.301862
Observations (or Sum Wgts)	429

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	0.106477	0.035492	0.6117	0.6077
Error	425	24.661244	0.058026		
C. Total	428	24.767721			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	26	0.265699	0.04724	0.17284	0.35856

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Background	34	0.309611	0.04131	0.22841	0.39081
Cleanout	180	0.317727	0.01795	0.28244	0.35302
HyF	189	0.290332	0.01752	0.25589	0.32477

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
Cleanout	Ambient	14.3056	12.21671	1.17098	0.2416	0	0.000000	0.1151236
HyF	Ambient	10.9381	12.55472	0.87124	0.3836	0	0.000000	0.0653197
Cleanout	Background	5.2801	11.33899	0.46566	0.6415	0	-0.010000	0.0600000
Background	Ambient	4.1063	4.43009	0.92692	0.3540	0	0.000000	0.0800000
HyF	Background	2.7068	11.64029	0.23254	0.8161	0	-0.014876	0.0300000
HyF	Cleanout	-8.3735	10.80374	-0.77506	0.4383	0	-0.005985	0.0000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	26	4953.00	5590.00	190.500	-1.068
Background	34	7141.00	7310.00	210.029	-0.250
Cleanout	180	39949.5	38700.0	221.942	1.013
HyF	189	40191.5	40635.0	212.653	-0.357

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
1.7980	3	0.6154

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.57926	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	Cleanout	Background	HyF	Ambient
Cleanout	-0.06549	-0.10807	-0.03731	-0.07832
Background	-0.10807	-0.15069	-0.09646	-0.11796
HyF	-0.03731	-0.09646	-0.06391	-0.10533
Ambient	-0.07832	-0.11796	-0.10533	-0.17232

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
Cleanout A	0.31772742
Background A	0.30961084
HyF A	0.29033193

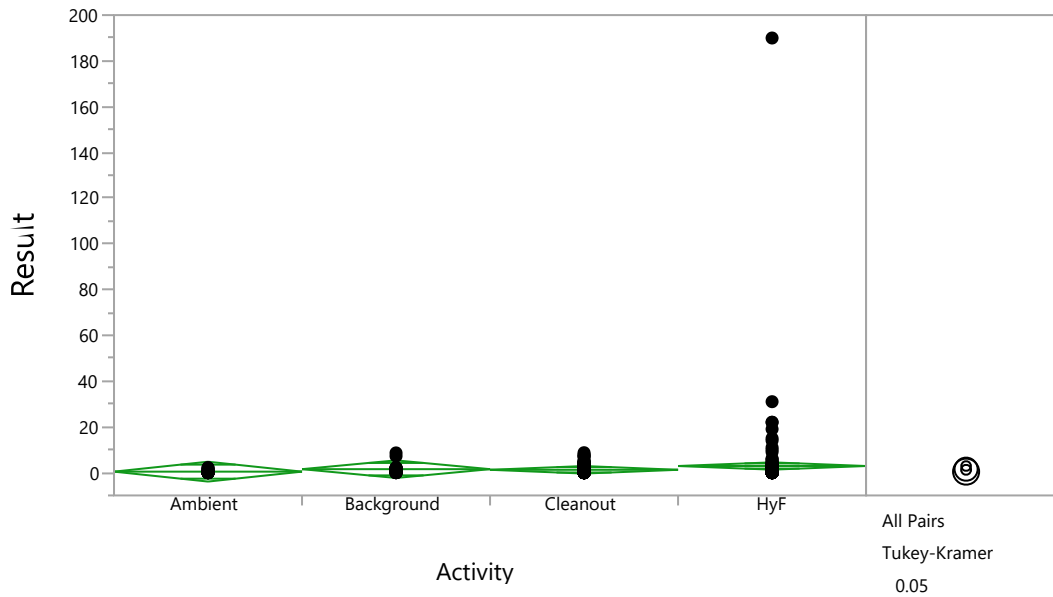
Level		Mean
Ambient	A	0.26569906

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
Cleanout	Ambient	0.0520284	0.0505387	-0.078324	0.1823808	0.7322
Background	Ambient	0.0439118	0.0627570	-0.117955	0.2057786	0.8972
Cleanout	HyF	0.0273955	0.0250876	-0.037312	0.0921030	0.6946
HyF	Ambient	0.0246329	0.0503866	-0.105327	0.1545930	0.9616
Background	HyF	0.0192789	0.0448740	-0.096463	0.1350208	0.9734
Cleanout	Background	0.0081166	0.0450448	-0.108066	0.1242988	0.9979

Oneway Analysis of Result By Activity Analyte (Units)=Pentane (ppb v/v)



Missing Rows 154

Oneway Anova

Summary of Fit

Rsquare	0.007152
Adj Rsquare	-0.0011
Root Mean Square Error	10.35088
Mean of Response	1.918481
Observations (or Sum Wgts)	365

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio	Prob > F
Activity	3	278.624	92.875	0.8668	0.4584
Error	361	38677.774	107.141		
C. Total	364	38956.398			

Means for Oneway Anova

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Ambient	22	0.40455	2.2068	-3.935	4.7444

Level	Number	Mean	Std Error	Lower 95%	Upper 95%
Background	28	1.48826	1.9561	-2.359	5.3351
Cleanout	153	1.20941	0.8368	-0.436	2.8551
HyF	162	2.86811	0.8132	1.269	4.4674

Std Error uses a pooled estimate of error variance

Nonparametric Comparisons For Each Pair Using Wilcoxon Method

q*	Alpha
1.95996	0.05

Level	- Level	Score Mean Difference	Std Err Dif	Z	p-Value	Hodges-Lehmann	Lower CL	Upper CL
Cleanout	Ambient	24.7735	10.76369	2.30158	0.0214*	0.000000	0.000000	0.980000
HyF	Ambient	20.7542	11.08497	1.87228	0.0612	0.000000	0.000000	0.870000
Background	Ambient	11.5666	3.91453	2.95478	0.0031*	0.900000	0.000000	1.491040
HyF	Cleanout	-9.0931	9.60895	-0.94632	0.3440	0.000000	0.000000	0.000000
Cleanout	Background	-13.3722	10.27446	-1.30150	0.1931	-0.086706	-0.850000	0.000000
HyF	Background	-22.0326	10.59490	-2.07955	0.0376*	-0.292701	-0.900000	0.000000

Wilcoxon / Kruskal-Wallis Tests (Rank Sums)

Level	Count	Score Sum	Expected Score	Score Mean	(Mean-Mean0)/Std0
Ambient	22	3003.50	4026.00	136.523	-2.274
Background	28	6110.50	5124.00	218.232	1.962
Cleanout	153	28875.0	27999.0	188.725	0.939
HyF	162	28806.0	29646.0	177.815	-0.895

1-way Test, ChiSquare Approximation

ChiSquare	DF	Prob>ChiSq
9.3789	3	0.0247*

Means Comparisons

Comparisons for all pairs using Tukey-Kramer HSD

Confidence Quantile

q*	Alpha
2.58107	0.05

HSD Threshold Matrix

Abs(Dif)-HSD

	HyF	Background	Cleanout	Ambient
HyF	-2.9685	-4.0880	-1.3531	-3.6068
Background	-4.0880	-7.1402	-5.2127	-6.5278
Cleanout	-1.3531	-5.2127	-3.0545	-5.2868
Ambient	-3.6068	-6.5278	-5.2868	-8.0553

Positive values show pairs of means that are significantly different.

Connecting Letters Report

Level	Mean
HyF	2.8681135
Background	1.4882580
Cleanout	1.2094110

Level		Mean
Ambient	A	0.4045455

Levels not connected by same letter are significantly different.

Ordered Differences Report

Level	- Level	Difference	Std Err Dif	Lower CL	Upper CL	p-Value
HyF	Ambient	2.463568	2.351891	-3.60683	8.533963	0.7216
HyF	Cleanout	1.658703	1.166888	-1.35312	4.670522	0.4867
HyF	Background	1.379856	2.118446	-4.08800	6.847712	0.9150
Background	Ambient	1.083713	2.948980	-6.52781	8.695234	0.9830
Cleanout	Ambient	0.804866	2.360147	-5.28684	6.896570	0.9863
Background	Cleanout	0.278847	2.127608	-5.21266	5.770352	0.9992